



# The Urban and Rural Classifications

## Components of the Urban and Rural Classifications

The Bureau of the Census defines urban as comprising all territory, population, and housing units located in urbanized areas and in places of 2,500 or more inhabitants outside of UAs. The term *urban* refers to both kinds of geographic entities. The terms *urban*, *urbanized area*, and *rural* are the Census Bureau's definitions; other Federal agencies, State agencies, local officials, and private groups may use these same terms to identify areas based on different criteria.

### Urbanized Areas (UAs)

A UA is a continuously built-up area with a population of 50,000 or more. It comprises one or more places—*central place(s)*—and the adjacent densely settled surrounding area—*urban fringe*—consisting of other places and nonplace territory.

### Urban Places Outside of UAs

Outside of UAs, an urban place is any incorporated place or census designated place (CDP) with at least 2,500 inhabitants. A CDP is a densely settled population center that has a name and community identity, and is not part of any incorporated place (see Chapter 9, "Places").

### Rural Places and Territory

Territory, population, and housing units that the Census Bureau does not classify as urban are classified as *rural*. For instance, a rural place is any incorporated place or CDP with fewer than 2,500 inhabitants that is located outside of a UA. A place is either entirely urban or entirely rural, except for those designated as an extended city.

### Extended Cities

An extended city is an incorporated place that contains large expanses of sparsely populated territory for which the Census Bureau provides separate urban and rural population counts and land area figures.

The Census Bureau defines UAs and extended cities for statistical purposes only; that is, for the purpose of presenting its data. Although some other geographic statistical entities, such as census tracts and CDPs, originate from agreement and cooperative action with local governmental officials and other outside groups, the development and implementation of criteria for defining and delineating UAs and extended cities has been largely the responsibility of the Census Bureau from the inception of the concept.

This chapter discusses (1) the Census Bureau's criteria for classifying areas as urban (with an emphasis on the definition of UAs and extended cities), (2) the procedures used to establish UAs and update their boundaries, and (3) the relationship of UAs to other geographic entities. The Census Bureau applies the same urban and rural definitions to all parts of the United States, Puerto Rico, and the Outlying Areas. Puerto Rico has both UAs and urban places outside of UAs; the Outlying Areas—American Samoa, Guam, the Northern Mariana Islands, Palau, and the Virgin Islands of the United States—have only urban places.

## **Background**

### **Early Definitions of Urban**

Statistics by urban and rural categories have figured in decennial census publications for over a century.<sup>1</sup> In the censuses of 1880, 1890, and 1900, the Census Office (predecessor of the Census Bureau) published tables based on minimum sizes of 8,000, 4,000, and 2,500 inhabitants; the latter figure was officially adopted for the 1910 census. In the decennial censuses from 1910 through 1940, *urban* comprised all territory, people, and housing units in incorporated places of 2,500 or more. In addition, some areas—usually minor civil divisions (MCDs)<sup>2</sup>—were classified as urban under special rules relating to population size and density. This definition of urban was not adequate because (1) it excluded many large, densely settled population concentrations merely because they were not part of any incorporated place, and (2) it continued to classify many large, densely built-up areas as rural in spite of the special rules that

permitted classification of some MCDs as urban. Something more than place/MCD size was needed to define urban area and population.

### **Evolution of the UA Concept From 1950 Through 1990**

To improve its measure of urban territory, population, and housing units for the 1950 census, the Census Bureau introduced two new types of geographic units, the UA and the CDP.<sup>3</sup> This step resulted in major changes to the urban and rural classifications. The introduction of CDPs meant that densely settled population centers without legal status were recognized as places, and classified as urban if they had at least 2,500 residents. The identification and delineation of UAs made it possible to include as urban many densely built-up areas that had previously been classified rural because they were not part of any place. By using these new geographic entities—UAs and CDPs—the Census Bureau improved its separation of the urban and rural population. Outside of UAs, the Census Bureau continued to classify a place (whether an incorporated place or a CDP) as urban if its population was at least 2,500.

Table 12-1 summarizes important elements of the UA definitional criteria as they have developed through the period 1950 through 1990. Many elements of the criteria have remained largely unchanged. The density criterion of at least 1,000 people per square mile has remained the same since it was adopted for the 1960 census. The provision allowing the inclusion of distinctly urban land uses has been part of the UA criteria since it was adopted for the 1950 census. Measures of density and concentration continue as the basis for including places in the urban fringe zone. With the exception of extended cities, entire places are still, in most instances, the major geographic building blocks of a UA.

