

Census Proposes Updated Urban Area Criteria

Prepared by Chris Zeilinger, Community Transportation Association of America

March 2021



For transit agencies, planning agencies, their partners and funders, and their other stakeholders, one of the most important things that happens every ten years is that the Census Bureau takes the latest census results and determines which parts of the country are in which urban areas, and which are not. The results of these urban area determinations set the course for how the next decade's urban and rural transportation funds are allocated, so they're pretty important.

In general, here's how that works. The US is made up of more than 11 million census blocks; these are pretty small geographic units, often only a city block or two in built-up areas, and a bit larger in less developed areas, but generally with anywhere from zero to only a few dozen or maybe a hundred or so people in most cases. After each decennial count, Census uses some established criteria to look at every one of those blocks to determine which ones are urban, and which aren't urban.

On February 19, 2021, Census proposed the criteria it is considering to use when determining urban areas under the 2020 decennial population count. Census is accepting comments on its proposal through May 20, 2021. Here's a link to that day's Federal Register notice: <https://www.federalregister.gov/documents/2021/02/19/2021-03412/urban-areas-for-the-2020-census-proposed-criteria>.

This notice does not identify which places are going to be considered urban areas with populations greater than 50,000. However, when Census finalizes these criteria, as informed by comments submitted in response to its proposal, that's how those urban areas will be determined.

To help you think about this topic, we've compiled a "redline" document which you'll find at the end of this analysis, that shows what's proposed to be changed from the current urban area criteria, which were established in response to the 2010 decennial census. In that document, proposed new text is italicized, and current text proposed for removal is indicated in a strike-through font. Text that is neither italicized nor struck-through is proposed to remain unchanged from 2010.

In brief, Census is proposing fundamental shift toward using housing density, instead of population density, as the primary criterion for determining whether a census block is urban. On a nation-wide level, that won't change the relative balance of the country's urban and rural areas, but probably will have locally significant impacts in some places. Another fundamental change is that Census is proposing a totally new approach for addressing how to merge or split urban areas in those "agglomerations" where two or more urban areas are

largely contiguous (such as in many growing and sprawling major metropolitan areas); this is something where constructive comments are warranted by those with information and insight on the issue. There are some other, more modest, proposed modifications in Census' proposed urban area definition criteria that won't affect everyone, but may be locally significant in some areas. For instance, some changes proposed to the criteria for "hops" and "jumps" to connect outlying high-density census blocks to urban core census blocks may have the effect of preventing some urban areas from merging or agglomerating, but may also cause a handful of otherwise-urban areas' populations to fall below one of FTA's qualifying population thresholds.

CTAA's more detailed analysis of Census' proposal is below, followed by the CTAA-created "redline" text mentioned on the previous page. However, before you read any further, there are four underlying points that are important to keep in mind:

- This Census proposal has nothing to do with a January 2021 notice from the Office of Management and Budget (OMB) concerning proposed changes to the way Metropolitan Statistical Areas (MSAs) are determined. **Nothing in federal transit or highway programs, nor their statutory requirements concerning MPOs, are linked in any way to areas' MSA status.** Therefore, it does not seem necessary for transit interests to speak up in response to OMB's proposal.
- **This latest Census action is merely a proposal;** nothing in its pages is official. In all likelihood, some of what's discussed below will be changed when Census finalizes its 2020 urban area criteria. Just how things get changed may be influenced by your comments, if you have them.
- **Census is concerned solely with the details of how to define a place as being "urban,"** whatever that's determined to mean. Census is not interested in, and not responsible for, the ways their data or definitions are used by other parts of the federal government. Therefore, there's little to no point in commenting to Census about how this proposal could affect your future FTA funding or MPO status.
- Regardless of how Census proceeds with defining its urban area criteria, formula-based FTA funds will continue to be allocated to Census-defined urban areas with populations greater than 50,000 (with tiers of funding related to urban areas with populations between 50,000 and 200,000, areas with populations between 200,000 and 1 million, and areas with populations greater than 1 million), and to areas that are not within any urban area with a population greater than 50,000, and both FTA and FHWA statutes will continue to require that all Census-defined urban areas with populations greater than 50,000 are within the planning areas of properly designated MPOs. **Census is powerless to change these fundamentals of federal transportation law.**

What's Census Proposing to Change in their Urban Criteria?

