

# Massachusetts

## Three rural definitions based on Census Places

Rural locations are those outside Census Places with a population...

...greater than or equal to 2,500

Outside Census Places  $\geq$  2,500 people

...greater than or equal to 10,000

Outside Census Places  $\geq$  2,500 people  
Census Places: 2,500 - 9,999

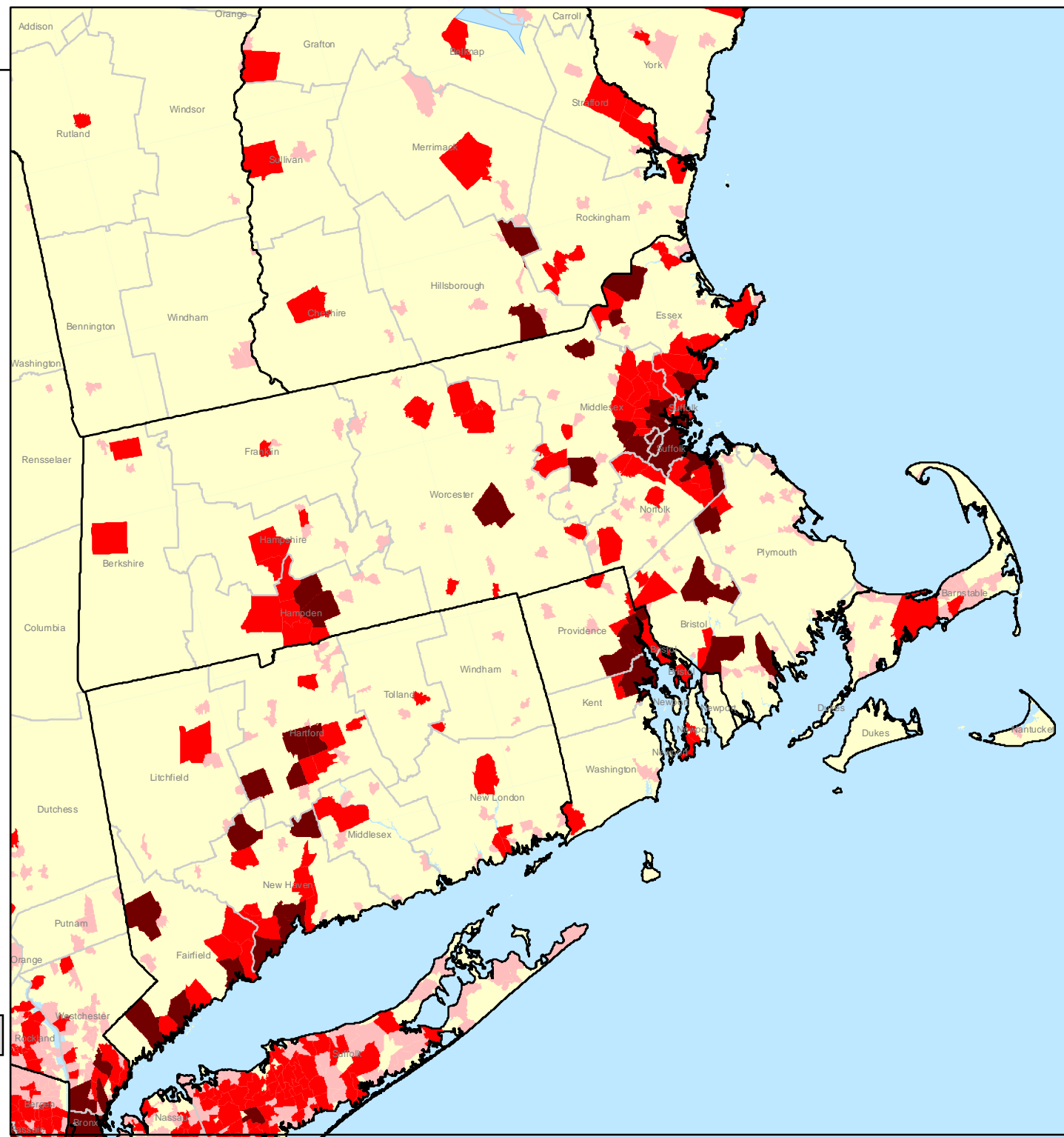
...greater than or equal to 50,000

Outside Census Places  $\geq$  2,500 people  
Census Places: 2,500 - 9,999  
Census Places: 10,000 - 49,999

Urban locations under all three definitions:

Census Places:  $\geq$  50,000 people

For more information on definitions, see documentation



# Massachusetts

## Three rural definitions based on Census Urban Areas

Rural locations are those outside Census Urban Areas with a population...