In recent years, significant revisions to the UA criteria have included the recognition of extended cities and more liberal criteria for central places and CDPs. Extended cities, identified starting with the 1970 census, better define the extent of urban and rural territory (area), but have very little effect on the urban and rural population and housing unit counts at the

Table 12-1. **Development of UA Criteria From 1950 Through 1990**

|      |   |
|------|---|
| 1950 | <p><b>Central place requirement</b><br/>           Incorporated place population of 50,000 or more (1940 census count)</p> <p><b>Method of boundary delineation</b><br/>           Population estimates, precensus surveys, aerial photography</p> <p><b>Density requirement</b><br/>           At least 500 dwelling units (approximately 2,000 people per square mile)</p> <p><b>Place population in urban fringe</b></p> <ul style="list-style-type: none"> <li>• Incorporated places with at least 2,500 people; no CDPs were included</li> <li>• Smaller incorporated places with a concentration of 100 or more dwelling units whose density was at least 500 dwelling units per square mile</li> </ul> <p><b>Other features</b><br/>           Exclaves of discontinuous nonplace territory within 1 1/2 miles and connected by road</p> <p><b>Number of UAs</b><br/>           A total of 157</p>   |
| 1960 | <p><b>Central place requirement</b></p> <ul style="list-style-type: none"> <li>• Incorporated place population of 50,000 or more using current census counts</li> <li>• <i>Twin cities rule</i> (two contiguous incorporated places with a combined population of at least 50,000, the smaller of which must have at least 15,000)</li> </ul> <p><b>Method of boundary delineation</b><br/>           Census results, small enumeration districts (EDs)</p> <p><b>Density requirement</b><br/>           At least 1,000 people per square mile</p> <p><b>Place population in urban fringe</b><br/>           At least 2,500 people; CDPs if at least 10,000 people (except New England)</p> <p><b>Other features</b></p> <ul style="list-style-type: none"> <li>• MCDs in New England, New Jersey, and Pennsylvania with at least 25,000 inhabitants or a population density of at least 1,500 people per square mile and a minimum total population of 2,500 became <i>urban by special rule</i>; this rule applied only to the 1960 census.</li> <li>• Inclusion of indentations/enclaves</li> <li>• First UAs in Hawaii and Puerto Rico</li> </ul> <p><b>Number of UAs</b><br/>           A total of 213</p> |
| 1970 | <p><b>Central place requirement</b></p> <ul style="list-style-type: none"> <li>• Incorporated place population of 50,000 or more using current census counts</li> <li>• An incorporated city of 25,000 or greater population could qualify as a central place if it could combine with contiguous places of any size (but with a density of at least 1,000 people per square mile) to obtain a total population of at least 50,000.</li> </ul> <p><b>Method of boundary delineation</b><br/>           Blocks (mail areas), small EDs (non-mail areas)</p>  |

Table 12-1. (cont.)

**Density requirement**

At least 1,000 people per square mile

**Place population in urban fringe**

- Incorporated places with at least 2,500 people
- CDPs if at least 5,000 people (except New England)
- Some CDPs if at least 1,000 people—this lower threshold applied if an incorporated place of at least 25,000 inhabitants could join with contiguous places of any size (and a density of at least 1,000 people per square mile) to reach a total population of at least 50,000.

**Other features**

Introduction of extended cities

**Number of UAs**

A total of 275

1980 **Central place requirement**

Incorporated place (any size) within a densely settled area of at least 50,000 population

**Method of boundary delineation**

Blocks, small EDs in certain situations

**Density requirement**

At least 1,000 people per square mile

**Place population in urban fringe**

Incorporated places of at least 2,500 people

**Other features**

- *Whole-town CDPs* (MCDs in New England, Michigan, New Jersey, New York, Pennsylvania, and Wisconsin having at least 95 percent of their population and at least 80 percent of their land area qualifying for inclusion in the UA were included in their entirety in the UA—applicable only to the 1980 census).
- First CDPs in New England UAs

**Number of UAs**

A total of 366

1990 **Central place requirement**

Incorporated place of any size within a densely settled area of at least 50,000 population; CDP of any size permitted as central place

**Method of boundary delineation**

Blocks exclusively

**Density requirement**

At least 1,000 people per square mile

**Place population in urban fringe**

*Whole place test*, minimum CDP population of generally 2,500

**Other features**

Intercensal UAs, new titling provisions for UAs

**Number of UAs**

A total of 405

national and State levels (for some individual counties and UAs the effects have been more evident).

Since the 1970 census, changes in the minimum size criterion to qualify as a central place have permitted the delineation of UAs around smaller population centers. For 1990, there was no size requirement for a central place. The inclusion of CDPs in the urban fringe, which began in 1960, and the increasing liberalization of the minimum population size requirements for CDPs, mark a continuing local involvement and interest in these geographic entities. In 1980, the Census Bureau delineated CDPs in the UAs of the six New England States (no CDPs had been delineated in New England UAs previously). For 1990, the change of the designation *central city* to *central place* further underlined the importance of CDPs in UA delineations.