Some of what's proposed is clearly minor, even though it may be internally important to the Census Bureau. Other items may sound important, but might not really be too significant. Some items in Census' proposal are very important to note, even if their overall impact winds up not being very dramatic. And some items might actually be controversial or problematic.

ITEM 1: Farewell to Urbanized Areas and Urban Clusters; By the Way, Let's Also Remove Hundreds of Places from Urban America

That sounds scary, but probably won't matter too much in the highway, transit and transportation planning arenas. Currently, Census-defined urban areas are either qualifying "urban clusters" with populations between 2,500 and 50,000, or else are qualifying "urbanized areas" with populations greater than 50,000. Census proposes replacing that 2-part scheme with a single definition of "urban area," which would be qualifying areas with either 4,000 or more housing units or populations greater than 10,000.

If that becomes official, nothing changes in the determinations of FTA "urban" and "rural" formula transit apportionments and allocations, and nothing changes in the requirement that there be MPOs for urban areas with populations greater than 50,000. The fact that areas currently qualifying as urban clusters with populations between 2,500 and 10,000 are relegated to a rural status under this proposal is statistically interesting, but won't affect the planning or distribution of federal highway and transit funds.

ITEM 2: Let's Get Granular

This is a big change in practice. Census is proposing to make all urban area determinations on a Census block-by-Census block basis. If you're unfamiliar, this is the smallest unit of geography that Census uses in its tabulations; the US is made up of more than 11 million Census blocks. In current practice, Census looks at census tracts as the starting point for identify urban area cores; tracts are much larger geographic units than blocks, generally with several thousand residents (the numbers vary, but most Census tracts contain dozens of Census blocks). But since current practice already is to examine census blocks surround urban area cores when making urban area determinations, relying solely on block-level data probably wouldn't make a very noticeable change in the outcomes of urban area determinations.,

ITEM 3: How Dense Is Your Housing?

This is a big change, and may be locally significant in many places. Basically, Census is proposing that the triggering event for a census block to be deemed “urban” would be based on the number of housing units per square mile. Both occupied and unoccupied housing units would be counted, which could be a relief for those places having high levels of housing transience, or whose residents had higher than usual displacement when the decennial census enumeration took place in spring 2020. Under current practice, the triggering event is population density (the number of residents per square mile), not housing density. Even if this change takes effect, all FTA funding would continue to be allocated on the bases of population, population density, low-income population, senior population, population of individuals with disabilities, and various non-Census factors; none of that is slated to change, even if the qualifying urban areas are determined on the basis of census blocks’ housing density.

ITEM 4: Including Institutional Population

When changing the determination basis from population density to housing density, this new item becomes essential, since “institutional” living arrangements are not counted in Census’ definition of “housing units.” In some places, this could be pretty significant. Basically, census blocks that have institutional or other group quarters, and which are adjacent to qualifying urban area census blocks, would be included as part of those urban areas. This would ensure that college dorms, residential care facilities, on-base military housing, and possibly even some correctional facilities would be able to be included in the defined urban area of which they’re a part. Otherwise, those institutional and other facilities would have to be left out in the rural cold, when urban areas are defined in terms of housing unit density. Note that under current population-based criteria, this isn’t an issue; when you’re counting heads, people are people, whether they’re living in a housing unit or in an institutional arrangement.

ITEM 5: Tightening up Hops, Jumps, and Enclaves, and an End to Indentations

For 2020, Census is proposing slight reductions in the distances that defined urban area boundaries can “hop” and “jump” along road corridors through non-qualifying census blocks as they connect otherwise non-contiguous qualifying urban census blocks. Census proposes to clarify that hopped and jumped low-density census blocks would not be counted as part of the urban area or its population. Furthermore, Census is proposing a slight reduction in the size of an allowable low-density “enclave,” wholly surrounded by qualifying census blocks, that can be included as part of that urban area. “Indentations” of low-density census blocks bordered on about 75 percent of their boundaries by qualifying urban census blocks, no longer would be included in defined urban areas. On the other hand, Census is proposing a slight increase in the distance that defined urban area boundaries can connect qualifying census blocks by jumping over bodies of water or – for

the first time – wetlands. In addition, Census proposes to add the possibility of including census blocks made up entirely of cargo airports to their adjoining or surrounding urban areas, as would remain to be the case for qualifying passenger airports.