...greater than or equal to 2,500

Outside Census Urban Areas  $\geq$  2,500

...greater than or equal to 10,000

Outside Census Urban Areas  $\geq$  2,500

Census Urban Areas: 2,500 - 9,999

...greater than or equal to 50,000

Outside Census Urban Areas  $\geq$  2,500

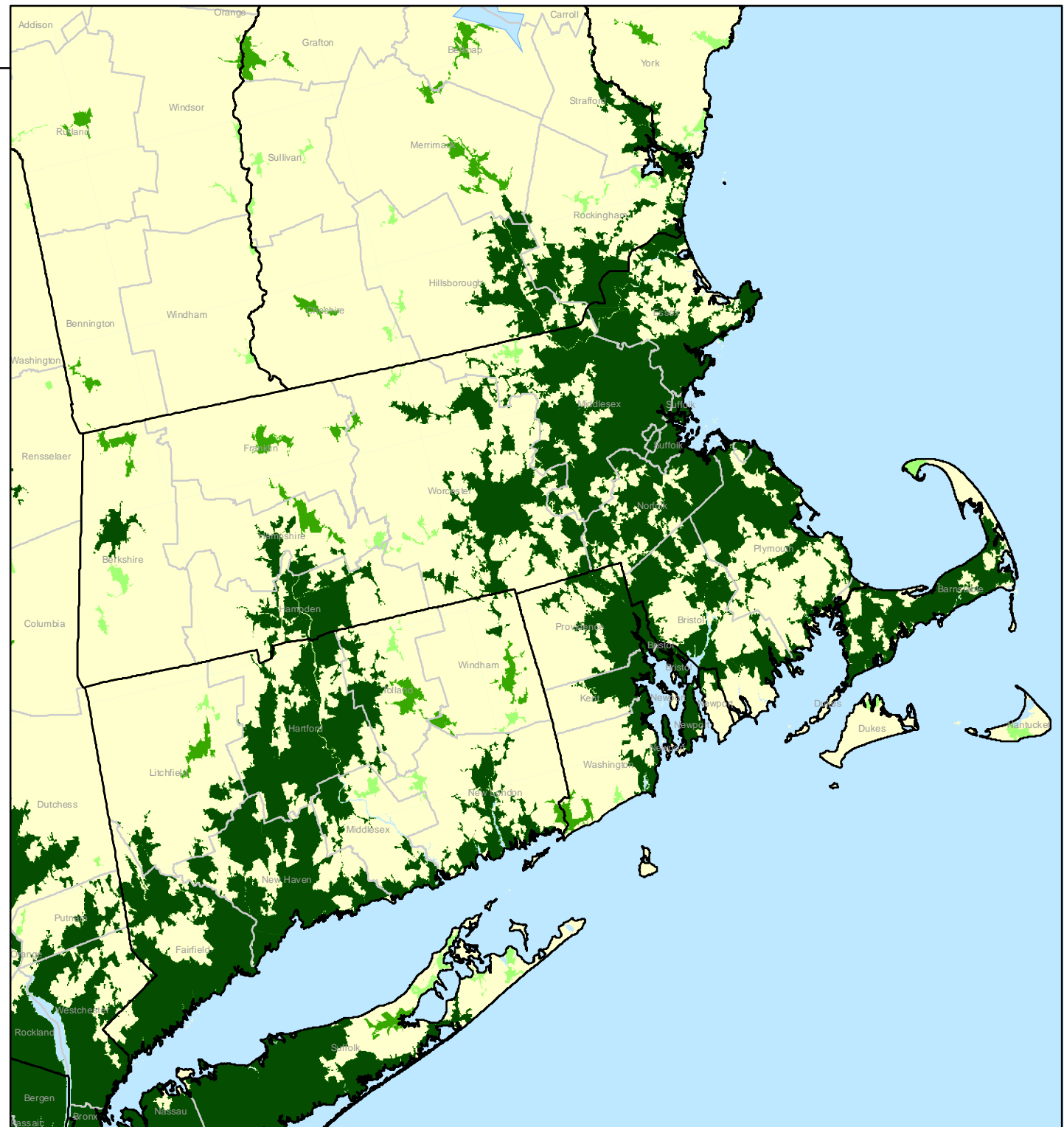
Census Urban Areas: 2,500 - 9,999

Census Urban Areas: 10,000 - 49,999

Urban locations under all three definitions:

