

Final Public Use Microdata Area (PUMA) Criteria and Guidelines for the 2010 Census and the American Community Survey

SUMMARY: PUMAs are statistical geographic areas defined for the tabulation and dissemination of decennial census and American Community Survey (ACS)¹ Public Use Microdata Sample (PUMS) data.² Additionally, PUMAs are used in the publication of ACS period estimates. Nesting within states, or equivalent entities,³ PUMAs cover the entirety of the United States, Puerto Rico, and the Island Areas that contain a 2010 Census population of 100,000 or more.⁴ PUMA delineations are subject to population, building block geography, geographic nesting, and contiguity criteria. State Data Centers (SDCs) define PUMAs with the cooperation of regional, state, local, and tribal organizations and agencies.

This Notice announces the U.S. Census Bureau's final criteria for the PUMA delineation program for the 2010 Decennial Census and the ACS. In addition, this Notice contains a summary of comments received to proposed criteria published online from January 3, 2011 through February 28, 2011 as well as the Census Bureau's response to these comments.

Most provisions of the PUMA criteria for the 2010 Census remain unchanged from those used in conjunction with Census 2000, except as follows. First, the Census Bureau proposes the delineation of one level of PUMA for the United States, Puerto Rico, Guam, and the U.S. Virgin Islands, as compared with two levels (PUMAs and Super-PUMAs) used for Census 2000. Second, the required minimum population threshold of 100,000 persons must be maintained throughout the decade, as compared with the 2000 requirement to meet the minimum population threshold of 100,000 persons at the time of delineation only. Finally, the Census Bureau proposes the use of counties and census tracts as the only PUMA building block geography, as compared with counties, census tracts, minor civil divisions (in some states), and incorporated places with populations of 100,000 persons or greater for Census 2000.

Upon publication of the final criteria contained in this Notice, the Census Bureau will offer the SDCs, the opportunity to delineate 2010 PUMAs scheduled to begin in September 2011. During the delineation

¹ The ACS is conducted in the United States and in Puerto Rico. In Puerto Rico the survey is called the Puerto Rico Community Survey (PRCS). For ease of discussion, throughout this document the term ACS is used to represent the surveys conducted in the United States and in Puerto Rico, as well as their data products.

² PUMS are files which contain individual records of the characteristics for a sample of persons and households.

³ States are the primary governmental divisions of the United States. The District of Columbia and Puerto Rico are treated as statistical equivalents of a state for data presentation purposes. The Census Bureau treats Puerto Rico, America Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands as state equivalents as well. For Census Bureau purposes, the United States includes the fifty States and the District of Columbia.

⁴ There was only one PUMA delineated for each of the state equivalents of Guam and the U.S. Virgin Islands in Census 2000; therefore, the Guam and U.S. Virgin Islands SDCs did not delineate PUMAs. American Samoa and the Commonwealth of the Northern Marianas Islands did not meet the minimum population threshold for PUMS publication; therefore, PUMAs were not delineated in these areas. At the time of publication, the 2010 Census population counts were not yet released for the Island Areas. A 2010 PUMA will be delineated for those Island Areas that contain a 2010 Census population of 100,000 or more.

process, SDCs are encouraged to consult with interested tribal, state, and local governments, organizations, and other data users.

Date: This Notice's final criteria will be effective upon approval. For additional information contact Vincent Osier, Chief, Geographic Standards and Criteria Branch, Geography Division, U.S. Census Bureau, via e-mail at vincent.osier@census.gov or telephone at

301-763-3056.

This document contains six sections:

- I. Introduction
- II. Summary of Comments Received in Response to the "Proposed Public Use Microdata Area (PUMA) Criteria and Guidelines for the 2010 Census and the American Community Survey".
- III. Final PUMA criteria for the 2010 Census and ACS
- IV. Final PUMA guidelines for the 2010 Census and ACS
- V. Additional Information Pertaining to 2010 PUMAs
- VI. Definitions

SUPPLEMENTARY INFORMATION

I. Introduction

Public Use Microdata Sample (PUMS) files contain individual records of the characteristics for a sample of persons and households.⁵ PUMS files were first created for the 1960 Decennial Census. For each census since 1960, PUMS data have been tabulated and published for selected geographic entities. Until 1990, the geographic units for which PUMS data were available included states, counties, county groups, metropolitan areas, and urban areas. Since 1990, Public Use Microdata Areas (PUMAs) have been delineated by the State Data Centers (SDCs) as a unique type of geographic area for the tabulation and dissemination of PUMS files. For Census 2000, the standard 5-percent PUMAs were defined along with the new 1-percent super-PUMAs, which were based upon aggregations of the smaller 5-percent standard PUMAs.⁶ Migration (MIG) PUMAs and place-of-work (POW) PUMAs were created for use in the publication of MIG and POW microdata files.⁷

⁵ Further information about microdata, PUMS, and confidentiality of PUMS data is provided on the Census Bureau website. Please refer to <http://www.census.gov/main/www/pums.html> and http://www.census.gov/acs/www/data_documentation/public_use_microdata_sample/.