### **Changes for the 1990 Census**

Before each decennial census, the Census Bureau reviews the criteria for delineating UAs and extended cities. As a result of this review, the Census Bureau historically has proposed improvements to assure that these entities consistently measure the Nation's settlement pattern. The Census Bureau then publishes the proposed criteria in the *Federal Register* and solicits comments from the data-using public. Where necessary, further revisions are made before the final criteria are published. For 1990, the following major changes were made:

- Through the 1980 census, the urbanized area delineation process had taken place only once every decade, at the time of the decennial census. Beginning in 1986, the Census Bureau allowed the delineation of new UAs on the basis of a special census taken in the intercensal period. Two areas (Davis, CA, and Merced, CA) qualified as UAs on the basis of a special census; two others (Bowling Green, KY, and Elizabethtown-Radcliffe, KY) did not.
- Areas that had been UAs in a previous census were not automatically *grandfathered* if their 1990 population fell below 50,000. As a result, two areas that had been UAs in 1980 (Danville, IL, and Enid, OK) were no longer UAs in 1990.

- The *whole place* test improved the rules for inclusion of incorporated places and CDPs in the urban fringe. In addition, the Census Bureau introduced a standard minimum population threshold for CDPs in the urban fringe—2,500 inhabitants in most instances (see Table 12-1).
- Extended cities had been defined in 1970 and 1980 solely for UA delineation purposes; for 1990, the Census Bureau broadened the concept to include extended cities outside of UAs.

In addition, there were slight changes in the rules for including areas of nonresidential urban land, and more precise provisions for merging contiguous UAs. A major operational shift for 1990 was the introduction of an interactive delineation process and the decentralization of the UA delineation work, which was accomplished by the Census Bureau's 12 regional offices, with final approval from headquarters.

### **Criteria for UAs and Extended Cities in the 1990 Census**

A UA must exhibit a pattern of continuous development out from a central core or the boundary of a UA delineated for the previous census. Existing UAs generally retain all territory that was within their previous boundaries.<sup>4</sup> Areas added to the urban fringe must be contiguous to this core and must have a population density of at least 1,000 people per square mile. Areas with lower densities are permitted if they meet the criteria for jumps, nonresidential urban land use, closure of indentations or enclaves, or undevelopable territory. All area added to the UA must be connected directly by road to the main body of the UA, and this road connection must either be located within the area being added, or touch it on one side. The UA must contain at least 50,000 people.

#### **Whole Place Qualification**

Places are important geographic components of UAs. Except for extended cities, all incorporated places and CDPs either are included in a UA in their entirety, or excluded from it completely. A place is included in the UA if it has a *qualifying core*. This qualifying core is an area with a population density of at least 1,000 people per square mile that contains at least 50 percent of

the place's total population and is contiguous with other qualifying urbanized territory that also meets the population density criterion. As a result of the whole place qualification rule, places with overall densities of less than 1,000 people per square mile may be in the UA.

### **Jumps**

A *jump* occurs where a low-density area is used to connect an outlying densely populated area to the main body of the UA. Two conditions must be satisfied: (1) the road distance through the low-density area must be 1 1/2 miles or less, and (2) the combined population density of the outlying area and the intervening area must be at least 500 people per square mile. Jumps may occur within places as well as in nonplace territory. A jump is permissible once along a road and in a given direction; for instance, once along Main Street to the east of the core and once along Main Street to the west of the core would both be acceptable jumps. A second jump cannot take place if it relies on a first jump for its geographic connection to the main body of the UA; for instance, a *second* jump east or west along Main Street.

### **Nonresidential Urban Land Use**

The UA encompasses not only densely settled residential territory, but also various nonpopulated or sparsely populated territory that serves urban functions and that is geographically intermingled throughout the built-up area. If population density were the sole criterion for including territory, the UA boundary could not include other adjacent densely populated territory. This would be undesirable because the low-density territory does not represent a break in settlement; rather, it includes territory with land uses that are typically urban in character. Types of nonresidential urban land uses that qualify are commercial and industrial development, transportation sites, parks, golf courses, cemeteries, and the like. Their identification, in specific situations, provides a more accurate UA delineation. For instance, a population density figure based only on the total surface of a small area would be lower than one that excluded its areas of nonresidential urban land use. As a result of the application of the nonresidential urban land use procedure, the population density of some territory will be greater than 1,000 people per square



mile (in the case of jumps, 500 or more), and the territory can be added to the UA.