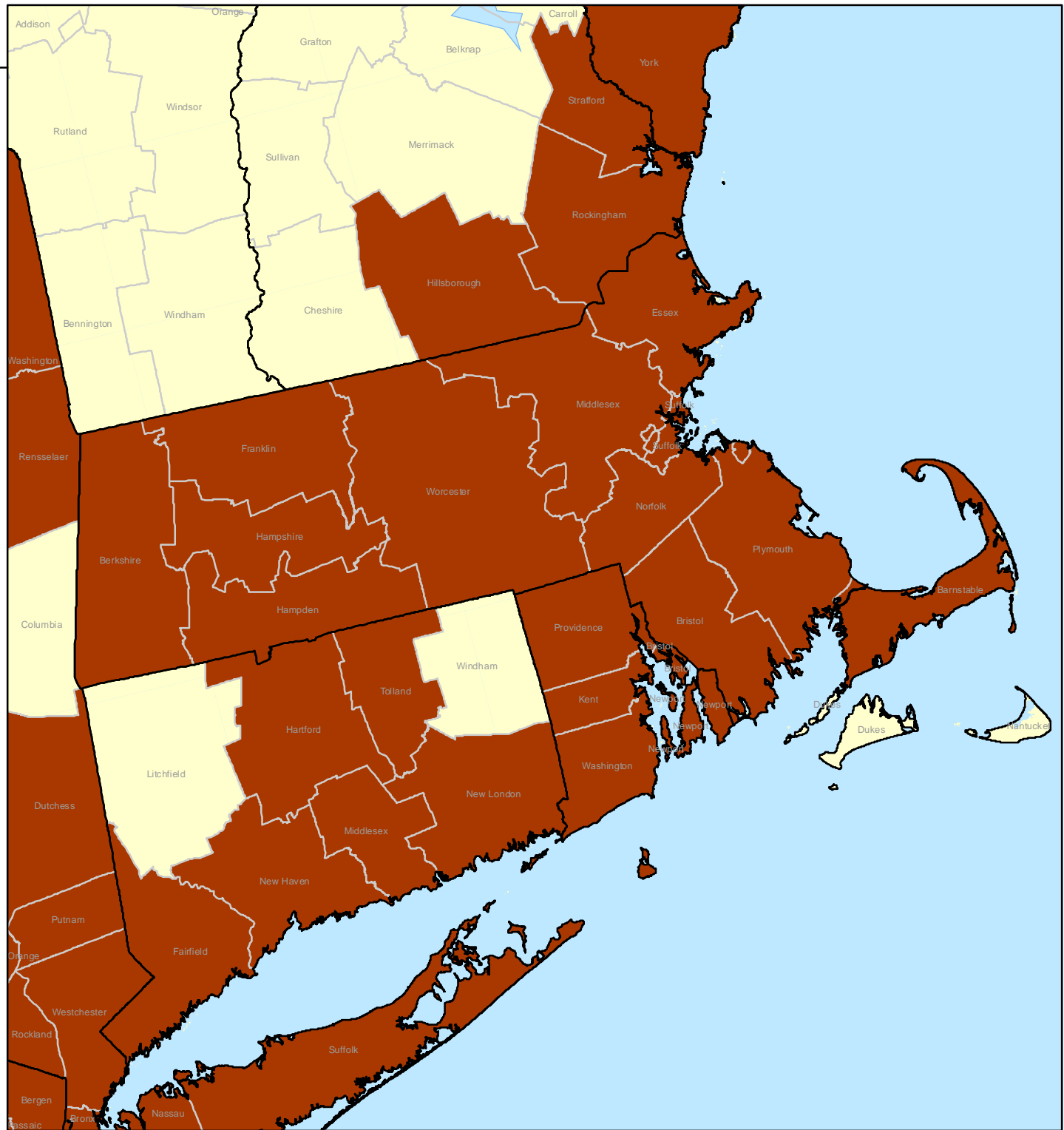
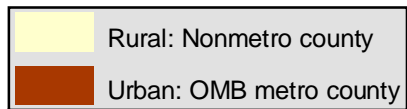
Census Urban Areas:  $\geq$  50,000