⁶ Further information about the history and geography of PUMS and PUMAs is provided on the Census Bureau website. Please refer to http://www.census.gov/geo/puma/puma_history.pdf.

⁷ POW and MIG PUMA geographies were based on one or more 5-percent PUMAs. In cases where 5-percent PUMAs encompassed one or more whole *counties*, the MIG and POW PUMAs were equivalent to the 5-percent PUMA geography; however, when 5-percent PUMAs contained other types of geographic entities, the MIG and POW PUMAs were based on aggregations of two or more 5-percent PUMAs in order to encompass whole counties.

The ACS was fully implemented in the United States and Puerto Rico in January 2005. Census 2000 PUMAs have been used in the tabulation and dissemination of ACS PUMS data and to present ACS period estimates. In 2008, the Census Bureau released its first 3-year PUMS and estimates based on ACS data collected from 2005 through 2007. The first 5-year PUMS and estimates, based on ACS data collected from 2005 through 2009, were released on December 14, 2010.

II. Summary of Comments Received in Response to Proposed Criteria for the PUMA Delineation Program for the 2010 Census

- A. **Summary of changes:** On January 1, 2011, the Census Bureau published PUMA proposed criteria on the U.S. Census Bureau's website and solicited comments on the proposed criteria for delineating PUMAs for the 2010 Decennial Census. The proposed criteria contained the following changes to the criteria used in the 2000 Decennial Census:
- 1) Only one level of PUMA is proposed to be delineated for the United States, Puerto Rico, Guam, and the U.S. Virgin Islands, as compared with two levels (PUMAs and Super-PUMAs) used for Census 2000.
 - 2) The required minimum population threshold of 100,000 persons must be maintained throughout the decade.
 - 3) Counties and census tracts are proposed to be used as the only PUMA building block geographies, as compared with counties, census tracts, minor civil divisions (MCDs)⁸, and incorporated places with populations of 100,000 persons or greater for Census 2000.
- B. **Responses:** The Census Bureau received letters and e-mails (each containing comments on several issues) from several organizations and individuals. The correspondence received pertained mostly to the building block entities (3 above), specifically the elimination of incorporated places and MCDs as building block entities. In addition, there were several comments regarding the recommended guidelines and further suggestions for the inclusion of specific research communities, governmental organizations, and local data users in the review process. A major public policy research organization recommended a guideline to make PUMAs coincident with metropolitan boundaries. Comments received are summarized below, as well as the Census Bureau's response to these comments.
- 1) ***Comments on eliminating incorporated places and MCDs as a building block entity for 2010 PUMAs:*** The Census Bureau received four (4) comments opposed to the elimination of incorporated places and MCDs building block entities for 2010 PUMAs. These comments were from a major public policy research organization as

Within the six New England states (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut), MIG and POW PUMAs encompassed *minor civil division* (city and town)-based 5-percent PUMAs.
⁸ For 2000 PUMAs, MCDs were permitted as PUMA building block geographies only within the six New England states.

well as the states of California and Michigan representing state and local government agencies, and a regional organization.

The public policy research organization recommended that cities (incorporated places) should continue to be used as PUMA building blocks. This organization feels that their audience needs “real world” data that corresponds to the places where they live and work. Their argument maintains that a vast majority of cities keep their boundaries consistent, and that data users need to access reliable data for these geographies. The California local government agency also maintained that PUMAs should be allowed to be built from incorporated places with populations greater than 100,000, as data aggregated by incorporated places are more meaningful than data aggregated by large groups of census tracts. The Michigan state agency objected to the elimination of MCDs and places with 100,000 residents because this would significantly decrease the utility of PUMS files. A regional agency from Michigan objected to the elimination of MCDs as a building block entity because these entities are very important to their local data users and in a few instances, notably in the city of Ann Arbor and in Monroe county, census tracts do not correspond to MCD boundaries.

The comment from a California university favored the proposed elimination of incorporated places building block entities since Los Angeles County currently has many noncontiguous PUMAs that are created where PUMAs are based on places that contain enclaves and exclaves. This organization prefers to eliminate all such anomalies in favor of geographically contiguous areas.

a) **The Census Bureau presents the following research to eliminate incorporated places as building blocks:**

- (1) Incorporated place-based PUMAs whose boundaries change over the decade represent significant PUMS publication disclosure risks for residence PUMAs and POW PUMAs. This is of particular concern since annual PUMS will be published for 2010 PUMAs.