Collectively, those proposed changes would have **significant marginal impacts** in many urban areas. Shortening the hop and jump distances means that some outlying higher-density areas might not be included in defined urban areas, after all. Increasing the allowable jump distance over bodies of water, allowing these same longer jumps over wetlands, and allowing some cargo airports to be included in urban areas might, in some cases, make it easier for some outlying high-density census blocks to be incorporated into defined urban areas. For the most part, these changes from what would be expected under 2010 procedures would not lead to dramatic impacts, but would be noticeable around the edges of defined urban area. However, Census' proposal probably would lead to some urban areas failing to cross the 50,000, 200,000, or 1 million population thresholds as a result of these changes, while other urban areas might find, to their surprise, that they have jumped (or fallen below) one of these thresholds.

ITEM 6: A New Approach to Agglomerations and Splits

Without some intervening rules of procedure, there would have been one continuous urbanized area from northeastern Maryland to central Massachusetts, and many other urban “agglomerations” around the country, in 2010, and this tendency of ever-increasing urbanization would be at least as dramatic in 2020. In 2000 and earlier censuses, the Census Bureau applied a subjective human touch to determine when and where to merge, split or leave alone these agglomerated urban areas, but the shift to block-based urban area definitions in 2010 forced a change to a more automated urban area decision-making process.

In a radical-sounding move, Census is proposing to scrap the geography- and history-based process used in addressing 2010's agglomerations, and would replace that with an all-new methodology, based on using commuting patterns as reported through the Longitudinal Employer-Household Dynamics (LEHD) analysis program to determine when and where it makes sense to break up an agglomerated urban area into individual urban areas, when or where it makes sense to combine existing urban areas that are part of an agglomeration, and when it's best to leave the 2020 urban area definition results alone, even in an agglomerated setting. By the way, LEHD information is what drives the Census-BLS “On The Map” data visualization tool.

In general, this data-driven approach to managing agglomerations should sustain Census' unofficial policy of trying to minimize unnecessary disappearances among neighboring urban areas at risk of merger or absorption. In many cases, the use of LEHD commuting patterns to resolve agglomerations should lead to rational-seeming results when determining when – or whether – to merge or split adjoining urban areas. However, there

are certain to be surprises under the proposed methodology, and some of these surprises in urban area determinations may be dramatic or downright shocking in a few instances.

Care to Comment?

As stated above, Census is accepting public comments on its proposed urban area determination criteria through May 20, 2021. For details of when and how to comment, see their Federal Register notice at <https://www.federalregister.gov/documents/2021/02/19/2021-03412/urban-areas-for-the-2020-census-proposed-criteria>.

As you wrestle with what you may want to say, if anything, in official comments to the Census docket on this notice, here are some things to ponder:

- In cases where there are large agglomerations of adjoining or nearly overlapping urban areas, what do you think of Census' proposal to use LEHD commuting patterns to guide its decisions about how to merge, split or demarcate these closely knit urban areas?
- What do you think about the proposed adjustments of metrics used around the edges of urban areas – whether it's a matter of how "hops" and "jumps" are used, the inclusion – or not – of "enclaves" and "indentations" within urban areas, the extent to which waterways, wetlands or airports affect urban area determinations, etc.? Would those changes improve the way urban areas are identified?
- Does it make more sense, or less, to look at housing unit density (whether occupied or vacant) instead of population density when starting to determine whether a census block is urban or rural?
- Do you see a positive or negative impact in Census' proposed use solely of block-level housing unit densities to define urban cores? This would be a change from current practice, in which Census looks at tract-level population densities when identifying urban cores, and then builds up identified urban areas based on adding qualifying census blocks to these cores.
- And, of course, there's that very basic question: does this proposal succeed at using Census' existing data to define what is urban, and what's not urban? That's the most important question of all, because once Census has settled on its criteria to the 2020 population count and established the country's updated list of urban areas, there's almost no opportunity to appeal or change those determinations. And almost immediately thereafter, FHWA & FTA will be looking at any newly defined urban areas with populations above 50,000 to establish planning areas and MPOs, and FTA will be using those new urban area definitions in the very next year's apportionments and allocations of urban and rural transit funds.

Whether in response to those or other issues you see in this process, you can submit official comments to the Census Bureau by following the instructions in their Federal Register notice.

Finally, if you have thoughts, questions or concerns you'd like to share with CTAA, don't hesitate in reaching out to Chris Zeilinger of the CTAA staff by email at zeilinger@ctaa.org, or on his phone, 202-250-4108.

