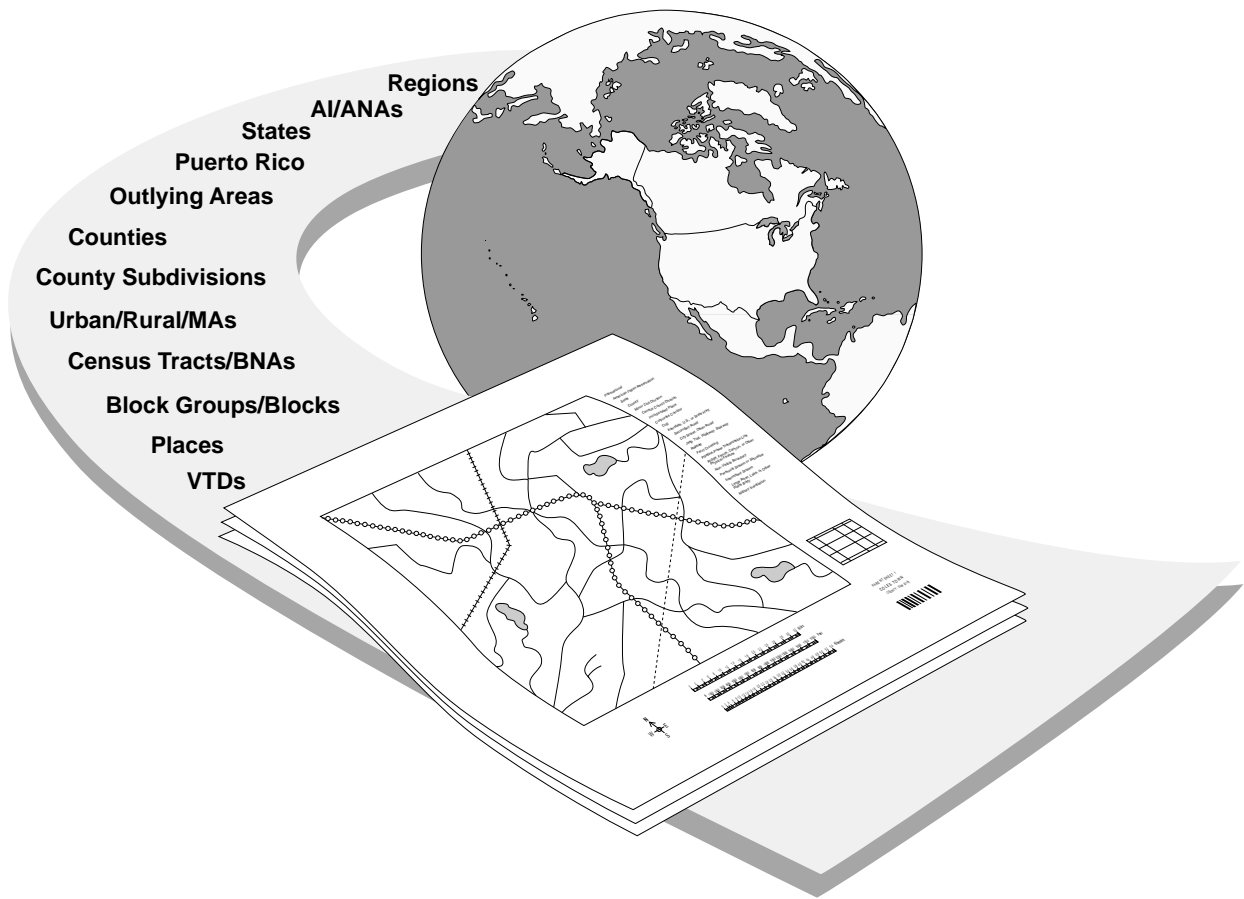


# *Geographic Areas Reference Manual*



**U.S. Department of Commerce  
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BUREAU OF THE CENSUS**

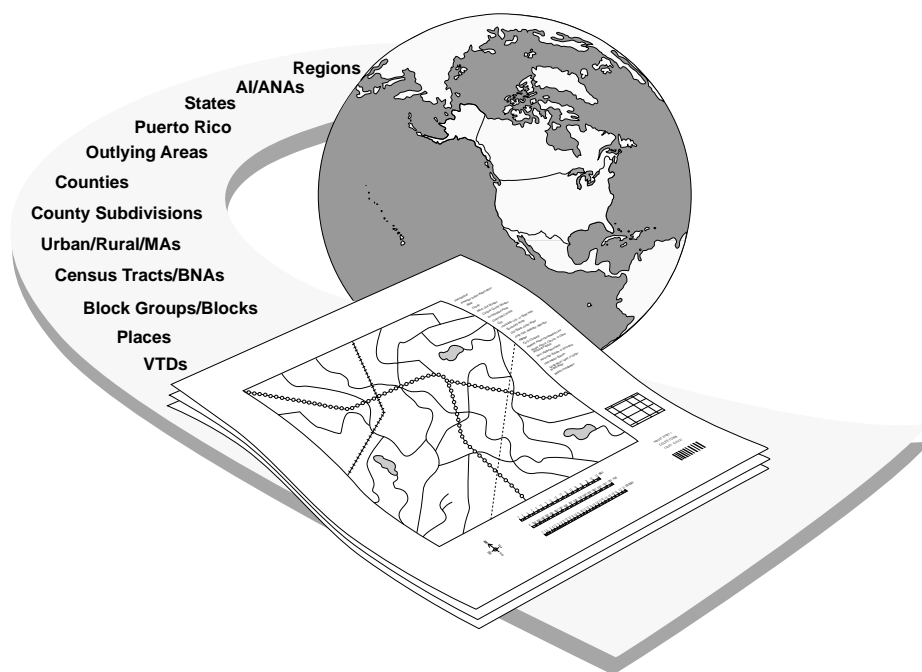
# Acknowledgments

The *Geographic Areas Reference Manual (GARM)* was produced by the Geography Division, **Robert A. LaMacchia**, acting Division Chief and Assistant Division Chief for Planning, under the direction of **Robert W. Marx**, former Division Chief, and **Joel Sobel**, Chief, Geographic Areas Branch.

**Nancy K. Torrieri** directed all activities leading to the writing, review, and publication of the GARM. **James B. Davis** was responsible for research, presentation, and editorial review of the text. **Elaine N. Gregory** coordinated publication activities and review of the maps and graphics. Geography Division staff contributing significantly to the writing of the chapters were **David R. Aultman**, **Lee C. Bush**, **James B. Davis**, **Joan F. Greendeer-Lee**, **Donald I. Hirschfeld**, **Catherine M. McCully**, **Joseph L. Marinucci**, **Catherine L. Miller**, **Joel C. Miller**, **Janemary G. Rosenson**, and **Beatrice L. Warren**. **Robert W. Marx**, **Joel Sobel**, **Nancy K. Torrieri**, and **Michael R. Ratcliffe** of the Geography Division, and **Robert C. Speaker**, **James D. Fitzsimmons**, **Richard L. Forstall**, **Donald E. Starsinic**, and **Donald C. Dahmann** of the Population Division, contributed significantly to the editorial review. **Charlene K. Bickings** of the Geography Division designed the graphics, cover illustration, and publication layout style. **Timothy F. Trainor**, **Connie Beard**, **Carl C. Sanders**, **April M. Robbins**, and **Richard E. Hartgen** of the Geography Division oversaw the production of the maps. **Wendell McManus** of the Geography Division, and **Martha E. Gurtz**, **Jacqueline R. Appell**, and **Carol Hendrich** of the Data Preparation Division provided cartographic support. **Erskie D. Greggs** and **Karen L. Abercrombie** of the Geography Division provided publication support. **Linda H. Ambill** and other staff of the Administration and Publication Services Division, **Walter C. Odom**, Chief, provided procurement, editorial, design, publication, and printing services.

Many members of the staff of the Geography Division contributed to early drafts of chapters that now appear in the GARM. Staff working under the direction of **Susan B. Hardy** and the late **Alice M. Winterfeld**, former chiefs of the Geographic Areas Branch, produced draft versions of GARM chapters for dissemination to participants in the Census Bureau-sponsored Geographic Areas Conferences held during the 1980s. In particular, we wish to acknowledge the substantial contributions of the late **Gerald R. McManus**, who wrote and reviewed many of these early draft chapters. We dedicate the GARM to his memory, and thank all other Census Bureau staff, too numerous to identify, who contributed to this project in the past.