For more information on definitions, see documentation



# Massachusetts

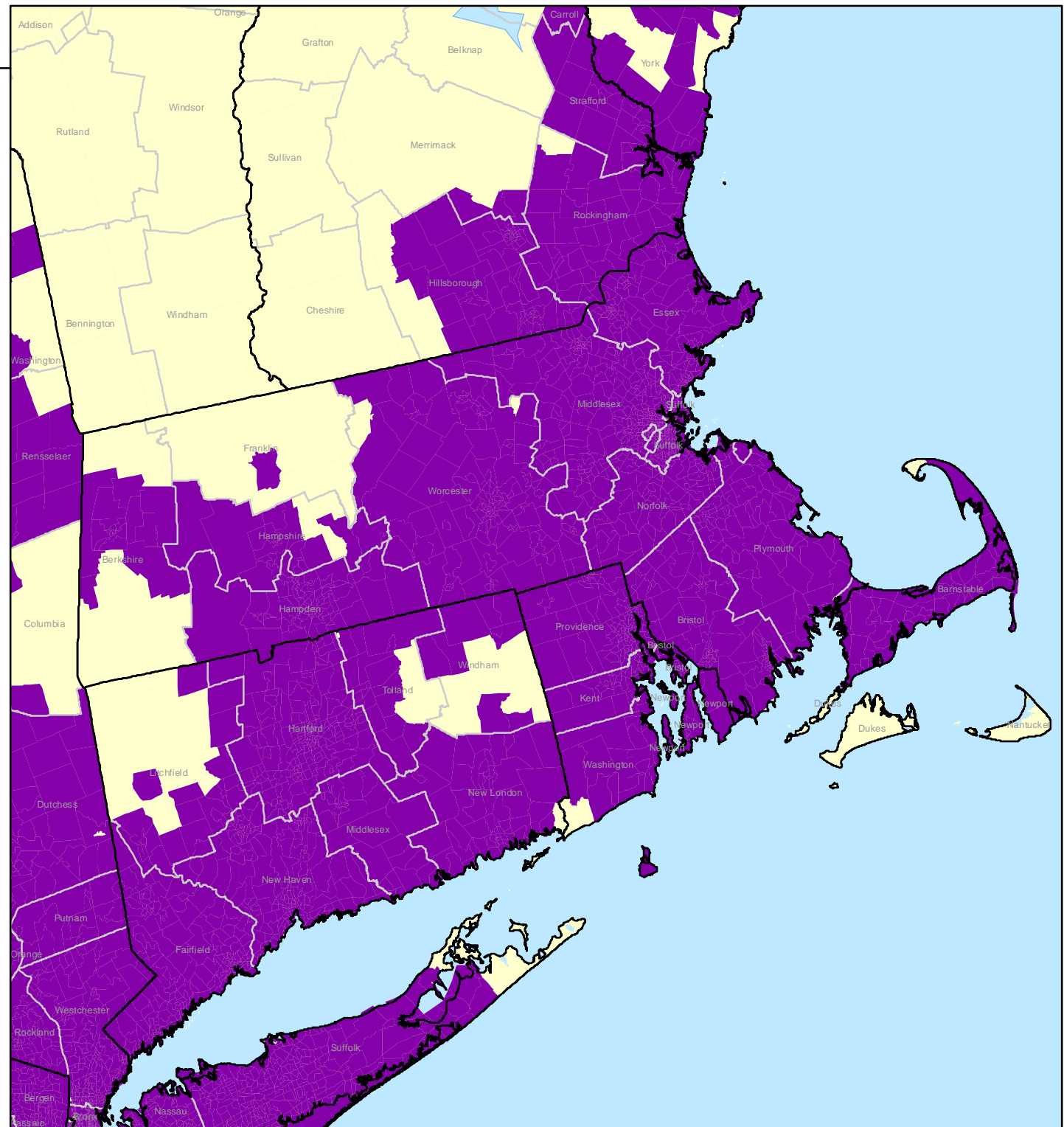
Rural definition based on Office of Management and Budget (OMB) metro counties



For more information on definitions, see documentation

# Massachusetts

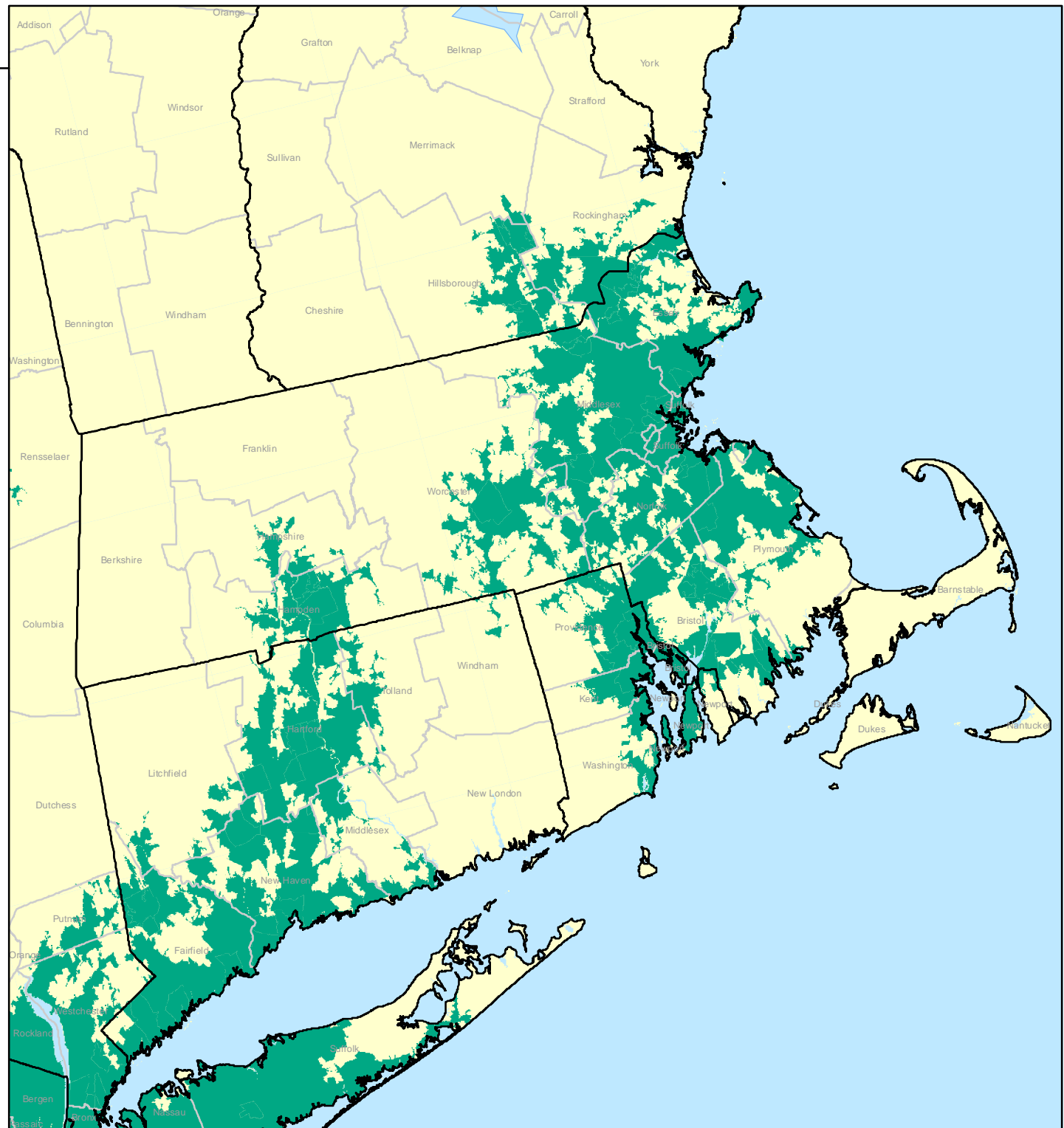
Rural definition based  
on Economic  
Research Service  
Rural-Urban  
Commuting  
Areas (RUCA)