Research reviewed by several internal Census Bureau committees (including the Disclosure Review Board (DRB), the Statistical Areas Committee (SAC), and the 2010 PUMA working group) provided convincing evidence that this represents a disclosure risk and, therefore, incorporated places should not be permitted as 2010 PUMA building blocks.

More specifically, changes in PUMA boundaries present ample opportunity for PUMS “geographic identification” as outlined in the **Federal Register** detailing the *Criteria for Releasing Public Use*

Microdata (Vol. 68, No. 86)--see II.B.1.a.6 below. These disclosure concerns apply in situations where PUMAs are built upon building block geography that changes over a decade (e.g., incorporated places that annexes or deannexes area). In these cases the potential for creating a sliver piece of geography with low populations greatly increase the risk of disclosure.

The Census Bureau found that nationally, incorporated places of 100,000 or more residents only comprise 17% of all 2000 PUMAs. A majority (60%) of the place-based 2000 PUMAs (places with 100,000 or more residents) have had annexations or deannexations over the past 10 years.

Since changes in PUMA building block geography represent a disclosure risk for PUMS publication, and since a majority (60%) of all place-based 2000 PUMAs had annexations/deannexations from 2000 to 2010, the Census Bureau will not permit the use of incorporated places as building blocks for 2010 PUMAs. Census tracts provide much more stable boundaries, and may be aggregated to approximate the extent of other types of geographic entities.

- (2) Follow-up research from participant comments found PUMAs built from incorporated places that contain enclaves and exclaves, some of which have very low populations (see items 4 and 5 below). Areas with low populations' present opportunities for "geographic identification" as outlined in the **Federal Register** detailing the *Criteria for Releasing Public Use Microdata* (Vol. 68, No. 86)--see II.B.1.a.6 below. To help ensure confidentiality of PUMS data, the Census Bureau set forth a new criterion for 2010 PUMAs: tract-based PUMAs may cross county boundaries provided that each single PUMA-county part meets a minimum population threshold of 2,400 persons (i.e., the 2010 Census minimum population threshold for a census tract (1,200) x 2). This change seeks to eliminate unique geographic areas within a PUMA that contain low populations.
- (3) It was argued that PUMS data would be less useful and meaningful if census tracts were used to approximate incorporated place or MCD boundaries, as the data would not relate to the actual building block geographic entity the PUMA was created to represent. Since PUMS data are subject to "noise" (i.e., small amounts of variation) and data swapping, the PUMS data are less susceptible to the small differences between a census tract boundary and an incorporated place or MCD boundary, and these differences are not likely to have a significant

impact on the representation of the PUMS data for an incorporated place or MCD.

- (4) California's place-based PUMAs (places with 100,000 or more residents) represent 33% of all PUMAs in California. A majority of these are noncontiguous (55%) and have had annexations or deannexations in the past 10 years (69%). PUMAs built exclusively with more than one place represent only 6% of all PUMAs in California. A majority of California's place-based PUMAs, particularly those in Los Angeles County referenced by the respondent from a California university (above), represent significant disclosure risks from noncontiguous enclaves/exclaves, and sliver geography created from annexations or deannexations. Incorporated places are not stable boundaries in these instances and therefore cannot be permitted as building blocks in California.
- (5) Michigan's place-based PUMAs (places with 100,000 or more residents) represent 22% of all PUMAs in Michigan. Half of these are noncontiguous (50%), and 38% have had annexations or deannexations in the past 10 years. Ann Arbor, Michigan⁹ exemplifies a place-based PUMA, with significant disclosure risks from both noncontiguous enclaves/exclaves and sliver geography created from annexations or deannexations. Incorporated places are not stable boundaries in these instances and therefore cannot be permitted as building blocks in Michigan.
- (6) The following information, referred to in II.B.1.a.1 and II.B.1.a.2 above, comes from the **Federal Register/Vol. 68, No. 86/Monday, May 5, 2003/Notices, page 23694-*Criteria for Releasing Public Use Microdata:***

Once a file has been released with one set of geographic identification, the same records cannot be released with different identification if the two geographic schemes in combination identify any area with fewer than 100,000 population.

Specifications for each file must be reviewed to assure confidentiality is protected. To do so, the Census Bureau's Checklist on Disclosure

⁹ Michigan PUMA 03200 comprises Ann Arbor city and is extremely complex, including 4 exclaves and 86 enclaves (holes). Ann Arbor reported 194 annexations from January 1, 2000 through January 1, 2010. Total acreage annexed in that time, as reported in the Boundary and Annexation Survey, was 669.3 acres. Throughout Michigan, there were 794 legal boundary changes in the past 10 years, involving 21,345 acres.