### **Undevelopable Territory**

As with jumps and nonresidential urban land uses, undevelopable territory also is used in some cases to link an outlying cluster of densely settled territory to the main body of the UA. The Census Bureau designates territory as undevelopable only if it consists of water area, mud flats, swamps, marshlands, steep slopes, and other terrain where development is nonexistent and new development is virtually impossible because of the physical limitations; such territory must not contain any existing housing or commercial structures.<sup>5</sup> There must be a road connection from the main body of the UA through the undevelopable territory to the outlying densely settled area, and the road distance cannot exceed five miles.

### **Indentations, Enclaves, and Exclaves**

Indentations occur where a low-density census block or cluster of blocks protrudes into the main body of the UA. Indentations almost always consist of territory outside of any place (only very rarely are they small incorporated places or CDPs). Indentations formed by the boundaries of incorporated places usually occur more frequently than those involving only territory outside of any place. The inclusion of indentations smooths the UA boundary, gives it a more regular appearance, and simplifies its presentation on maps.

The Census Bureau includes an indentation in the UA if it is:

- Flanked by territory that has an average density of at least 1,000 inhabitants per square mile.
- Less than one mile wide across its open end.
- At least two times deeper than it is wide.
- Five square miles or less in size.
- Closeable by means of a block boundary located across or close to its open end.<sup>6</sup>

All of the above conditions must apply.

Enclaves are low-density areas surrounded by territory that is in the UA. Enclaves almost always consist of territory outside of any place (rarely are they incorporated places or CDPs); the surrounding territory may be in a place, or it may consist of nonplace territory. As with indentations, the inclusion of enclaves gives the UA a more regular appearance and simplifies data presentations. An enclave is included in the UA if it is five square miles or less in size and surrounded by territory that has an average density of at least 1,000 people per square mile. Both conditions must apply.

Exclaves occur where an outlying piece of a place is physically separated from the main part of the place by intervening territory that does not qualify for inclusion in the UA. The intervening territory consists of either territory outside of any place or—less frequently—in another place. Places with exclaves usually are incorporated places (most CDPs consist of one contiguous piece of territory). An exclave can never consist of territory outside of any place. Exclaves always are included in the UA when their parent place is in the UA; the criteria for density, continuous development, and road connection do not apply to exclaves.

### **Extended Cities**

Some incorporated places include large expanses of vacant or very sparsely populated territory that are essentially rural in character. In general, this situation results from (1) extensive annexation of adjacent undeveloped territory, (2) governmental consolidation of an incorporated place with an MCD or county, or (3) formation of a new incorporated place from several sparsely populated MCDs.

An incorporated place is considered to be an *extended city* if it contains one or more areas that:

- Are 5 square miles or more in size.
- Have a population density less than 100 people per square mile.
- Comprise at least 25 percent of the total land area of the place.
- Consist of 25 square miles or more.

The first two conditions, and *either* the third *or* the fourth, must apply.

The rural portion of an extended city may consist of several separate pieces of territory, provided that each piece is at least 5 square miles in size and has a density less than 100 people per square mile. The urban portion of an extended city consists of territory that has a density of at least 100 people per square mile. Along with jumps, nonresidential urban land use, and undevelopable territory, extended cities are another instance where portions of the UA can have a density less than 1,000 people per square mile.

The criteria for jumps, indentations, and enclaves also apply within extended cities, except that the density thresholds are lower—50 and 100 people per square mile for qualifying blocks instead of 500 and 1,000 people per square mile. If the extended city has low-density exclaves that are adjacent to its rural portions, these exclaves become part of the rural portion.

There is no minimum total population for UA extended cities; however, non-UA extended cities must have at least 2,500 inhabitants. Before the 1990 census, the Census Bureau defined extended cities only for incorporated places inside UAs. The delineation of non-UA extended cities provides better population density statistics for the Nation's urban population by excluding those portions of incorporated places that contain vast expanses of empty or near-empty land. (Refer to Table 9-2 in Chapter 9, "Places.")

### **Qualification of UAs**

All candidate or potential UAs that have a 1990 census population of 50,000 or more qualify as UAs and appear in the 1990 census data presentations. Those potential areas that have a 1990 population below 50,000 fail to achieve urbanized status; however, their incorporated places and/or CDPs are considered non-UA urban places if they have at least 2,500 inhabitants.

### **Retention or Merger of UAs**

The Census Bureau never creates a new UA from the territory of an existing UA, nor does it ever transfer large portions of populated territory from one UA to another. Where two or more UAs are contiguous, the Census Bureau decides whether to maintain separate UAs or to merge them into a single

UA. In many instances, the decision hinges on the location of the UAs within metropolitan areas (MAs).

The MAs are geographic entities established by the Federal Office of Management and Budget (OMB). The general concept of an MA is that of a core area containing a large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that core area. The fundamental geographic units of MAs are counties, except in New England, where they are cities and towns.