For more information on definitions,  
see documentation

# Massachusetts

The USDA Business and Industry ineligible locations are Census Places greater than 50,000 people and their adjacent and contiguous Urbanized Areas



For more information on definitions, see documentation

## Rural Population Indicators for United States, 2000

<i>Rural is defined as areas outside...</i>	<a href="#">Rural definition (see details in data appendix)</a>									<b>U.S. total</b>
	Census Places with a population ≥			Census Urban Areas with a population ≥			OMB metro counties	ERS RUCA tract codes 1-3	USDA B&I ineligible locations	
	2,500	10,000	50,000	2,500	10,000	50,000				
<b>Population</b>										
Total population considered rural (million)	87.7	115.8	177	59.1	70.6	89.5	48.8	57.6	101.9	281.4
Percent of population considered rural	31.1	41.1	62.9	21	25.1	31.8	17.4	20.5	36.2	N/A
Percent of land area considered rural	97	97.9	99	97.4	97.6	98	74.6	81.2	97.9	N/A
Population density (people/sq mile)	25.6	33.4	50.5	17.1	20.4	25.8	18.5	20	29.4	79.6
<b>Age</b>										
Percent younger than 18	26	25.9	25.7	26.1	26	25.7	25.2	25.3	25.6	25.6
Percent 19 to 64	61.5	61	61.1	61.1	60.8	60.7	59.9	59.9	60.7	61.9
Percent 65 or older	12.5	13.1	13.1	12.8	13.2	13.6	15	14.8	13.7	12.4
<b>Ethnicity</b>										
Percent non-Hispanic Black	6.9	7.2	8.3	5.9	6.6	7.2	8.4	8.4	7.5	12
Percent American Indian	1.2	1.1	0.9	1.6	1.6	1.4	1.8	1.8	1.3	0.7
Percent Hispanic	5	5.8	7.8	4	4.8	6.1	5.3	6.6	6.4	12.5
<b>Education</b>										
Percent not completing high school	19.2	19.1	18.4	21.2	21.6	21.8	23.5	23.7	21.4	19.6
Percent completing high school only	33.7	33.1	31.2	36.2	35.8	35	35.9	35.5	34.5	28.6
Percent with only some college	20.4	20.5	21	20.1	20.1	20.3	19.7	19.8	20.5	21
Percent with a college degree or higher	26.8	27.3	29.4	22.5	22.4	22.9	20.8	21	23.6	30.7