The following text was assembled by CTAA. It uses the urban area criteria from 2010, adding in the changes proposed for 2020. Text in italics (*like this*) is new text proposed by Census for 2020; text in strikethrough (~~like this~~) is proposed for removal when determining urban areas under the 2020 census. All other text would be unchanged from 2010 to 2020.

Urban Area Criteria for the ~~2010~~ 2020 Census

The criteria outlined herein apply to the United States, ~~and~~ Puerto Rico, *and the Island Areas of American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands.* The Census Bureau ~~will use~~ *proposes* the following criteria and characteristics for use in identifying the areas that will qualify for designation as ~~urbanized areas and urban clusters~~ *urban areas* for use in tabulating ~~and presenting~~ data from the ~~2010~~ 2020 Census, the American Community Survey (ACS), the Puerto Rico Community Survey, and potentially other Census Bureau censuses and surveys.

A. ~~2010~~ 2020 Census Urban Area, ~~Urbanized Area, and Urban Cluster~~ Definitions

For the ~~2010~~ 2020 Census, an urban area will comprise a densely settled core of census ~~tracts and/or census~~ blocks that meet minimum ~~population~~ *housing unit* density requirements, along with ~~contiguous~~ *adjacent* territory containing non-residential urban land uses as well as *other lower density* territory ~~with low population density~~ included to link outlying densely settled territory with the densely settled core. To qualify as an urban area ~~on its own~~, the territory identified according to the *proposed* criteria must encompass at least ~~2,500~~ people, at least ~~1,500~~ of which reside outside institutional group quarters

~~4,000 housing units or at least 10,000 persons. Urban areas that contain 50,000 or more people are designated as urbanized areas (UAs); urban areas that contain at least 2,500 and less than 50,000 people are designated as urban clusters (UCs). The term “urban area” refers to both UAs and UCs. The term “rural” encompasses all population, housing, and territory not included within an urban area.~~

As a result of the urban area delineation process, an incorporated place or CDP may be partly within and partly outside an urban area. ~~Any place (incorporated place or CDP) that is split by an urban area boundary is referred to as an extended place.~~ Any census geographic areas, with the exception of census blocks, may be partly within and partly outside an urban area.

All proposed criteria based on land area, housing unit density, and population, and population density, reflect the information contained in the Census Bureau's Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) Database (MTDB) produced for the 2010 Census at the time of the initial delineation. All calculations of population housing unit density include only land; the areas of water area contained within census tracts and census blocks are not used to calculate population in density calculations. Housing unit, population, and worker flow data used in the urban area delineation process will be those published by the Census Bureau for all public and official uses.

~~B. UA and UC Proposed Urban Area Delineation Criteria~~

The Census Bureau ~~defines~~ *proposes to define* urban areas primarily on the basis of ~~residential population~~ *housing unit* density measured at the ~~census tract and census block levels of geography. Two population density thresholds are used in the delineation of urban areas: 1,000 persons per square mile~~

(ppsm) and 500 ppsm. The higher threshold is consistent with population density criteria used in the 1960 Census through 1990 Census urban area delineation processes; it is used to identify the starting point for delineation of individual, potential urban areas and ensures that each urban area contains a densely settled core area that is consistent with previous decades' delineations. The lower threshold was adopted for the Census 2000 process when the Census Bureau adopted an automated delineation methodology; it provides that additional territory that may contain a mix of residential and nonresidential urban uses can qualify for inclusion in an urban area. *The 385 housing units per square mile density threshold utilized in the delineation of urban areas is consistent with the 1,000 persons per square mile density used in the past, based on the 2019 ACS 1-year data average of an estimated 2.6 persons per household for the United States.*

1. IDENTIFICATION OF INITIAL URBAN AREA CORES

The Census Bureau will begin the delineation process by identifying and aggregating contiguous census tracts, blocks each having a land area of less than three square miles and a population density of at least 1,000 ppsm: *housing unit density of at least 385 housing units per square mile. After the initial urban area core with a population density of 1,000 ppsm or more is identified, additional census tracts with a land area less than three square miles and with a population density of at least 500 ppsm will be included if contiguous to any qualifying census tracts. If a qualifying census tract does not exist, then one or more contiguous census blocks that have a population density of at least 1,000 ppsm are identified and aggregated. This aggregation of continuous census blocks would be known as the "initial urban area core."* *The initial urban area core must encompass at least 385 housing units (consistent with the requirement for at least 1,000 people in the 2010 criteria).*