The term *MA* is a collective one; individual MAs are *metropolitan statistical areas (MSAs)*, *consolidated metropolitan statistical areas (CMSAs)*, or *primary metropolitan statistical areas (PMSAs)*. Qualification as an MSA requires the presence of a city of at least 50,000 population, or a UA and a total population of at least 100,000 (75,000 in New England). The MSA's geographic extent is a function of commuting patterns and other specified characteristics such as population density. Within an area that qualifies as an MSA and also has a population of one million or more, individual component areas are identified if specified criteria are met and local opinion supports separate identification. These component areas are designated PMSAs, and the entire area containing the PMSAs is designated a CMSA. If no PMSAs are defined, the entire area is designated an MSA. (For further information on MAs, see Chapter 13, "Metropolitan Areas.")

Contiguous UAs maintain their separate identity when:

- The UAs are entirely or mostly in different MSAs or CMSAs.
- The major portion of the UA territory is in the same CMSA but in different PMSAs.
- The largest central place of one UA is mostly outside of the MA that encompasses the other UA.

The Census Bureau generally merges contiguous UAs when major portions of the UA territories are located in the same MSA or PMSA. In addition, all of the following conditions must be present:

- There is continuous development, with no more than one jump in each

UA, between their core areas and the area where the two UAs meet.

- The two UAs share a common boundary line—not simply a point—that is at least 1 mile in length.
- The census blocks on both sides of this common boundary have an average density of at least 1,000 people per square mile.

The Census Bureau considers two UAs separated by less than 5 miles of water or undevelopable territory and connected by less than 5 road miles to be contiguous if the areas adjacent to the undevelopable territory and the road connection have an average population density of at least 1,000 people per square mile.

When two UAs touch, but do not meet all the criteria specified above, they remain separate. The separation line always follows census block boundaries, and often is a prominent physical feature or the boundary of a legal entity.

### **Designation of UA Central Places**

The central place(s) of a UA identifies the most populous center(s) or *core* of that UA. This designation permits data users to compare statistics for the dominant center with those for the remaining part of the UA—the urban fringe. Most UA central places are also the central cities of MAs. In rarer instances, where the UA does not contain an MA central city or the UA is located outside of an MA, the central place(s) of the UA is (are) determined by total population.

To determine central place status, the Census Bureau selects the most populous incorporated place that contains at least 2,500 people. It may select up to two additional incorporated places as central places, provided that each additional place has a population of at least 15,000 and that each has at least one-third the population of the most populous incorporated place. If the UA does not contain any incorporated place of 2,500 or more, the largest CDP is selected as the central place, provided that more than 50 percent of its population is located outside the boundaries of a military installation.

In all instances, the entire entity is classified as a central place. Extended cities are an exception—only their urban portions are classified as central. There is no limit on the number of central places in a UA; however, not all central places are necessarily included in the UA title.

### **Assignment of UA Titles**

The title of a UA identifies those places that are most important within the UA; where appropriate, it links the UA to the encompassing MA. If a single MA encompasses most of the UA, the title of the UA generally is the same as the title of the MA.

The title of a UA generally is different from any MA title when:

- Most of the UA is not part of a single MA.
- The UA does not include any place that is a central city of the encompassing MA.
- The UA is not located in an MA.

In these instances, the Census Bureau uses the total population of the central places included in the UA—with a preference for incorporated places—to determine the UA title. The name(s) of the State(s) in which the UA is located is (are) always part of the UA title.

A regional title may be used to identify a UA with a population of one million or more where such a name provides an unambiguous description of the area. Regional titles include only the name of the largest city in the UA, followed by the regional reference; for example: *Chicago-Northwestern Indiana* and *New York-Northeastern New Jersey*.

The MA central cities and titles used to determine UA central places were those that were in effect on June 30, 1990. Even though the MA central cities, titles, and geographic components underwent a later review and revision by the OMB based on the 1990 census results, such revisions did not affect the central places, titles, or boundaries of UAs already defined. (For information on how UAs delineated during the intercensal period may affect MAs, see the “Intercensal MA Changes” section in Chapter 13.)

## **Delineation of UAs and Extended Cities for the 1990 Census**

The 1990 UA delineation operation involved an examination of 635 potential UAs, including all or parts of 1,155 counties. These included all previous UAs, those that had qualified on the basis of a special census in the 1980s, all areas that had failed to qualify in 1980, and new areas that might qualify for the first time in 1990. Because of the extensive geographic scope of the operation, and because of the lengthy, labor-intensive nature of UA delineation work, the Census Bureau automated much of the task by using the TIGER data base and customized UA delineation software.<sup>7</sup>

The 1980 UA boundaries were digitized and inserted into the TIGER data base, as were all representations of 1980 nonresidential urban land use, jumps, and undevelopable territory. For population concentrations that were not UAs in 1980, the Census Bureau digitized the boundaries of the central place(s) to serve as a starting point for making the 1990 UA determinations. Potential extended cities also were identified.