# Geographic Areas Reference Manual



Issued November 1994



**U.S. Department of Commerce**

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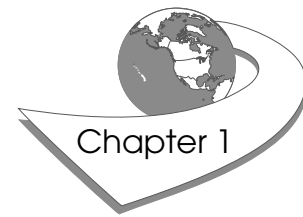


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# Census Bureau Geography

## The Role of Geography in Census-Taking

“In its best interests, a civilized nation counts and profiles its people and institutions. Doing so ably and objectively is the abiding mission of the United States Census Bureau. We honor privacy, shun partisanship, invite scrutiny, and share our expertise globally. Striving to excel, we chronicle the Nation’s past, describe its present, and illuminate its future.”<sup>1</sup>

As the factfinder for the Nation, the Bureau of the Census, an agency of the U.S. Department of Commerce, collects, tabulates, and disseminates statistical data to meet a variety of needs. The original and foremost Census Bureau obligation is to provide the most complete and accurate population count possible for apportionment of the seats in the U.S. House of Representatives. Beyond this obligation, numerous other needs for Census Bureau data have developed over the years, such as the redistricting of States for congressional and legislative representation purposes, the charting of social and economic trends, the distribution of public funds authorized in Federal and State legislation, and the administration of public and private programs. All these needs require that the Census Bureau recognize many kinds of geographic areas—legal, administrative, and statistical—as the framework for the tabulation and presentation of data from its decennial, economic, agriculture, and governments censuses, as well as its periodic sample surveys and estimates programs.

The success of a census or sample survey depends not only on how well the Census Bureau designs the questionnaire, collects the data, and processes the results, but also on how well it links the collected data to geographic areas. In defining the geographic area framework for each specific census or survey, the geographic requirements consist of identifying the legal, administrative, and statistical entities to be used; promulgating official standards for those entities, where appropriate; determining the names, numeric codes, and boundaries for the entities selected; entering the required information about these entities into the TIGER data base;<sup>2</sup> preparing the maps necessary to support the data collection and data

dissemination functions; linking the address appearing on each census or survey questionnaire to its proper geographic location (for example, within a census block, a city, or a county); and providing the reference files and technology needed to assign the data collected to the full set of geographic entities used to report the results of that census or survey.