Potential of Data must be completed by the data producers and reviewed by disclosure experts at the Census Bureau. This review may result in:

- The introduction of “noise” (i.e., small amounts of variation) into selected data items.
- The use of data swapping (i.e., locating pairs of matching households in the database, based on a set of predetermined variables, and swapping those households across geographic areas to add uncertainty for households with unique characteristics).

b) Census Bureau presents the following research to eliminate MCDs as building blocks for 2010 PUMAs:

- (1) In 29 states, MCDs are the primary governmental or administrative division of a county having legal boundaries, names, and descriptions. MCDs represent different types of legal entities (i.e., towns, townships, boroughs, incorporated places) and vary in characteristics, powers, and functions depending upon the state and the type of MCD. In the 12 states in which MCDs serve as general-purpose local governments (Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin), only Michigan provided opposing comments on this topic. Presumably all other MCD states are satisfied with the proposed change from 2000¹⁰.
- (2) In 20 MCD states¹¹ some or all of the incorporated places have governments that function independently from the jurisdiction of the surrounding MCD or MCDs, and these incorporated places are referred to as MCD equivalents. The State of Michigan has two types of MCDs: those that are coextensive with an active incorporated place that is independent of any county subdivision and serves as a county subdivision or MCD equivalent, referred to here as ‘false MCDs;’ and those that are active county subdivisions that are not coextensive with an incorporated place, referred to here as ‘legal-general purpose MCDs.’ A minority (22%) of the 2000 PUMAs were built on (solely consist of) one false MCDs/incorporated places. PUMAs that were built on multiple geographic entities, one or more of which were false MCDs/incorporated

¹⁰ For 2000 PUMAs, only MCDs in the New England states were permitted to be used as PUMA building block geographies.

¹¹ In 20 states (Connecticut, Illinois, Indiana, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin) a majority of the MCDs are general-purpose governmental units. A majority of these MCDs are legally designated as towns or townships.

places accounted for only 19% of all PUMAs. The remaining PUMAs in Michigan were built with legal-general purpose MCDs, tracts, and/or counties. Most Michigan PUMAs in 2000 were tract-based, and therefore coincident with county boundaries.

Most of the PUMAs in Michigan have a strong correlation with census tract and/or county boundaries. Tracts and county boundaries provide stable building blocks for PUMAs and can be used to approximate the boundaries of MCDs in many cases.

c) Additional guidelines to improve the utility and meaningfulness of the PUMA and PUMS/estimate data for PUMAs that were formerly delineated with incorporated places or MCDs as primary building blocks

- (1) To improve the utility and meaningfulness of the PUMA and PUMS/estimate data, participants will have the ability to name PUMAs (so that the areas will be recognizable in name, if not precisely the same boundaries).
- (2) To improve the utility and meaningfulness of the PUMA and PUMS/estimates data, PUMA equivalency files will be published on the Census Bureau's website (as in Census 2000) to help users better understand the relationship between the PUMA and the underlying counties, county subdivisions (e.g., MCDs), places, and census tracts.

2) ***Guideline to make PUMAs coincident with Metropolitan Statistical Area Boundaries, as well as other place definitions, and principal cities:*** A major public policy research organization strongly recommends a guideline to make PUMAs coincident with metropolitan statistical area boundaries. They support the guideline to define PUMAs that are either entirely inside or entirely outside a metropolitan statistical area whenever possible. They also support the guidelines that place definitions, urban/rural status, and local knowledge should inform PUMA delineation, and to maximize the number of standard PUMAs. In addition they suggest that PUMAs be defined to approximate principal city boundaries so that researchers can use PUMA data to study differences between urban, suburban, and rural populations.

a) The Census Bureau recommends that PUMAs approximate metropolitan statistical area boundaries as well as other meaningful geographies: The participant should use counties and census tracts as the building blocks for the delineation of PUMAs to approximate the full extent

of the metropolitan statistical area boundaries as well as other types of meaningful geographies (cities, etc). This guideline is unchanged from Census 2000.

b) Metropolitan Statistical Areas available during 2010 PUMA delineation: Metropolitan and micropolitan areas available for the 2010 PUMA delineation are those that are available as of January 1, 2010. These areas are not based on the results from the 2010 Census or the 2010 ACS.

3) *Include other organizations within the state during the 2010 PUMA delineation process:* A regional organization from Missouri and transportation planning agencies from Maryland and New Mexico have suggested that local input should be required by the Census Bureau (rather than “recommended”) for PUMAs that include metropolitan statistical areas. Groups such as the Tribal Governments, State Departments of Transportation (DOTs), and Metropolitan Planning Organizations (MPOs) are examples of organizations that can provide appropriate information and knowledge to develop boundaries for 2010 PUMAs in metropolitan areas.