~~A census block is included in~~ *After the initial urban area core is identified, additional census blocks would be included if it is adjacent if it is contiguous to other qualifying territory, and and if it meets any of the following criteria:*

a. Has a ~~population~~ *housing unit density of at least 500 ppsm, or 385 housing units per square mile.*

b. At least one-third of the census block consists of territory with a level of imperviousness of at least twenty percent, and is compact in nature as defined by a shape index. A census block is considered compact when the shape index is at least 0.185 using the following formula: $I = 4\pi A/P^2$ where I is the shape index, A is the area of the ~~block~~ *entity*, and P is the perimeter of the *entity*.
~~block, or~~

c. At least one-third of the census block consists of territory with a level of imperviousness of at least twenty percent, and at least forty percent of its boundary is contiguous with qualifying territory.

The Census Bureau will apply criteria 1.a, 1.b, and 1.c above until there are no census blocks to add to ~~an~~ *the* urban area. Any “holes” or remaining nonqualifying territory completely contained within an initial urban area core that is less than five square miles in area will qualify as urban via the criteria for the inclusion of enclaves set forth in ~~V.B.4.a.~~ *the III. B. 5., subheading entitled, “5. Inclusion of Enclaves.”*

2. INCLUSION OF GROUP QUARTERS

Census blocks containing institutional and non-institutional group quarters that are adjacent to census blocks qualifying based on the criteria outlined in step 1 above (“1. Identification of Initial Urban Area Cores”) will be included in the urban area. This criterion accounts for the fact that group quarters,

such as college dormitories, are not considered housing units by the Census Bureau, but generally are part of the urban landscape.

3. INCLUSION OF NONCONTIGUOUS TERRITORY VIA HOPS AND JUMPS

Noncontiguous territory that meets the proposed ~~population~~ *housing density* criteria specified in ~~Sections 1.a, 1.b, and 1.e~~ *section B.1.a and b* above, but is separated from an initial urban area core of ~~1,000 or more people, will~~ *385 housing units or more*, may be added via a “hop” hop along a road connection of no more than 0.5 miles. Multiple hops may be made along a single road connection, thus accounting for the nature of contemporary urban development which often encompasses alternating patterns of residential and nonresidential ~~land~~ uses.

After adding territory to an initial urban area core via hop connections, the Census Bureau will identify all *urban area* cores that have a ~~population of~~ *1,500 or more housing unit count of 577 or more (consistent with the requirement for at least 1,500 people in the 2010 criteria)* and add other qualifying territory via a jump connection. Jumps are used to connect densely settled noncontiguous territory separated from the core by territory with low ~~population~~ *housing unit density* measuring greater than 0.5 and no more than ~~2.5~~ *1.5* road miles *across*. This process recognizes the existence of larger areas of nonresidential urban uses or other territory with low ~~population~~ *housing unit density* that do not provide a substantial barrier to interaction between outlying territory with high ~~population~~ *housing unit density* and the ~~main body~~ *of the urban area core*. Because it is possible that any given densely ~~settled~~ *developed* area could qualify for inclusion in multiple cores via a jump connection, the identification of jumps in an automated process starts with the initial urban area core that has the largest total population and continues in descending order based on the total population of each initial urban area core.

Only one jump is permitted along any given road connection, ~~unless the territory being included as a result of the jump was an initial urban area core with a population of 50,000 or more.~~ This limitation, which has been in place since the inception of the urban area delineation process for the 1950 Census, prevents the artificial extension of urban areas over large distances that results in the inclusion of communities that are not commonly perceived as connected to the particular initial urban area core. Exempted territory is not taken into account when measuring road distances along hop and jump corridors. *In the case of both hops and jumps, the intervening, low density block or blocks are not included in the urban area.*

~~In addition to the distance criteria listed above, a hop or a jump will qualify only if:~~

- ~~a. The territory identified in the high density destination and along the hop or jump corridor has a combined overall population density of at least 500 ppsm, or~~
- ~~b. The high density destination to be added via the hop or jump has a total population of 1,000 or more.~~

~~Although census blocks with a population density greater than or equal to 500 ppsm, but less than 1,000 ppsm, and not contiguous to qualifying territory containing at least one census tract or census block with a population density of at least 1,000 ppsm do not qualify as part of the initial urban core, these census blocks may still qualify as urban via hops or jumps.~~