The value of most census and sample survey data relates directly to the ability of the Census Bureau to classify the data accurately and usefully into geographic areas, and to portray the geographic entities comprising those areas correctly and meaningfully on maps and in the resulting data products. The many geographic entities the Census Bureau recognizes and delineates often result in a geographic pattern that is quite complex. Tables 2-1 and 2-2 in Chapter 2, “Geographic Overview,” provide a listing of the geographic entities for which the Census Bureau has tabulated statistical data in several of its recent censuses.

### **Providing a Selection of Geographic Area Choices for Data Users**

The Census Bureau strives to provide data for those geographic areas most useful to the many and varied users of those data. To do this, the Census Bureau presents data summaries for the Nation’s many legal and administrative entities, including States, American Indian and Alaska Native areas, counties, minor civil divisions (MCDs), incorporated places, congressional districts, and voting districts. To supplement these legally defined entities, the Census Bureau also provides data for a variety of other geographic entities that are helpful to the data users. To do this, the Census Bureau, usually in cooperation with State and local agencies, establishes, identifies, and delineates geographic entities referred to as *statistical areas*. These include regions, divisions, urbanized areas (UAs), census county divisions (CCDs), unorganized territories (UTs), census designated places (CDPs), census tracts, block numbering areas (BNAs), block groups (BGs), and census blocks.<sup>3</sup> The data user community, composed of numerous individuals, businesses, and agencies at all levels of government, each with somewhat different needs, can then select the geographic entity or set

of entities that most closely represent their geographic area of interest. For examples of how data users can meet their geographic needs, see Table 1-1.

Table 1-1. **User Needs and Data Product Choices**

<b>Data User Situations</b>	<b>Data Product Choices</b>
<p>A student writing a history term paper needs the current and past population totals for a city.</p>	<p>A good starting point is the <b>1990 Census of Population and Housing CPH-2 report series</b>, a set of publications that contains tables showing place populations in 1970, 1980, and 1990. The comparable 1970 and 1960 publications provide historical population counts for those incorporated places with 10,000 or more inhabitants, the former by decade from 1900 and the latter by decade from the earliest decennial census when each place existed.</p>
<p>A large manufacturer of consumer goods wants to evaluate its division of the Nation into marketing regions, advertising territories, and areas for conducting sample surveys of existing and potential customers.</p>	<p>The various censuses and sample surveys of the Census Bureau offer a wealth of socioeconomic data. These are available in various product formats: <b>printed reports, magnetic tapes, microfiche, flexible diskettes, CD-ROM</b>, and most recently, <b>electronic bulletin boards</b>. Standard summary statistics from censuses and sample surveys, plus estimates of population and income, are available for numerous kinds of large-area geographic entities such as regions, divisions, States, metropolitan areas, large cities, and counties. In addition to the standard data products, there are <b>public-use microdata files</b> that contain the full range of population and housing information from the 1990 census; these include several independently drawn sample files that feature different configurations of large-area geographic entities.</p>
<p>A religious organization is planning to expand its activities by establishing several new congregations throughout a metropolitan area. It needs socioeconomic profiles for a network of small areas within several counties. It also would like to combine these statistics with local sources of information.</p>	<p>Census tracts, and BNAs, are the most versatile units of small-area decennial census geography because they define small, relatively permanent areas designed to be homogeneous when originally established and because they average around 4,000 residents. The <b>CPH-3 report series</b> is a set of publications that contains many tables of demographic, social, economic, and housing statistics from the 1990 Census of Population and Housing. These publications provide an inexpensive, convenient source for small-area information throughout the United States. Moreover, during the intercensal period, local agencies often use census tracts as a geographic framework for aggregating and presenting their own small-area statistical compilations, such as housing starts and population growth estimates.</p>

The many different kinds of geographic areas used by the Census Bureau to report statistical data serve various purposes, as defined by the specific use to be made of the data from a particular census, sample survey, or other program. The decennial census of population and housing provides data for the largest selection of geographic entities, including entities that are both large and small in area and those that are densely or sparsely populated. The decennial census can embrace this variety of entities because the very large number of people and housing units involved are distributed in sizable numbers throughout the Nation and its territories. The information collected in the other censuses and sample surveys conducted by the Census Bureau, such as statistics about manufacturing establishments, farms, or people unemployed, usually are more appropriate for presentation only when summarized into larger geographic entities, counties, metropolitan areas, or States. Such entities are appropriate because of the relatively small number of establishments located in many smaller areas or the small number of people involved in most sample surveys.

Despite the numerous levels of standard geography for which the Census Bureau tabulates statistical data, the existing geographic entities used to report the results of a specific census or sample survey sometimes do not match the needs of a specific user. As an example, the Census Bureau does not currently tabulate data for local school-attendance areas as part of its regular decennial census data series, yet many school boards need this level of geographic detail to help them determine the demographic characteristics of their service areas as well as to plan for school closings, new schools, and attendance-area boundary revisions. Census blocks, BGs, and census tracts or BNAs, together with county subdivisions and/or places, are typically small enough to serve as basic spatial units for aggregation into other types of analysis areas. For example, a school board generally can accumulate the statistics it needs for attendance areas by combining the data for a set of census blocks, BGs, and/or census tracts/BNAs. Increasingly, the State Data Centers, a relatively recent addition to the Census Bureau's outreach and data dissemination program, and private companies provide these types of user-specified geographic reaggregation services in order to supply needed data tabulations.