The Census Bureau strongly recommends local input for PUMAs in all areas: Existing partnerships established by the SDCs to support the 2010 Census are recommended for the delineation of PUMAs in all areas, including metropolitan areas.

C. No Changes to the Final Criteria From the Proposed Criteria

Upon reviewing all comments regarding appropriate building blocks as well as additional guidelines and recommendations, the Census Bureau will not put forth any new changes to the final criteria from the proposed criteria.

III. Final PUMA Criteria for the 2010 Census

The criteria contained herein apply to the United States, Puerto Rico, and the Island Areas. In accordance with the final criteria, the Census Bureau may modify and, if necessary, reject any proposals for PUMAs that do not meet the established criteria. In addition, the Census Bureau reserves the right to modify the boundaries and attributes of PUMAs as needed to maintain geographic criteria and relationships before the final 2010 PUMA geography is finalized.

The Census Bureau will use the following criteria and characteristics to identify the areas that will qualify for designation as PUMAs for use in tabulating data from the 2010 Census and the ACS.

A. One level of PUMAs will be delineated for the 2010 Census.

The Census Bureau previously published two levels of PUMA geography corresponding to the two types of PUMS files available (1-percent super-PUMA and 5-percent standard

PUMA). Because 1-percent PUMS files are not produced for the ACS and are not planned for the 2010 Census, only one type of PUMA—the standard 5-percent PUMA—is needed. The standard PUMAs for 2010 will be used to tabulate and present decennial census and ACS PUMS as well as ACS period estimates.

B. Each PUMA must have a population of 100,000 or more. Each PUMA must contain a minimum population of 100,000 at the time of delineation.

PUMAs with a population substantially below 100,000 persons present disclosure concerns for the ongoing publication of ACS PUMS and potentially for ACS estimates. If the population of a PUMA falls substantially below the minimum population threshold of 100,000 through the decade, the Census Bureau will evaluate the disclosure risk and may combine the PUMA with one or more adjacent PUMAs for ACS data publication to ensure data confidentiality. For those areas currently experiencing population decline, or where population decline is anticipated, PUMAs should be delineated to encompass a population substantially higher than 100,000 persons such that the population will remain above 100,000 throughout the decade.

C. PUMAs may not cross state boundaries.

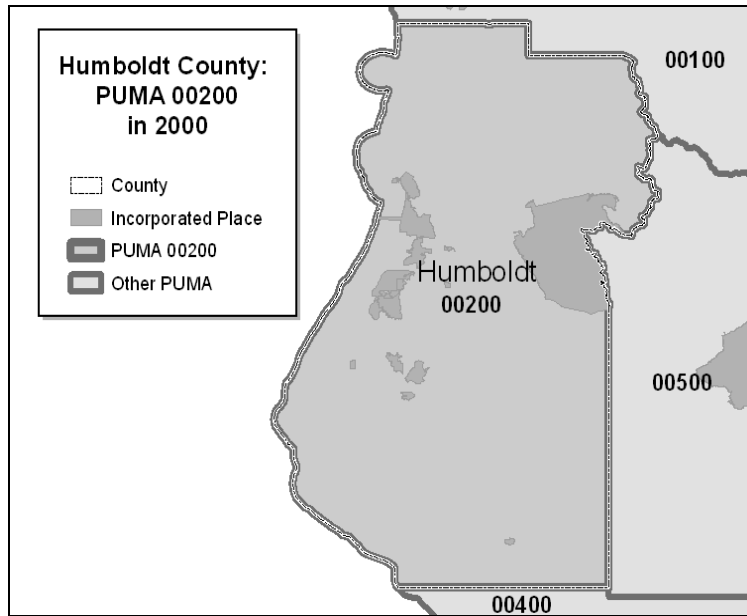
D. Counties and equivalent entities¹² and census tracts¹³ will be the geographic “building blocks” for PUMAs.

Examples of PUMA building blocks are provided in the map examples below (Maps 1 – 3).

1. One county may be designated as a PUMA as long as it meets the minimum threshold of 100,000 persons (MAP 1).

¹² Includes parishes in Louisiana; boroughs and census areas in Alaska; independent cities in Maryland, Missouri, Nevada, and Virginia; that portion of Yellowstone National Park in Montana; districts in American Samoa; the three main islands of the U.S. Virgin Islands; municipalities in the Northern Mariana Islands; municipios in Puerto Rico; and the entire areas constituting the District of Columbia and Guam.