4. INCLUSION OF NONCONTIGUOUS TERRITORY SEPARATED BY EXEMPTED TERRITORY

The Census Bureau ~~will~~ *proposes to* identify and exempt territory in which residential development is substantially constrained or not possible due to

either topographic or land use conditions. Such *exempted* territory offsets urban development due to particular land use, land cover, hydrological, and/or topographic conditions. For the ~~2010~~ 2020 Census, the Census Bureau identifies bodies of water as *proposes the following to be exempted territory*:

- *Bodies of water; and*
- *Wetlands (belonging to one of eight wetlands class definitions).*

~~Additional exempted territory will include land area where the populations of the census blocks on both sides of a road segment are zero and the road connection crosses at least 1,000 feet of water.~~

Noncontiguous qualifying territory will be added to a core *via a hop or jump* when separated by exempted territory, provided that *it meets the following criteria*:

- a. The road connection across the exempted territory (located on both sides of the road) is no greater than five miles, and
- b. ~~The road connection does not cross more than a total of 2.5 miles of territory not classified as exempted (those segments of the road connection where exempted territory is not on both sides of the road), and~~
- e. The total length of the road connection *between the initial urban area core and the noncontiguous territory, including the (exempt distance and nonexempt distance) non-exempt hop or jump distances, is also* no greater than five miles ~~for a jump and no greater than 2.5 miles for a hop.~~

The intervening, low density block or blocks of water or wetlands are not included in the urban area.

4. 5. INCLUSION OF ENCLAVES

The Census Bureau will add enclaves (that is, nonqualifying area completely surrounded by area already qualified for inclusion as urban) within the urban area, provided that they are surrounded only by land area that qualified for

inclusion in the urban area based on ~~population~~ *housing unit* density criteria and at least one of the following conditions is met:

- a. The area of the enclave must be less than five square miles, ~~or~~.
- b. All area of the enclave is surrounded by territory that qualified for inclusion in the initial *urban area* core, and is more than a straight-line distance of ~~2.5~~ 1.5 miles from a land block that is not part of the urban area.

Additional enclaves will be identified and included within the urban area if:

- ~~e. a.~~ The area of the enclave is less than five square miles, ~~and~~
- ~~e. b.~~ The enclave is surrounded by both land that qualified for inclusion in the urban area and water, and
- ~~e. c.~~ The length of the line of adjacency with the water is less than the length of the line of adjacency with the land.

~~7.~~ 6. INCLUSION OF AIRPORTS

After all territory has been added to the urban area *core* via hop and jump connections, ~~and enclaves, and indentations~~, the Census Bureau will then add whole census blocks that approximate the territory of ~~major~~ airports, provided at least one of the blocks that represent the airport is within a distance of 0.5 miles of the edge of qualifying urban territory. An airport qualifies for inclusion; if it is currently functional and ~~had an annual enplanement of at least 2,500 passengers in any year between 2001 and the last year of reference in the FAA Air Carrier Activity Information System. In cases where the qualifying airport is not contiguous to the qualifying urban area, the intervening nonqualifying census blocks will also be included in the urban~~

~~area.~~ *one of the following criteria (per the Federal Aviation Administration's (FAA) Air Carrier Activity Information System) applies:*

a. It is a qualified cargo airport.

b. It has an annual passenger enplanement of at least 2,500 in any year between 2011 and 2019.

8. 7. ADDITIONAL NONRESIDENTIAL URBAN TERRITORY

The Census Bureau will identify additional nonresidential urban-related territory that is noncontiguous, yet near the urban area. The Census Bureau recognizes the existence of large commercial and/or industrial land uses that are separated from an urban area by a relatively thin “green buffer,” small amount of undeveloped territory, and/or a narrow census block required for tabulation (such as a water feature, offset boundary, road median, or area between a road and rail feature). The Census Bureau will review all groups of census blocks whose members qualify as urban via the impervious surface criteria set forth in Section 1.b, have a total area of at least 0.15 square miles, and are within 0.25 miles of an urban area. A final review of these census blocks and surrounding territory will determine whether to include this territory in an urban area.