If a large number of data users identify a need for some category of geographic area unmet by the existing standard units, they can request that the Census Bureau consider and develop a new geographic concept that it will apply uniformly in aggregating the data collected in its current and future censuses. This occurred in the past when the Census Bureau developed and expanded the census tract program, when it developed the concept of UAs, and when it issued and refined the guidelines for voting district data tabulations.

Alternatively, individual users with highly specific geographic needs can request a special tabulation in which the Census Bureau will provide a one-time reaggregation of the data it collected into a specific area or set of areas; the Census Bureau provides data tabulations for nonstandard geographic areas upon receipt of reimbursement for relevant costs from the requesting person or agency. The Census Bureau's User Defined Areas Program (UDAP) offers this capability.

## **Geographic Areas Reference Manual**

Definition, delineation, and user understanding of the various geographic entities used for data collection and reporting have been, and remain an important part of, the Census Bureau's mission, both in terms of fulfilling its obligations to the data user community and in conducting its data collection operations. To ensure that the data the Census Bureau presents for these areas are useful, the geographic entities used in the tabulations must reflect a meaningful geographic structure. To achieve this goal, the Census Bureau must consider carefully the various approaches others use and/or advocate to classify the Nation's land, institutions, and settlement. Because it is not always possible for the staff of the Census Bureau to know the geographic units most appropriate for classifying people and establishments in a particular census or sample survey, they must rely on the judgment of, and participation by, local, State, tribal, and other Federal officials. Consequently, it is important that these officials, as well as all data users, understand the types of geographic entities the Census Bureau uses in its data collection, tabulation, and dissemination processes.



## **The Census Bureau's Commitment to Help Data Users Understand Its Geographic Entities**

To help governmental officials, scholars, researchers, market analysts, and other data users better understand the Census Bureau's geographic entities, the Census Bureau is publishing this *Geographic Areas Reference Manual*. The purpose of the *Geographic Areas Reference Manual* is to provide information about the basic geographic entities the Census Bureau uses in its various data tabulations and to document the purposes, definitions, standards, criteria, and procedures used to select, define, delineate, and revise these geographic entities. The manual serves as a composite source of information to serve the needs of the broad community of data users. It is a reference tool for Census Bureau staff; Members of Congress; officials in Federal, American Indian, Alaska Native, State, and local government agencies. It is also useful to data users in the business and academic communities, data analysts with an interest in demographic and/or economic statistics, and the general reader with an interest in geography. It provides a guide for the tribal and State officials and local Census Statistical Areas Committees that assist the Census Bureau in its geographic programs. It also provides information needed by the many other agencies and groups working with the Census Bureau to maintain and improve its treatment of geographic areas.

The information, knowledge, and insights gained from data users and from the past are a significant part of the presentations in the *Geographic Areas Reference Manual*. In this way, the manual represents a step toward an improved knowledge and understanding of these geographic entities and their role in the Census Bureau's processes. The manual also offers a perspective on the pragmatic problems associated with using these geographic entities, and describes how the Census Bureau responds to these problems. By enabling data users to better understand the concepts underlying the geographic entities for which it presents data, the Census Bureau anticipates that data users can make more effective use of these data. The role of the Census Bureau includes functions such as publishing guidelines, providing information on changes in geographic concepts, and cooperating with the data user community.

**Providing published guidelines** The *Geographic Areas Reference Manual* traces its beginnings to the *Census Tract Manual*. The first edition of the *Census Tract Manual* appeared in 1934. It described the series of steps a local Census Tract Committee needed to follow when it developed a census tract plan. The Census Bureau published the fifth (and last) edition of the *Census Tract Manual* in 1966. By then, the manual had been expanded to describe (1) the steps a local committee needed to take to develop a new census tract plan or to revise an existing one; (2) the basic definitional criteria for census tracts; (3) the standards set by the Census Bureau for census tracts; (4) the various types of data produced by the Census Bureau for census tracts; and (5) a history of, and general background information for, the census tract program. The census tract was the first, and for many years the only, geographic area that the Census Bureau delineated in cooperation with local officials.

Gradually, the Census Bureau involved tribal, State, and local officials in the delineation of additional geographic entities such as CCDs, CDPs, BNAs, and BGs. When the Census Bureau asked tribal, State, or local officials to delineate these entities, it also provided entity-specific guidelines to facilitate their work. Because these programs took place at various times during each decade, the Census Bureau did not attempt to consolidate the separate program requirements into a single document. Given the increasing role of tribal, State, and local agencies in the delineation of geographic areas and the obsolescence of the *Census Tract Manual*, there was an obvious need for a document that included background material and guidelines for the geographic entities used in the Census Bureau's statistical programs. This document would describe the roles of the participants working with the Census Bureau to implement the guidelines applicable to these geographic entities.