¹³ 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. The primary purpose of census tracts is to provide a stable set of geographic units for the presentation of statistical data. Standard census tracts used for the delineation of PUMAs are coincident with state and county boundaries. Tribal census tracts are not used in the delineation of PUMAs. The tribal census tract are a unique geographic entity defined within federally recognized American Indian reservations and off-reservation trust lands and can cross state and county boundaries. Tribal census tracts may be completely different from the census tracts and block groups defined by state and county.

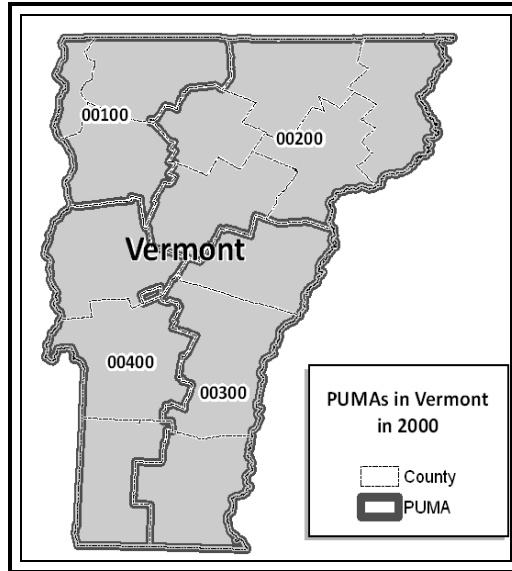


Map 1: Humboldt County, California in 2000

One county may be designated as a PUMA as long as it meets the minimum population threshold of 100,000 persons.

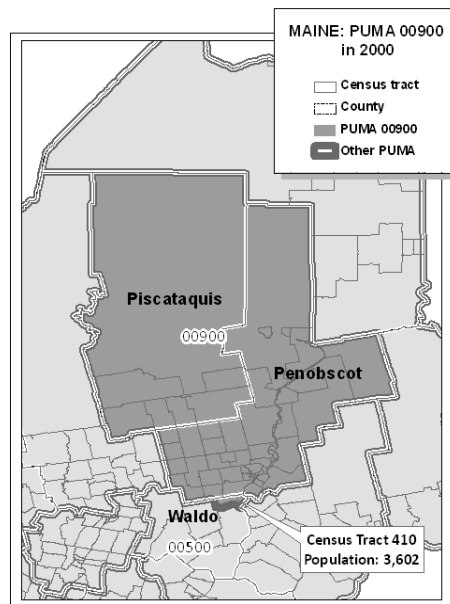
2. Two or more contiguous counties may be aggregated to create a PUMA (MAP 2). Tract-based PUMAs may cross county boundaries provided that each single PUMA-county part meets a minimum population threshold of 2,400 persons (i.e., double the 2010 Census minimum population threshold for a census tract, 1,200 persons). This minimum population threshold for census tract populations that cross county boundaries is a new criterion for 2010 to ensure confidentiality of data within a single PUMA-county part (MAP 3).

Census tracts may be aggregated to approximate the extent of other types of other geographic entities, including MCDs, incorporated places, census designated places (CDPs), and/or urban areas (UAs).



Map 2: Multi-County PUMAs in Vermont in 2000

Two or more contiguous counties may be aggregated to create a PUMA.