To perform the UA delineations, the Census Bureau developed interactive software that featured a visual screen display of census block densities from which small-area units were created. The software could display an entire UA, sometimes involving as many as five counties, on an interactive graphics terminal. Other advantages of the UA delineation software were its ability to:

- Display area and density tables.
- Plot line features.
- Display nonresidential urban land use.
- Measure both road and straight-line distances.
- Aggregate census blocks for analysis.

In addition, the software made it possible to perform numerous edits for consistency and completeness, and, ultimately, to assign the appropriate urban or rural classification code to each block in the TIGER data base.

## **Classification as Urban or Rural**

For UAs that qualified in earlier censuses, the 1990 delineation process began at the previous (usually 1980) UA boundary. In the case of potential UAs, the boundary of the central place(s) was the starting point for examining territory to determine qualification. Portions of surrounding territory were added to the core if they had a population density of at least 1,000 people per square mile, or if they could be included through recognition of a whole place, an extended city, a jump, a nonresidential urban land use area, or by virtue of being undevelopable territory (see previous section).

For making specific delineation decisions, the Census Bureau frequently relied on small geographic entities called analysis units (AUs). Each AU consisted of either a single census block or—more frequently—a cluster of contiguous blocks, often of similar physical size and shape. An AU generally represented a single housing cluster, other territory having a closely spaced street pattern, or territory having a similar population density or land use.

The Census Bureau established AUs to decide what pieces of territory to include or exclude. Staff used the automated system to measure and evaluate the following kinds of areas as AUs: core areas of places, outlying clusters of high-density blocks, gaps in the pattern of continuous development (usually potential jumps), urban and rural components of extended cities, indentations, and enclaves. In all these situations, the grouping of blocks into AUs established an interpretative grid of small-area geographic units. The census blocks within each AU eventually were classified as either urban or rural.

## **Delineation Results for 1990**

After the determination of UA boundaries, there followed the separation or merger of contiguous UAs and the determination of UA central places and titles. Ultimately, the Census Bureau recognized 405 UAs for the 1990 census—396 in the United States and 9 in Puerto Rico. In addition, the Census Bureau recognized 4,019 urban places outside of UAs—



3,938 in the United States and 81 in Puerto Rico and the Outlying Areas. Of the 280 extended cities that the Census Bureau identified in the United States (none in Puerto Rico and the Outlying Areas), 128 were located inside UAs and 152 outside of UAs.

## **Geographic Relationships and Patterns**

### **Places, Nonplace Territory, and Population Density**

The use of places as geographic building blocks often has an effect on the size, shape, and extent of a UA, especially where the UA consists mostly of places. Incorporated places and CDPs frequently contain low-density areas (less than 1,000 people per square mile) that would not qualify for inclusion in the UA had the territory been outside of any place. Therefore, a UA whose urban fringe consists mostly of places may include more sparsely settled territory than a UA whose fringe contains mostly nonplace territory. As a result, the urban fringe of a UA consisting mostly of places often has a lower population density than a UA whose urban fringe is mostly nonplace territory.

### **Metropolitan Areas**

Since 1980, UAs have been used as one of the criteria for designating an area as metropolitan. A UA also can play a role in determining the geographic extent of an MSA or CMSA. In general, a UA represents the densely settled portion of an MA, and nearly every MSA/CMSA contains at least one UA at its core. The UAs generally cover much smaller geographic areas than do MAs and have much higher average population densities.

Two or more UAs may exist within a single MA. Conversely, a UA may extend into more than one MA or into nonmetropolitan area; some UAs are located entirely outside metropolitan areas.

### **Other Geographic Entities**

The urban and rural classifications may be applied to many of the geographic entities recognized by the Census Bureau (refer to Figure 2-1

in Chapter 2, “Geographic Overview”). For example, there usually is both urban and rural territory within metropolitan and nonmetropolitan areas, there are urban places and rural places, urban parts of States and rural parts of States, and so forth. The boundaries of UAs can cross State and county boundaries, as well as the boundaries of county subdivisions (MCDs, CCDs,<sup>8</sup> and other entities), American Indian and Alaska Native areas (AIANAs), census tracts and block numbering areas (BNAs),<sup>9</sup> and block groups. A UA boundary cannot subdivide a tabulation census block.