**Providing information about changes in geographic concepts** To make effective use of the statistical data presented by the Census Bureau, it is helpful for data users to be informed about the total framework of Census Bureau geography as it evolves to meet the challenges of modern

data collection and processing techniques. Recent decades have seen the Census Bureau undertake several important new initiatives to improve the census-taking process. These include the adoption of geographic programs to improve the mail census; for example, the creation of computerized geographic files, including the address coding guides (ACGs) of the 1970 census, the GBF/DIME-Files<sup>4</sup> of the 1970 and 1980 censuses, and the TIGER data base of the 1990 census. These improvements allowed the Census Bureau to extend the small-area geographic entities to all parts of the Nation by the 1990 census, assisted by the rapidly increasing use of automation in data processing and in map-making and other graphic presentations. As these developments continue, they become increasingly important in both their direct and indirect effect on the type, definition, and/or delineation of geographic areas for Census Bureau data tabulations and map portrayals. The geographic precision and detail included in the automated files improves the Census Bureau's performance in fulfilling its mission. This manual is an important component in understanding the geographic concepts that go into the automation of the Census Bureau's geographic framework so that this framework can be adjusted more effectively to respond to the ever-changing political, social, and economic dynamics of our Nation.

**Cooperation with the data user community** Data users need to be aware of the Census Bureau's commitments and obligations to the data-using public. Mutual cooperation with the data user community is, and will continue to be, a vital element in the Census Bureau's maintenance and update of its geographic area framework. In meeting this obligation to involve data users in planning the geographic structure, the Census Bureau has invited the network of local Census Statistical Areas Committees, State Data Centers, Business and Industry Data Centers, tribal groups, and other user groups to assist in delineating many of the geographic entities (see Chapter 3, "Local Census Statistical Areas Committees and Other Local Assistance"). These groups also serve as an important resource for distributing the resulting census data, maps,

and related geographic information to local data users. Their access to this manual should prove beneficial to everyone involved.

### **Organization of the Manual**

The individual chapters of the Geographic Areas Reference Manual deal with specific geographic subjects or the specific kinds of geographic entities used in the various censuses and sample surveys conducted by the Census Bureau. Each chapter stands alone as a reference source for a particular type of geographic entity or a specific subject; however, it often is useful to interrelate the geographic information in two or more chapters to develop a comprehensive understanding of broader topics.

These chapters encompass the standard geography that the Census Bureau uses in presenting information from its decennial censuses of population and housing as well as its other censuses, sample surveys, and statistical programs. The internal structure of the chapters on geographic entities follows a common pattern. An introductory section defines the geographic entity (or more typically, the set of entities) under discussion and describes its relevance to the Census Bureau's statistical programs. Other sections provide information on the historical development of the entity, its definitional criteria and guidelines, its delineation procedures, and its relationships to other components of the Census Bureau's hierarchy of geographic entities.

**Introductory chapters** The first three chapters provide background information about the Census Bureau's geographic concepts, an overall rationale for the selection and use of specific geographic entities by the Census Bureau, and the participants in the processes required to establish the geographic framework for each census and sample survey. The latter also assist the Census Bureau with the task of disseminating the resulting geographic information and statistical data.

**Subdivisions of the Nation** One important category of geographic entities includes the major civil divisions of the Nation and its territories, that is, States, counties, American Indian and Alaska Native areas, and

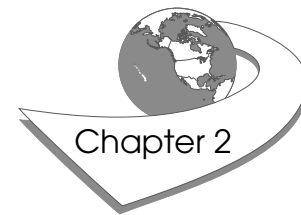
their statistically equivalent entities, which include Puerto Rico, the Outlying Areas, tribal jurisdiction statistical areas (TJSAs), and tribal designated statistical areas (TDSAs), as well as the groupings of some or all of these entities into larger statistical units. Another important category comprises sub-State/subcounty entities—MCDs, CCDs, and UTs—referred to comprehensively as county subdivisions, and places. A third major category includes the chapters on the statistical tabulation units used to control and present data for small geographic areas—census tracts and BNAs, BGs, and census blocks. There also is a chapter on voting districts.

**Population concentrations** The fourth significant category of basic geographic areas includes those documenting settlement patterns or concentrations of population as defined by both the Census Bureau and other agencies. Geographic areas based on settlement patterns are discussed in the chapters on the urban and rural classification and metropolitan areas. The chapter on places (which describes incorporated places and CDPs) and the chapter on voting districts also overlap into this category.

**Other topics** There is a chapter on the Census Bureau's area measurement statistics and its water classification scheme. The manual concludes with a glossary of the Census Bureau's geographic terminology.

## Notes and References

- <sup>1</sup> U.S. Department of Commerce, Bureau of the Census (Strategic Planning Committee), *Strategic Planning for the Census Bureau and the Initial Strategic Plan* (leaflet), October 1985.
- <sup>2</sup> The TIGER (Topologically Integrated Geographic Encoding and Referencing) data base (often called the TIGER File) is the set of computer files at the heart of the TIGER System. This computer 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>3</sup> The Federal Office of Management and Budget (OMB) establishes another well-known set of statistical entities for which the Census Bureau provides data: metropolitan areas (MAs). Chapter 13 provides information about these entities.
- <sup>4</sup> The geographic base files (GBFs), constructed using dual-independent map encoding (DIME) techniques, evolved from developmental work done in the late 1960s by the staff of the New Haven Census Use Study. The first files supplemented the ACGs prepared for the 1970 decennial census and allowed the Census Bureau to improve its processing of place-of-work responses to that census. All ACGs were converted to GBF/DIME-Files for the 1980 decennial census, and files were created for all new metropolitan areas to facilitate automated address matching operations for approximately one-half of the 1980 census housing unit addresses and to continue improvements in place-of-work response coding.