## Rural Population Indicators for United States, 2000

<i>Rural is defined as areas outside...</i>	<a href="#">Rural definition (see details in data appendix)</a>									<b>U.S. total</b>
	Census Places with a population ≥			Census Urban Areas with a population ≥			OMB metro counties	ERS RUCA tract codes 1-3	USDA B&I ineligible locations	
	2,500	10,000	50,000	2,500	10,000	50,000				
<b>Income</b>										
Average household income (\$1,000)	56	56	57	51	50	49	43	43	49	57
Percent in near-poverty households	8	8.2	8	9	9.3	9.6	10.9	10.9	9.5	8.6
Percent in below-poverty households	9.9	10.3	10.5	11	11.7	12.5	14.8	14.8	12.5	12.4
Percent in deep-poverty households	4.1	4.3	4.5	4.5	4.8	5.2	6.1	6.1	5.2	5.6
<b>Employment</b>										
Percent in agriculture, forestry, fishing, hunting, mining industries	4	3.5	2.6	5.6	5.2	4.7	5.7	5.6	4.3	1.9
Percent traveling > 1/2 hour to work	10.3	9.9	9.8	10.3	9.8	8.9	6.6	6.6	8.5	10.4
<b>Housing</b>										
Percent seasonal housing	7	6.2	4.7	8.9	8.1	7	8.5	8.2	6.8	3.3
Percent without complete plumbing	2	1.7	1.3	2.7	2.4	2.1	2.5	2.4	1.9	1.2
<b>Household composition</b>										
Percent 65 and older and living alone	25	26.4	27.2	25.2	26.5	27.6	29.3	29.3	27.8	28.2
Percent own children under 18 in female-headed household	13.5	14.9	16.5	12.8	14.4	16.2	18.6	18.8	16.9	20

## Rural Population Indicators for Massachusetts, 2000

<i>Rural is defined as areas outside...</i>	<a href="#">Rural definition (see details in data appendix)</a>									<b>State total</b>
	Census Places with a population ≥			Census Urban Areas with a population ≥			OMB metro counties	ERS RUCA tract codes 1-3	USDA B&I ineligible locations	
	2,500	10,000	50,000	2,500	10,000	50,000				
<b>Population</b>										
Total population considered rural (million)	1.9	2.3	4.0	0.5	0.6	0.7	0.0	0.2	1.1	6.3
Percent of population considered rural	30.6	36.6	63.3	8.6	10.0	11.7	0.4	3.4	18.0	N/A
Percent of land area considered rural	79.5	83.3	94.3	64.2	65.5	66.4	1.9	19.2	70.5	N/A
Population density (people/sq mile)	311.3	355.6	543.5	108.8	123.6	142.1	161.7	144.3	206.2	809.8
<b>Age</b>										
Percent younger than 18	26.2	25.6	24.5	26.6	26.3	25.3	21.4	20.7	24.4	23.6
Percent 19 to 64	61.6	61.4	61.5	62.2	62.2	62.9	65.9	65.1	61.2	62.9
Percent 65 or older	12.2	13.0	14.1	11.2	11.5	11.8	12.7	14.2	14.4	13.5
<b>Ethnicity</b>										
Percent non-Hispanic Black	1.1	1.2	1.6	0.7	0.9	1.1	4.2	2.2	1.5	5.0
Percent American Indian	0.2	0.2	0.2	0.2	0.2	0.2	0.9	0.3	0.3	0.2
Percent Hispanic	1.5	1.5	3.3	1.1	1.3	1.6	1.7	2.6	2.4	6.7
<b>Education</b>										
Percent not completing high school	9.7	10.2	11.6	9.7	10.3	11.0	9.1	13.0	11.6	15.2
Percent completing high school only	26.5	26.9	27.6	27.6	28.0	28.3	25.0	29.2	29.2	27.3
Percent with only some college	18.4	18.4	18.1	18.2	18.4	18.0	20.1	17.3	19.2	17.1
Percent with a college degree or higher	45.3	44.4	42.7	44.4	43.4	42.7	45.8	40.5	39.9	40.4



## Rural Population Indicators for Massachusetts, 2000

<i>Rural is defined as areas outside...</i>	<a href="#">Rural definition (see details in data appendix)</a>									<b>State total</b>
	Census Places with a population ≥			Census Urban Areas with a population ≥			OMB metro counties	ERS RUCA tract codes 1-3	USDA B&I ineligible locations	
	2,500	10,000	50,000	2,500	10,000	50,000				
<b>Income</b>										
Average household income (\$1,000)	80.0	77.0	73.0	78.0	76.0	71.0	67.0	53.0	65.0	66.0
Percent in near-poverty households	3.7	4.0	4.6	4.0	4.3	5.0	6.2	7.8	5.6	6.0
Percent in below-poverty households	4.2	4.6	5.9	4.2	4.6	5.9	7.4	10.6	6.9	9.3
Percent in deep-poverty households	1.8	2.0	2.6	1.8	2.0	2.6	3.8	4.5	2.9	4.4
<b>Employment</b>										
Percent in agriculture, forestry, fishing, hunting, mining industries	0.7	0.7	0.5	1.4	1.4	1.2	1.3	1.3	1.0	0.4
Percent traveling > 1/2 hour to work	9.6	9.3	9.8	9.8	9.3	8.9	1.4	7.2	7.7	11.1
<b>Housing</b>										
Percent seasonal housing	7.2	8.3	5.6	12.7	13.6	11.9	55.4	19.3	15.0	3.7
Percent without complete plumbing	0.6	0.5	0.5	0.9	0.9	0.8	1.0	1.0	0.7	0.7
<b>Household composition</b>										
Percent 65 and older and living alone	26.1	27.4	28.3	23.2	25.0	26.8	32.1	32.3	28.0	30.3
Percent own children under 18 in female-headed household	10.4	11.4	14.0	9.3	10.3	12.0	18.9	20.3	15.4	20.0

# Rural Definitions: Data Documentation and Methods

## Identifying Nine Rural Definitions

The rural definitions presented here are based on four sources described in detail below: Census Bureau's list of places, Census Bureau's list of urban areas, Office of Management and Budget's metropolitan areas, and ERS rural-urban commuting areas.