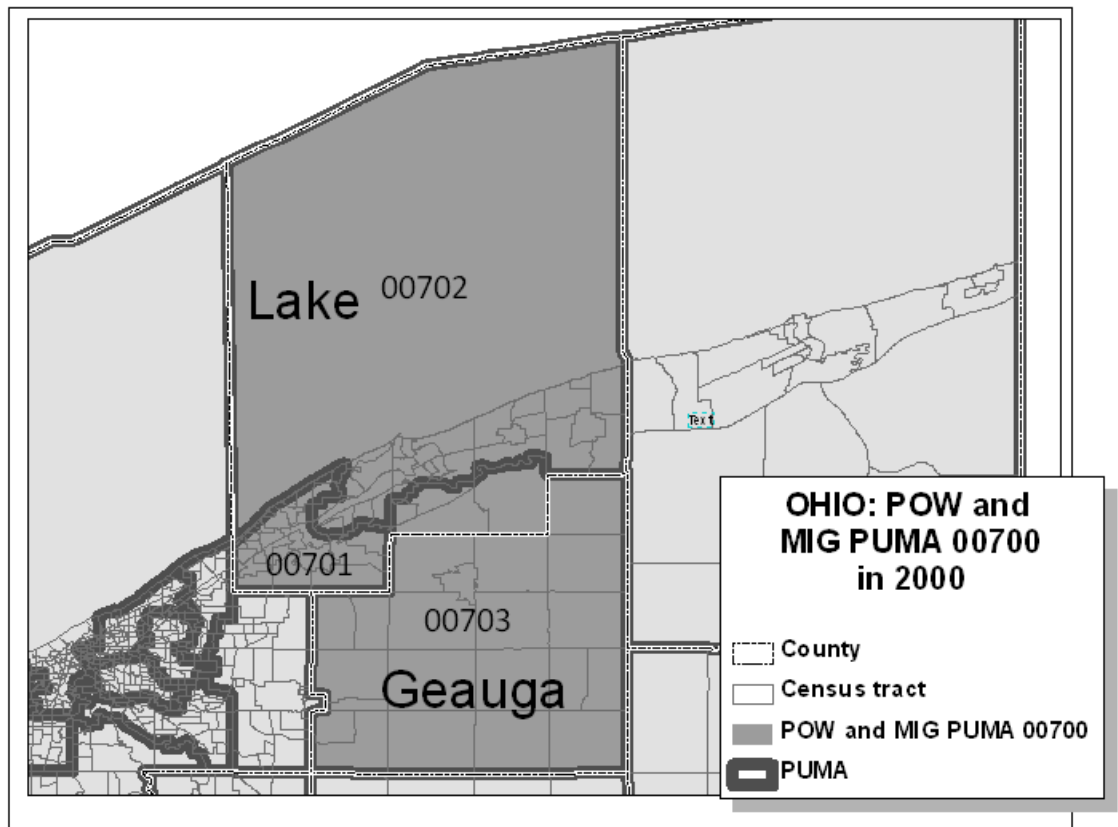


Map 3: PUMA 00900 in Piscataquis County, Penobscot County, and Census Tract 410 in Waldo County, Maine in 2000

Tract-based PUMAs may cross county boundaries provided that each single PUMA county-part meets a minimum threshold of 2,400 persons. PUMA 00900 consists of two entire counties and census tract 410 in a third county (Waldo). The single PUMA county part in Waldo County (Census Tract 410) had a Census 2000 population of 3,602 persons.

- E. **POW PUMAs and/or MIG PUMAs are larger aggregates of standard PUMAs and can consist of a single PUMA for county-based PUMAs, or a combination of adjacent tract-based PUMAs. When combined, these larger PUMAs may be aggregates of one or more complete counties (MAP 4).**

The Census Bureau defines POW PUMAs and MIG PUMAs to provide detailed characteristics regarding workers and their work places and detailed characteristics for migrants, respectively.



Map 4: POW and MIG PUMA 00700 in Ohio in 2000

POW and MIG PUMA 00700 is comprised of three standard PUMAs (00701, 00702, and 00703) within two counties (Lake and Geauga counties).

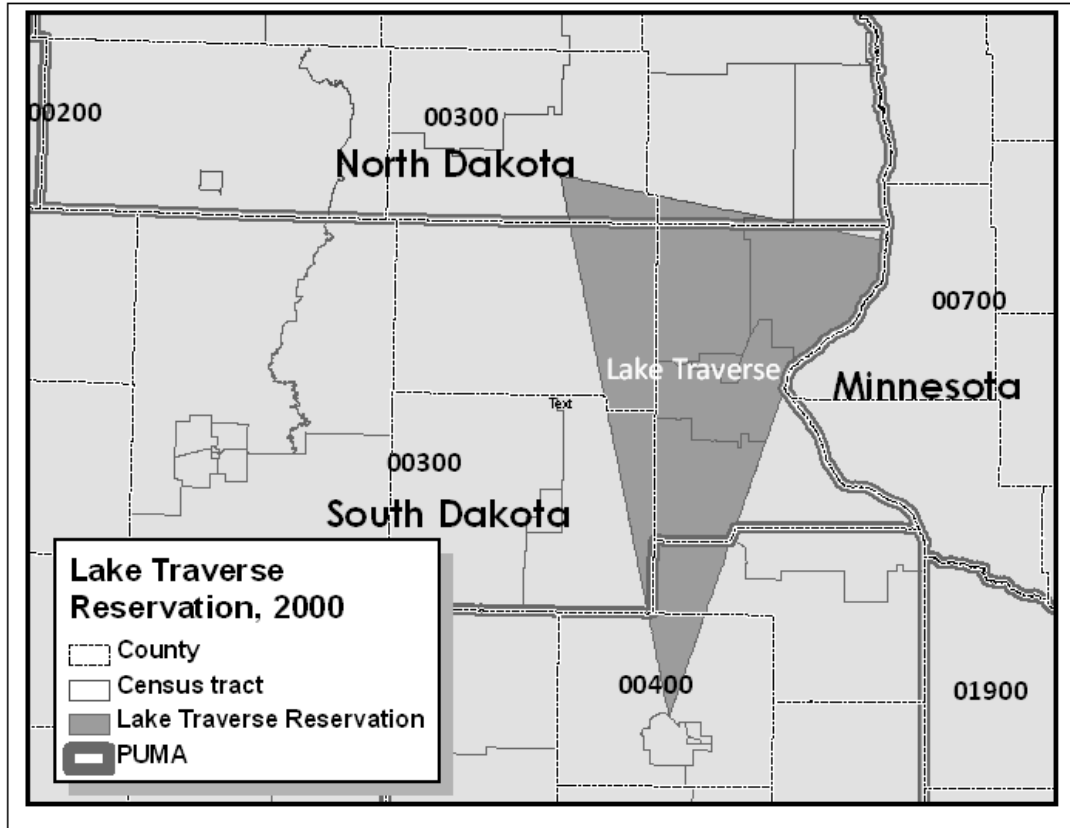
- F. **Each PUMA must constitute a geographically contiguous area.**