# Geographic Overview

A modern society has vast informational needs, and a Nation as large as the United States and its territories contains many different kinds of geographic situations and settlement patterns. To respond to these needs and provide statistical data for these diverse situations and patterns, the geographic programs at the Census Bureau include several kinds of entities. This ensures that the Census Bureau can effectively (1) conduct complete enumerations, sample surveys, and other statistical programs, and (2) tabulate, publish, and disseminate to data users, the results of its censuses, surveys, and other statistical programs.

## The Census Bureau's Geographic Entities

In its data collection operations, the Census Bureau must assign each person, household, housing unit, institution, farm, business establishment, or other responding entity to a specific location, and then assign that location to the tabulation units appropriate to the particular census or sample survey. This geographic coding (geocoding) process assures that the Census Bureau can provide correct counts for small geographic entities, and that both the Census Bureau and data users can accumulate the data for small entities to provide totals for larger geographic entities. Geography, then, is a basic element of the Census Bureau's system for organizing and presenting statistical data to the public.

There are numerous geographic entities for which the Census Bureau tabulates data (see Tables 2-1 and 2-2). Data users have a stake in the kinds of geographic areas for which the Census Bureau tabulates data. The Census Bureau uses two widely known entities, States and counties, in almost all its censuses, sample surveys, and other programs. Some geographic entities, however, appear in only a few data tabulations or are available only in machine-readable data summaries.

Regardless of their relative importance, the Census Bureau classifies all geographic entities into two broad categories: *legal and administrative entities* and *statistical entities*. Legal and administrative entities generally originate

from legal actions, treaties, statutes, ordinances, resolutions, court decisions, and the like. Local officials and others require data for governmental entities to fulfill a variety of needs. They require the boundaries of legal and administrative entities to manage a wide variety of programs and to conduct elections. The Census Bureau generally accepts, according to documentation by the appropriate authorities, the boundaries of these entities as they exist. Although the Census Bureau's data tabulations for legal and administrative entities are sufficient to satisfy the needs of many data users, information for these jurisdictions alone does not meet all data needs. Therefore, the Census Bureau also presents data for a second geographic category, statistical entities.

Statistical geographic entities usually evolve from practice, custom, usage, or need, and generally the Census Bureau develops the criteria and guidelines for their identification and delineation. In contrast to the legal and administrative entities, whose existence and boundaries are officially prescribed, statistical entities are appropriate in situations where the geographic coverage of the legal areas is incomplete, inadequate, or inconsistent over time, or is nonexistent. The Census Bureau develops statistical units in response to the programmatic or analytical needs of data users. In doing so, the Census Bureau, often in cooperation with State, local, and tribal officials, endeavors to establish a standard set of statistical entities whose size, composition, and boundaries meet the needs of its data presentations. The Census Bureau recognizes statistical entities at all levels in its decennial census geographic hierarchy (see Tables 2-1 and 2-2).

This chapter summarizes some of the more important considerations that enter into the Census Bureau's choice and use of legal/administrative and statistical geographic entities. To provide the data tabulations needed by a majority of users, the Census Bureau intermingles the legal/administrative and statistical entities within a common framework, the geographic hierarchy. The basic hierarchy has several levels (States, counties, and county subdivisions), with each comprising a level. American Indian and Alaska Native areas, metropolitan areas (MAs), urbanized areas (UAs), places, and other entities are interspersed throughout the framework. The diagrams



Table 2-1. **Geographic Entities of the 1990 Census**

<b>Type of Geographic Entity</b>	<b>Status</b>	<b>Number</b>
<b>Nation (the United States)<sup>1</sup></b>	Legal	<b>1</b>
<b>Regions (of the United States)</b>	Statistical	<b>4</b>
<b>Divisions (of the United States)</b>	Statistical	<b>9</b>
<b>States and Statistically Equivalent Entities<sup>2</sup></b>	Legal	<b>57</b>
<b>Counties and Statistically Equivalent Entities</b>	Legal	<b>3,248</b>
<b>County Subdivisions and Places</b>		<b>60,228</b>
Minor Civil Divisions (MCDs)	Legal	30,386
Sub-MCDs	Legal	145
Census County Divisions (CCDs)	Statistical	5,581
Unorganized Territories (UTs)	Statistical	282
Other Statistically Equivalent Entities <sup>3</sup>	Statistical	40
Incorporated Places <sup>4</sup>	Legal	19,365
Consolidated Cities	Legal	6
Census Designated Places (CDPs)	Statistical	4,423
<b>American Indian and Alaska Native Areas (AIANAs)</b>		<b>576</b>
American Indian Reservations (no trust lands)	Legal	259
American Indian Entities with Trust Lands	Legal	52
Tribal Jurisdiction Statistical Areas (TJSAs)	Statistical	19
Tribal Designated Statistical Areas (TDSAs)	Statistical	17
Alaska Native Village Statistical Areas (ANVSAs)	Statistical	217
Alaska Native Regional Corporations (ANRCs)	Legal	12
<b>Metropolitan Areas (MAs)</b>		<b>362</b>
Metropolitan Statistical Areas (MSAs)	Statistical	268
Consolidated Metropolitan Statistical Areas (CMSAs)	Statistical	21
Primary Metropolitan Statistical Areas (PMSAs)	Statistical	73
<b>Urbanized Areas (UAs)</b>	Statistical	<b>405</b>
<b>Special-Purpose Entities</b>		<b>404,583</b>
Congressional Districts	Legal	435
Voting Districts (VTDs) <sup>5</sup>	Legal	148,872
School Districts	Administrative	15,274
Traffic Analysis Zones (TAZs) <sup>6</sup>	Administrative	200,000
ZIP Codes <sup>7</sup>	Administrative	40,000

Table 2-1. (cont.)