### **Regional Variations**

There are significant regional variations in the shape and growth patterns of UAs. These differences stem from many factors. Often they relate to the dominant settlement patterns within particular areas, or to topography, environmental factors, and historical circumstances. For instance, the various State and local statutes governing the incorporation of places can influence the shape of UAs. Also, different land survey systems affect the location of property lines, the location of streets and roads, the layout of census blocks, and, ultimately, the shape of the UA and the location of its boundaries. Steep slopes and the presence of large water boundaries can constitute physical barriers to development, and often affect population densities, the layout of census blocks, and the location of some segments of the UA boundary. By contrast, UAs surrounded by abundant developable land may be more susceptible to urban sprawl. These are only some of the regional differences that shape UAs and present challenges to delineating them consistently on the basis of a single set of national criteria.

## **Data Presentation**

### **Printed Reports**

The Census Bureau releases several series of printed reports that are grouped under three broad titles: *1990 Census of Population and Housing (CPH)*, *1990 Census of Population (CP)*, and *1990 Census of Housing (CH)*.

The following series of publications contain data for UAs and for summary geographic areas such as urban and rural:

- CPH-1 Summary Population and Housing Characteristics
- CPH-2 Population and Housing Unit Counts
- CPH-5 Summary Social, Economic, and Housing Characteristics
- CP-1 General Population Characteristics
- CP-2 Social and Economic Characteristics
- CH-1 General Housing Characteristics
- CH-2 Detailed Housing Characteristics

The CPH-2 series, which consists of separate reports for each State or statistically equivalent entity, provides urban and rural information and data for all UAs along with their component places and county subdivisions. Each report contains one or more page-size maps to show the extent of each UA located entirely or partially in that State. These individual area UA Outline Maps show (1) the UA boundaries; (2) the boundaries and names of States, counties, county subdivisions (MCDs, CCDs, and other entities), and places; and (3) selected base map features such as major water bodies. The map scale is four miles to the inch.

All report series listed above include a summary report for the entire Nation; for example, *CPH-1-1, Summary Population and Housing Characteristics/United States*. These initial reports contain many tables that present data by UA, central place or places, and urban fringe; the following tabular format is used:

|                        | <b>All Persons</b> | <b>Land Area (sq. mi.)</b> | <b>Persons (per sq. mi.)</b> |
|------------------------|--------------------|----------------------------|------------------------------|
| Albany, GA .....       | 87,223             | 71.4                       | 1221.6                       |
| In central place ..... | 78,122             | 55.5                       | 1407.6                       |
| Albany City, GA .....  | 78,122             | 55.5                       | 1407.6                       |
| Urban fringe .....     | 9,101              | 15.9                       | 572.4                        |

Where UAs extend across State boundaries, there are data summaries both for the State parts and for the whole UA. Each United States summary report contains a two-page map, "Urbanized Areas of the United States: 1990," which shows the names and locations of all UAs nationwide.

No other report series contain data on UAs, although all contain summaries for urban and rural population and housing data. However, the following individual nationwide reports, sometimes composed of multiple volumes, are devoted to UAs; each also contains the two-page UA summary map.

- CP-1-1C General Population Characteristics for Urbanized Areas  
(100-percent data)
- CP-2-1C Social and Economic Characteristics for Urbanized Areas  
(mostly sample subjects)
- CH-1-1C General Housing Characteristics for Urbanized Areas  
(100-percent data)
- CH-2-1C Detailed Housing Characteristics for Urbanized Areas  
(generally sample subjects)

For the 1990 UA program, the Census Bureau produced a two-volume supplementary report, CPH-S-1-2, *Urbanized Areas of the United States and Puerto Rico*, containing UA tables and maps that appear in the separate State reports of the CPH-2 series.<sup>10</sup>

### **Computer Tape Files and CD-ROMs**

The Census Bureau's Summary Tape Files (STFs) and other machine-readable data products provide statistics with greater subject-matter detail than is shown in the printed reports. Each STF presents a particular set of data tables for specific types of geographic entities, with further subdivision into three or more file types (indicated by a letter suffix). The following STFs provide data for UAs and for urban and rural categories:

- STF 1B 100-percent data for the full geographic hierarchy to block level
- STF 1C 100-percent data for UAs, urban and rural (summaries by State)
- STF 2C 100-percent data for UAs, urban and rural (summaries by State)
- STF 3A Sample data for UAs, urban and rural
- STF 3C Sample data for UAs
- STF 4B Sample data for urban and rural (summaries by State)
- STF 4C Sample data for UAs, urban and rural (summaries by State)

The STFs 1B, 1C, 3A, and 3C also are available in compact disc—read-only memory (CD-ROM) format.

In machine-readable data products, each UA is identified by a four-digit numeric code and name. Where an MA and a UA have the same name, the UA code and the MA code are identical. If MA title cities represent multiple UAs, or the UA title city does not correspond to the first name of an MA title, the Census Bureau has assigned a code based on the alphabetical sequence of the UA title in relationship to the other UA and MA titles.