### Three Definitions Based on Census Places

To generate statistical tabulations, the Census Bureau maintains a list of places that, in 2000, included 19,452 incorporated and 5,698 unincorporated places. Incorporated places have legally defined boundaries established by each State. Unincorporated places, known as census-designated places (CDPs), are delineated by committees of local experts to recognize population concentrations that are identifiable by name but not legally incorporated. Because they are based on administrative or locally determined boundaries and not statistical criteria, places can be of any population size or density. See a [list of all places in the U.S.](#) and their 2000 population, or [visit the Census website](#) for more details.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #1	All areas outside Census places with 2,500 or more people	87.7 million people 31% of U.S. population 97% of U.S. land area
Rural definition #2	All areas outside Census places with 10,000 or more people	115.8 million people 41% of U.S. population 98% of U.S. land area
Rural definition #3	All areas outside Census places with 50,000 or more people	177 million people 63% of U.S. population 99% of U.S. land area

### Three Definitions Based on Census Urban Areas

The U.S. Census Bureau defines an urban area as: "Core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile."

There are two categories of urban areas. An urbanized area (UA) denotes an urban area of 50,000 or more people. An urban cluster (UC) is an urban area with fewer than 50,000 people, but more than 2,500. UAs were first delineated in the United States in the 1950 census, while UCs were added in the 2000 census. See a [list of urban areas in the U.S.](#) and their 2000 population, or [visit the Census website](#) for more details.

The Census Bureau classifies as rural all territory outside of urban areas. Definition #4 corresponds with this classification, widely recognized as the "official" Federal definition of rural for statistical purposes. Definitions #5 and #6 broaden the rural definition to include urban areas with populations less than 10,000 and 50,000, respectively.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #4	All areas outside urban areas. This places the upper limit of rural at 2,500, since urban areas must have at least 2,500 people.	59.1 million people 21% of U.S. population 97% of U.S. land area
Rural definition #5	All areas outside urban areas with 10,000 or more people.	70.6 million people 25% of U.S. population 98% of U.S. land area
Rural definition #6	All areas outside urban areas with 50,000 or more people.	89.5 million people 32% of U.S. population 98% of U.S. land area

### One Definition Based on Office of Management and Budget (OMB) Metropolitan Statistical Area Designation

Metropolitan statistical areas (metro areas) are geographic entities defined by the [U.S. Office of Management and Budget \(OMB\)](#) for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics. A metro area includes one or more counties containing a core urban area of 50,000 or more people, together with any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core. OMB also defines micropolitan statistical areas using the same method but centered around urban areas with at least 10,000 but no more than 50,000 people. Definition #7 classifies micropolitan counties as rural. See a [list of metro and micro counties](#) or visit the [Census website](#) for additional information.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #7	All counties outside metropolitan areas in 2003 (based on 2000 census data)	48.8 million people 17% of U.S. population 75% of U.S. land area

## One Definition Based on ERS Rural-Urban Commuting Area Codes (RUCAs)

The RUCA system classifies census tracts following the same theoretical concepts and data used by OMB to define metro and micro areas. Measures of population density, urbanization, and daily commuting are used to identify metropolitan, micropolitan, and small-town urban cores, adjacent tracts that are economically integrated with those cores, and outlying rural tracts. The use of census tracts instead of counties provides a different and more detailed geographic pattern of settlement classification.

The classification contains 10 primary and 30 secondary codes. Few, if any, research or policy applications need the full set of codes. Rather, the system allows for stricter or looser delimitation of metropolitan, micropolitan, and small-town commuting areas, and different definitions of rural based on selected combinations of codes. The rural definition used here consists of RUCA primary codes 4-10. In addition to the RUCA system based on census tracts, a zip code version is also available. See the [Measuring Rurality Briefing Room](#) for more information and data.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #8	Census tracts with 2000 RUCA codes 4 through 10	57.6 million people 20% of U.S. population 81% of U.S. land area

## One Definition Based on USDA's Business and Industry (B&I) Loan Program Definition

As part of its eligibility criteria, the B&I Loan Program adopted a definition established in the 2002 Farm Bill that includes as rural all areas outside "places of 50,000 or more people and their adjacent and contiguous urbanized areas." This language combines criteria from two of the sources described here: Census Places and Census Urban Areas.