<b>Type of Geographic Entity</b>	<b>Status</b>	<b>Number</b>
<b>Census Tracts and Block Numbering Areas (BNAs)</b>		<b>62,276</b>
Census Tracts	Statistical	50,690
Block Numbering Areas	Statistical	11,586
<b>Block Groups (BGs)</b>	Statistical	<b>229,192</b>
<b>Blocks</b>	Statistical	<b>7,017,427</b>

<sup>1</sup> Officially, "the United States" consists of the 50 States and the District of Columbia.

<sup>2</sup> In addition to the 50 States and the District of Columbia (the United States), the 1990 decennial census includes American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, and the Virgin Islands of the United States.

<sup>3</sup> The 40 entities include the 40 "census subareas" in Alaska.

<sup>4</sup> In agreement with the State of Hawaii, the Census Bureau does not recognize the city of Honolulu, which is coextensive with Honolulu County, as an incorporated place for statistical presentation purposes. Instead, the State delineates, and the Census Bureau tabulates data for, CDPs that define the separate communities within Honolulu County.

<sup>5</sup> Include only those eligible entities participating under the provisions of Public Law 94-171.

<sup>6</sup> The number of Traffic Analysis Zones, for which the Census Bureau tabulated data from the 1990 census, is an estimated value.

<sup>7</sup> The number of ZIP Codes is an estimated value.

Table 2-2. **Number of Geographic Entities of the 1992 Economic and Agriculture Censuses**

Type of Geographic Entity	Status	Economic	Agriculture
<b>Nation (the United States)</b>	Legal	<b>1</b>	<b>1</b>
<b>Regions (of the United States)</b>	Statistical	<b>4</b>	—
<b>Divisions (of the United States)</b>	Statistical	<b>9</b>	—
<b>States and Statistically Equivalent Entities</b>	Legal	<b>55</b>	<b>55</b>
<b>Counties and Statistically Equivalent Entities</b>	Legal	<b>3,227</b>	<b>3,171</b>
<b>County Subdivisions and Places</b>		<b>9,063</b>	—
Incorporated Places	Legal	6,897	—
Consolidated Cities	Legal	7	—
Census Designated Places (CDPs)	Statistical	65	—
Special Economic Urban Areas (SEUAs)	Legal	1,640	—
Balance of Metropolitan Areas	Statistical	454	—
<b>Metropolitan Areas (MAs)</b>		<b>348</b>	—
Metropolitan Statistical Areas (MSAs)	Statistical	253	—
Consolidated Metropolitan Statistical Areas (CMSAs)	Statistical	19	—
Primary Metropolitan Statistical Areas (PMSAs)	Statistical	76	—
<b>Special-Purpose Entities</b>		<b>40,900</b>	<b>40,900</b>
ZIP Codes	Administrative	40,900	40,900

showing the geographic hierarchies used in recent U.S. censuses provide a general picture of the most significant geographic patterns (see Figures 2-1 and 2-2). Figure 2-3 shows how several categories of small-area geographic entities subdivide a county.

## The Presentation of Data for Geographic Entities

The value of statistical data is directly related to the appropriateness of the geographic entities for which it is reported. Existing legal and administrative entities suffice for some purposes. For others, it is better to use a set of statistical entities; still other applications require both kinds of entities. Some

users require a stable set of boundaries that permit historical comparisons; others require updated boundaries that delimit the changing situation. Such considerations underlie the choice and use of a geographic area for each and every data use.