5. 8. SPLITTING LARGE AGGLOMERATIONS AND MERGING INDIVIDUAL URBAN AREAS

Population growth and redistribution coupled with the automated urban area delineation methodology that will be used for the ~~2010~~ 2020 Census may result in large ~~urban~~ agglomerations of continuously developed territory that may encompass ~~urban areas that were territory~~ defined as separate ~~urbanized urban areas in for the 2010 Census 2000.~~ Conversely, the ~~delineation methodology~~ may also result in separate ~~urbanized areas that were previously~~

defined as belonging to a single urbanized area. If such results occur, the Census Bureau will apply split and merge criteria guided by the Census 2000 urban area boundaries to the greatest extent possible to ensure the continued recognition of all such urbanized areas. All territory subject to either the splitting or merging criteria must first qualify as urban according to the 2010 Census delineation criteria.

The rule to retain the inventory of urbanized areas that continue to separately qualify for the 2010 Census does not apply to urban clusters. Urban clusters may be merged with other urban areas. The Census Bureau retains previously separate urbanized areas because these urban areas have historically developed as the functional units of 50 years of urbanized area delineation. Mandating this rule for urban clusters would artificially impede these areas from merging to form urbanized areas.

The Census Bureau will split a large urban agglomeration if the agglomeration consists of urbanized areas that were defined separately for the Census 2000. Potential split locations will include territory not qualifying as urban for the 2010 Census, water features, jump or hop corridors,^{f11} impervious census blocks,^{f12} where the corridor of contiguity between the component urbanized areas is at its most narrow, other geographic boundaries,^{f13} and/or the nearest location to the midpoint between the two component urbanized areas. In all cases, the Census Bureau will split the urban agglomeration at the best possible location that ensures the continued existence of all urbanized areas defined for the Census 2000.

After splitting all qualifying urbanized agglomerations into their component urbanized areas, the Census Bureau will examine all urban area cores sharing territory contained within the boundaries of the same urban area previously defined for the Census 2000. The Census Bureau will merge qualifying urban territory if an urban area defined for the Census 2000 is at risk of changing urban status from an urbanized area to an urban cluster, or losing its urban status entirely. If it is possible to maintain the urban status of a Census 2000

~~urban area, the Census Bureau will merge noncontiguous urban territories in descending order of population^[14] until the urban area status threshold is met.^[15]~~

~~After application in their entirety, the splitting and merging criteria will not prevent the formation of new urban areas consisting of territory previously defined as belonging to a Census 2000 urban area. These criteria also will not completely prevent urban areas from changing urban status.~~

For the 2020 Census, the Census Bureau proposes using worker flow data (i.e., commuting flows) from the Longitudinal Employer-Household Dynamics (LEHD) Program to identify whether the agglomeration represents a single functionally integrated region or whether commuting patterns indicate the presence of distinct urban areas within the larger agglomeration. An agglomeration that encompasses two or more 2010 Census urban areas will be a candidate for splitting into smaller urban areas. This condition will trigger application of the following splitting criteria:

a. Each pair of 2010 Census urban areas will be analyzed to determine whether to split or to remain merged. The 2010 urban area with the smaller population will be analyzed in relation to the 2010 urban area with the larger population.

b. The 2010 Census urban area with the smaller population will remain in the agglomeration if at least 50 percent of its resident workers are employed within the larger 2010 Census urban area and at least 50 percent of the jobs in the smaller urban area are filled by workers residing within the larger 2010 Census urban area. If either of these conditions are not met, the smaller urban area will be split from the agglomeration and categorized based on the worker flow data.

c. The 2010 Census urban areas are organized into four categories:

1. *Worker flows are 50 percent or more to or from another 2010 Census urban area, but not in both directions;*
 2. *Worker flows are less than 50 percent internal, but also less than 50 percent with any other single 2010 Census urban area;*
 3. *Adjacent 2010 Census urban areas that are in categories 1 or 2;*
 4. *Worker flows are 50 percent or more internal to the 2010 Census urban area.*
- d. Community detection is performed on the LEHD worker flow data using the Leiden Algorithm to identify commuter-based communities. The resulting communities are used to adjust the 2010 Census urban area split boundaries based on thresholds set to each of the four categories. However, for all categories, at least 50 percent of the worker flow must be internal to all resulting urban areas. The boundary between two urban areas may also be modified to avoid splitting an incorporated place, CDP, or minor civil division (MCD) between two urban areas at the time of delineation.*
- e. Upon running the community detection algorithm, the resulting communities are used to adjust the 2010 Census urban area split boundaries, and to identify the potential boundary between the resulting 2020 urban areas, starting with urban areas in the first category (below) and progressing to the fourth category (below).*
- *Category 1. For the smaller of each urban area pair, adjacent communities (identified by the Leiden Algorithm) are added from the larger urban area until the internal worker flow of the smaller urban area is greater than 50 percent. Communities can only be added to the smaller urban area until the total housing unit count increases by less than 50 percent.*
 - *Category 2. For the smaller of each urban area pair, adjacent communities (identified by the Leiden Algorithm) are added*

from the larger urban area until the internal worker flow is greater than 50 percent.