Definition	Description	Percent of people and land area considered rural in the U.S. under definition (2000)
Rural definition #9	Locations outside places of 50,000 or more people and their associated urbanized areas.	101.9 million people 36% of U.S. population 98% of U.S. land area

*Note that all of the above definitions are based on the 2000 Census. Over time, changes, additions, and corrections are made. For the most up-to-date Census and OMB definitions, see the links to their sites.*

## Developing Socioeconomic Indicators

The following table summarizes the methods used to compute socioeconomic indicators presented in the data product. It is meant as a guide to those wishing to duplicate the indicators, and for those interested in more detail about the indicators. The first column lists the indicator. The second column lists the Census 2000 Summary File 3 (SF3) segment (for users of the machine-readable file). The third column gives the formula for computing the indicator, using the SF3 variable naming convention. SF3 data files and technical documentation may be [downloaded from the Census Bureau's website](#).

Sociodemographic Indicator	Segment	Variable/Formula
<b>Population</b>		
Total population	Segment 1	p001001
Percent of population considered rural	Segment 1	Varies for each rural definition, but is always defined by (aggregate of p001001 for the defined rural area) / (aggregate of p001001 for the reference area) In our case the reference area is either the U.S. or a particular State.
Percent of land considered rural	Geo	Varies for each rural definition, but is always defined by (aggregate of AREALAND for the defined area) / (aggregate of AREALAND for the reference area) In our case the reference area is either the U.S. or a particular State.
Population density (people / sq mile)	Geo	$p001001 / (\text{AREALAND} * .38610)$ AREALAND is transformed from square meters
<b>Age</b>		
Percent younger than 18	Segment 1	$\text{sum}(p008003 \text{ through } p008020, p008042 \text{ through } p008049, p008050 \text{ through } p008059) / p001001$
Percent 19 to 64	Segment 1	$\text{sum}(p008021 \text{ through } p008034, p008060 \text{ through } p008073) / p001001$
Percent 65 or older	Segment 1	$\text{sum}(p008035 \text{ through } p008040, p008074 \text{ through } p008079) / p001001$
<b>Ethnicity</b>		
Percent non-Hispanic Black	Segment 3	$p007004 / p001001$
Percent Hispanic	Segment 3	$p007010 / p001001$
Percent American Indian	Segment 3	$p007005 / p001001$

<b>Education (for the population 25 years and over)</b>		
Percent not completing high school	Segment 3	sum (p037003 through p0370019, p037020 through p037027) / p037001
Percent completing high school only	Segment 3	(p037011 + p037028) / p037001
Percent completing some college	Segment 3	sum(p037012,p037013, p037029,p037030) / p037001
Percent completing college or more	Segment 3	sum(p037014 through p037018, p037031 through p037035) / p037001
<b>Income</b>		
Average household income (\$1000)	Segment 6	p054001 / p052001
<b>Poverty (for the population for whom poverty is determined, i.e. not living in group quarters)</b>		
Percent near poverty (ratio of income to poverty level is 1.00 to 1.49)	Segment 7	(p088005 + p088006) / p088001
Percent below poverty (ratio of income to poverty level is less than 1.00)	Segment 7	(p088002 + p088003 + p088004) / p088001
Percent in deep poverty (ratio of income to poverty is less than .50)	Segment 7	p088002 / p088001
<b>Employment</b>		
Percent in agriculture, forestry, fishing and hunting, and mining industries (for the employed civilian population 16 years and over)	Segment 5	(p049003 + p049030) / p049001
Percent traveling 30 minutes or longer to work (for workers 16 years and over)	Segment 3	sum(p031009 through p031014) / p031002
<b>Housing</b>		
Percent seasonal housing (for housing units)	Segment 56	h008005 / h001001
Percent without complete plumbing facilities (for housing units)	Segment 59	h047003 / h047001
<b>Household composition</b>		
Percent 65 years and older living alone	Segment 1	(p011013 + p011016) / p011001
Percent own children under 18 in female-headed household	Segment 2	p016019 / p016001

## **More About Census Summary File 3**

The primary source of data for building rural definitions and the associated socioeconomic indicators was Census Summary File 3. Specifically, we used summary level 85. Summary level 85 gives census data for the intersection of States-Counties-Places/Remainder-Tract-Urban/Rural. We needed to use summary level 85 in order to identify the portions of Census Places that were also part of Urban Areas.

In the case of the Census Place-based definitions, Census Urban Area-based definitions, and the Business and Industry (B&I) Loan Program definition, we were able to designate an observation as "rural" based on SF3 geographic identifiers. For the OMB-based definition, we merged a file identifying metro/nonmetro counties into SF3, matching by a county ID number. For the RUCA-based definition, we merged a file identifying tracts by RUCA code into SF3, matching by a tract ID number.

For more information, contact: [John Cromartie and Shawn Bucholtz](#)