A PUMA may be noncontiguous only if a county or a census tract used as a building block for the PUMA is noncontiguous.

IV. 2010 PUMA guidelines

The Census Bureau does not require participants to adhere to the following guidelines, but strongly encourages participants to consider the benefits of creating geographic entities that conform to these guidelines. In some instances, it may be geographically impossible to adhere to some of these guidelines.

- A. Wherever possible, each PUMA should comprise an area that is either entirely inside or entirely outside metropolitan or micropolitan statistical areas.
- B. The Census Bureau recommends that 2010 place definitions, 2000 urban/rural definitions, and local knowledge inform PUMA delineations.
- C. The number of standard PUMAs should be maximized, and PUMAs should not contain more than 200,000 persons, wherever possible, unless the PUMA is defined for an area in which population decline is anticipated.
- D. PUMAs should avoid unnecessarily splitting American Indian reservations (AIRs) and/or off-reservation trust lands (ORTLs), and separating American Indian populations, particularly if large numbers of American Indians are included within all parts of the split AIRs/ORTLs (MAP 5). Since AIRs/ORTLs may cross state boundaries, this guideline applies only to the portion of an AIR/ORTL within a state. In addition, multiple AIR/ORTLs with low populations may be combined with other AIR/ORTLs to delineate a PUMA within a state. In all such instances, the total population and makeup of the affected areas should be considered in any decisions regarding the adjustment of PUMAs for AIRs/ORTLs. The goal of this guideline is not to make PUMA boundaries noncontiguous or needlessly complex and separate their relationship from other important geographic boundaries like counties. Census tracts for the 2010 Census had a similar requirement, so by limiting 2010 PUMA building block geography directly to counties and census tracts, this should make following this guideline more straightforward.



Map 5: Lake Traverse Reservation in 2000

The reservation boundaries cross North Dakota and South Dakota state boundaries and are contained within three separate PUMAs: -00300 (ND), 00300 (SD), and 00400 (SD). The portion of Lake Traverse Reservation within PUMA 00400 contained a population of 1,924 persons in Census 2000. This situation should be avoided in 2010.

The Census Bureau may add additional delineation guidelines to which participants are strongly encouraged, but not required, to follow.

V. Additional Information Pertaining to 2010 PUMAs

- A. **PUMA names:** Where applicable, descriptive PUMA names may be assigned by SDCs to individual areas or regions to aid local identification. This is new for the 2010 Census and will enable participants to provide a name for a PUMA, identifying the area or region encompassed within the PUMA.

- 1) PUMA names should be recognized and used in daily communication by the residents of the community.
 - 2) A PUMA may not have the same name as an adjacent or nearby PUMA.
- B. **PUMA codes:** If the geographic extent of a proposed 2010 PUMA is primarily unchanged from Census 2000, the Census Bureau will attempt to retain the same code as was used for Census 2000. SDCs should indicate their preferences to retain codes for specific PUMAs.
- C. **Definitions of key terms used in the PUMA criteria document** are in Appendix A: *Geographic Terms & Concepts* document found on the Census Bureau website (http://www.census.gov/geo/www/2010census/GTC_10.pdf).

VI. Definitions

Contiguous— A description of areas sharing common boundaries, such that the areas, when combined, form a single piece of territory. Noncontiguous areas form disjoint pieces.

Microdata— The individual records which contain information collected about each person and housing unit.

Statistical Geographic Entity—A geographic entity that is specially defined and delineated, such as block group, CDP, or census tract, so that the Census Bureau may tabulate data for it. Designation as a statistical entity neither conveys nor confers legal ownership, entitlement, or jurisdictional authority.