### **Treatment of the Rural Category**

In the 100-percent data products, the rural classification is subdivided into two categories: *places of less than 2,500 outside UAs* (rural places), and *not in places*. The *not in places* category comprises (1) rural territory, population, and housing units outside incorporated places and CDPs, and (2) the rural portions of extended cities.<sup>11</sup> In many data products, the term *other rural* is used; other rural is a residual category specific to the classification of the rural population and housing units in each data product.

In the sample data products, rural population and housing units are subdivided into *rural farm* and *rural nonfarm*. Rural farm comprises all rural households and housing units on farms (places from which \$1,000 or more of agricultural products were sold in 1989); rural nonfarm comprises the remaining rural population and housing units.

### **Other Map Products and Computer Files**

The Census Bureau has produced individual Urbanized Area Boundary Maps. These maps are electrostatically plotted and portray the UA boundary and the names of all UA boundary features, along with the boundaries of States, counties, county subdivisions (MCDs and CCDs), AIANAs, places, and selected base map features such as major interstate and Federally maintained highways and water bodies. The format usually features a single UA on a standard paper map sheet (not to exceed 36 inches by 42 inches).

The Census Bureau also offers a machine-readable TIGER UA Limit™ file on magnetic tape. This national file contains a digital representation of the geographic coordinates for all linear features in the TIGER data base

that comprise the 1990 UA boundaries. In addition, the TIGER/Line™ files, 1992, contain the 1990 UA codes and identify every feature that comprises the boundary of each UA along with all the normal TIGER attributes for each feature.

## Notes and References

- <sup>1</sup> For details on the treatment of the urban and rural classifications in decennial census publications, consult *The Development of the Urban-Rural Classification in the United States: 1874-1949* [by Dr. Leon Truesdell], U.S. Department of Commerce, Current Population Reports, Series P-23, No. 1, August 5, 1949.
- <sup>2</sup> Minor civil divisions (MCDs) are legally established subdivisions of counties; they include areas such as towns, townships, districts, and other governmental or administrative units (for further information, see Chapter 8, “County Subdivisions”).
- <sup>3</sup> In the 1950, 1960, and 1970 censuses, CDPs were called *unincorporated places*.
- <sup>4</sup> Elimination of previously urbanized territory occurs when (1) a city in the earlier UA has deannexed territory, (2) a block boundary has changed its location, (3) a previously qualifying CDP no longer qualifies or its territory has retracted, and (4) rural portions are identified for a new extended city. Such instances are relatively rare and usually involve only small pieces of territory and relatively few people.
- <sup>5</sup> Local zoning classifications of land as *undevelopable* are not sufficient to qualify territory as undevelopable under the Census Bureau’s criteria because such classifications are subject to change at any time.
- <sup>6</sup> Often the census block boundary across or close to the open end of an indentation either curves inward or bulges outward. The indentation is closeable if this area of *bulge* or *sag* is less than 20 percent of the indentation’s *ideal* area. An indentation’s ideal area is defined by the projection of a straight-line boundary across its open end; this line also measures the indentation’s width. The measurement of depth always begins at the center of this line, follows the main *channel* of the indentation, and ends at its deepest point.
- <sup>7</sup> The TIGER (Topologically Integrated Geographic Encoding and Referencing) data base (often called the TIGER File) is the geographic data base at the heart of the TIGER System. This data base contains all the geographic information representing roads, boundaries, and other geographic features along with their attributes (names, address ranges, geographic codes, and other information). The TIGER System includes, in addition to the TIGER data base, the computer software, procedures, and control systems necessary to update and use the TIGER data base.

- <sup>8</sup> Census county divisions (CCDs) are the statistical equivalents of MCDs in 21 States where MCDs either do not exist or are not appropriate for decennial census data reporting purposes (for further information, see Chapter 8, “County Subdivisions”).
- <sup>9</sup> Block numbering areas (BNAs) are the statistical subdivisions of counties that do not have census tracts. The BNA serves as a framework for assigning census block numbers and identifying block groups (for further information, see Chapter 10, “Census Tracts and Block Numbering Areas”).
- <sup>10</sup> The 1980 counterpart of this report is the PC80-S1-14 publication, *Population and Land Areas for Urbanized Areas for the United States and Puerto Rico: 1980 and 1970*. The 1990 report does not include data from earlier decennial censuses.
- <sup>11</sup> For purposes of presenting urban and rural statistics, the Census Bureau may include counts for the rural portions of extended cities in this *not in places* category. In data presentations that identify the legal entity, the Census Bureau reports a single total for all territory, population, and housing units within the extended city’s legal boundary, or there may be a subtotal for that portion of the city identified as urban.