- *Category 3. If there is greater than 10 percent worker flow between adjacent urban areas in categories 1 and 2, then they will be combined as one urban area and the criteria of the lowest category will be applied.*
- *Category 4. Split boundaries will be adjusted to their nearest community boundary.*

6. INCLUSION OF INDENTATIONS

The Census Bureau will evaluate and include territory that forms an indentation within an urban area. This recognizes that small, sparsely settled areas that are partially enveloped by urban territory are more likely to be affected by and integrated with contiguous urban territory.

To determine whether an indentation should be included in the urban area, the Census Bureau will identify a closure line, defined as a straight line no more than one mile in length, that extends from one point along the edge of the urban area across the mouth of the indentation to another point along the edge of the urban area.

A census block located wholly or partially within an indentation will be included in the urban area, if at least 75 percent of the area of the block is inside the closure line. The total area of those blocks that meet or exceed the 75 percent criterion is compared to the area of a circle, the diameter of which is the length of the closure qualification line. The territory within the indentation will be included in the urban area if its area is at least four times the area of the circle and less than 3.5 square miles.

If the collective area of the census blocks inside the closure line does not meet the criteria listed above, the Census Bureau will define successive closure lines within the indentation, starting at its mouth and working inward toward the

~~base of the indentation, until the criteria for inclusion are met or it is determined that the indentation will not qualify for inclusion.~~

9. ASSIGNING URBAN AREA TITLES

A clear, unambiguous title based on commonly recognized place names helps provide context for data users, and ensures that the general location and setting of the urban area can be clearly identified and understood. The title of an urban area identifies the place(s) that is (are) most populated within the urban area. All population requirements for places and ~~minor civil divisions~~ (MCDs) apply to the portion of the entity's population that is within the specific urban area being named. ~~The following criteria will be used by the~~ Census Bureau *proposes the following criteria* to determine the title of an urban area:

- a. The most populous incorporated place with a population of 10,000 or more within the urban area will be listed first in the urban area title.
- b. If there is no incorporated place with a population of 10,000 or more, the urban area title will include the name of the most populous incorporated place or CDP ~~having that has~~ at least 2,500 people ~~in the urban area~~.
- c. Up to two additional places, in descending order of population size, may be included in the title of an urban area provided that *the place meets one of the following criteria*:
 - ~~e. a.~~ The place has 250,000 or more people ~~in the urban area, or~~.
 - ~~e. b.~~ The place has at least 2,500 people ~~in the urban area~~, and that population is at least two-thirds of the urban area population of the most populous place in the urban area.

If the urban area does not contain a place ~~with an urban population~~ of at least 2,500 people, the Census Bureau will consider the name of the incorporated place, CDP, or MCD with the largest total population in the urban area, or a local name recognized for the area by the United States Geological Survey's (USGS) Geographic Names Information System (GNIS), with preference given to names also recognized by the United States Postal Service (USPS). The urban area title will include the USPS abbreviation of the name of each state or statistically equivalent entity into which the urban area extends. The order of the state abbreviations is the same as the order of the related place names in the urban area title. ~~If an MCD name is used (outside of New England), the title also will include the name of the county in which the MCD is located.~~ If a single place or MCD qualifies as the title of more than one urban area, the largest urban area will use the name of the place or MCD. The smaller urban area will have a title consisting of the place or MCD name and the direction (North, South, East, and/or West) of the smaller urban area as it relates geographically to the larger urban area with the same place or MCD name.

If any title of an urban area duplicates the title of another urban area within the same state, or uses the name of an incorporated place, ~~or~~ CDP, *or* MCD that is duplicated within a state, the name of the county that has most of the population of the largest place or MCD is appended, in parentheses, after the duplicate place *or* MCD name for each urban area. If there is no incorporated place, ~~or~~ CDP, *or* MCD name in the urban area title, the name of the county having the largest total population residing in the urban area will be appended to the title.