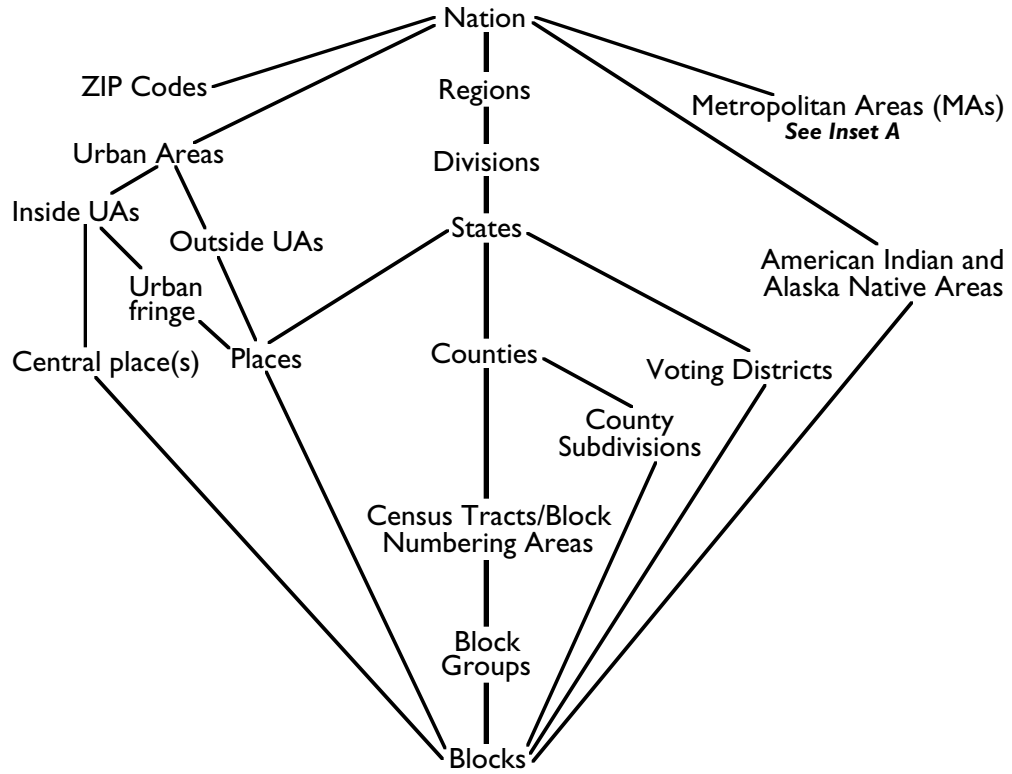
Before undertaking a census or sample survey, the Census Bureau reviews the geographic areas it currently uses. This review may include an evaluation of the entities at each level in terms of established or prevailing statistical practices and needs. Although generally there will be no major changes to most types of geographic entities, the Census Bureau always seeks to find better and more efficient geographic solutions if they exist, to devise new geographic approaches if they can be justified and implemented, and to drop or modify old geographic concepts that no longer serve their original purpose or are no longer cost-effective.

The following factors influence the Census Bureau in selecting an appropriate geographic framework for each of its censuses and sample surveys:

- Legislation
- Federal agency needs
- Tribal, State, local, and other needs
- Census Bureau confidentiality
- Technical and budgetary considerations
- Need for a general consensus on geographic concepts by data users

The weight and importance of any given factor may vary according to the specific purpose at hand and the particular application.

Figure 2-1. **Geographic Hierarchy for the 1990 Decennial Census**



**Inset A: MA Components**

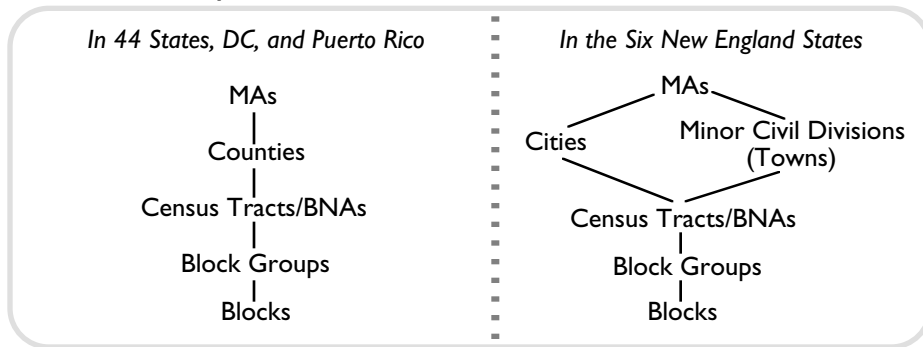
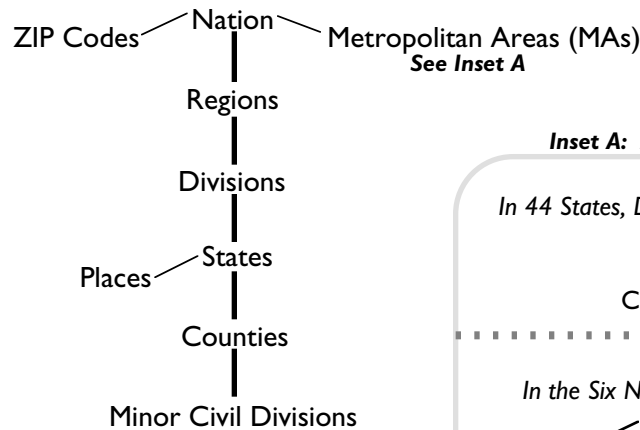
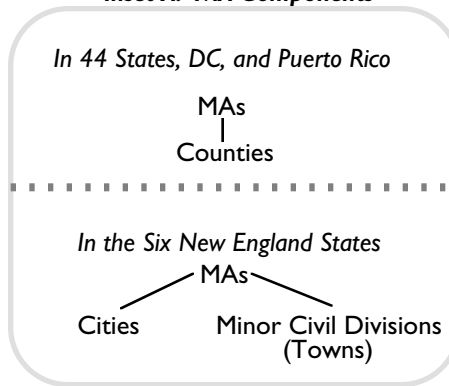


Figure 2-2. **Geographic Hierarchy for Other Censuses (1987, 1992)**

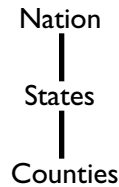
**Economic and Governments Censuses**



**Inset A: MA Components**



**Agriculture Census**

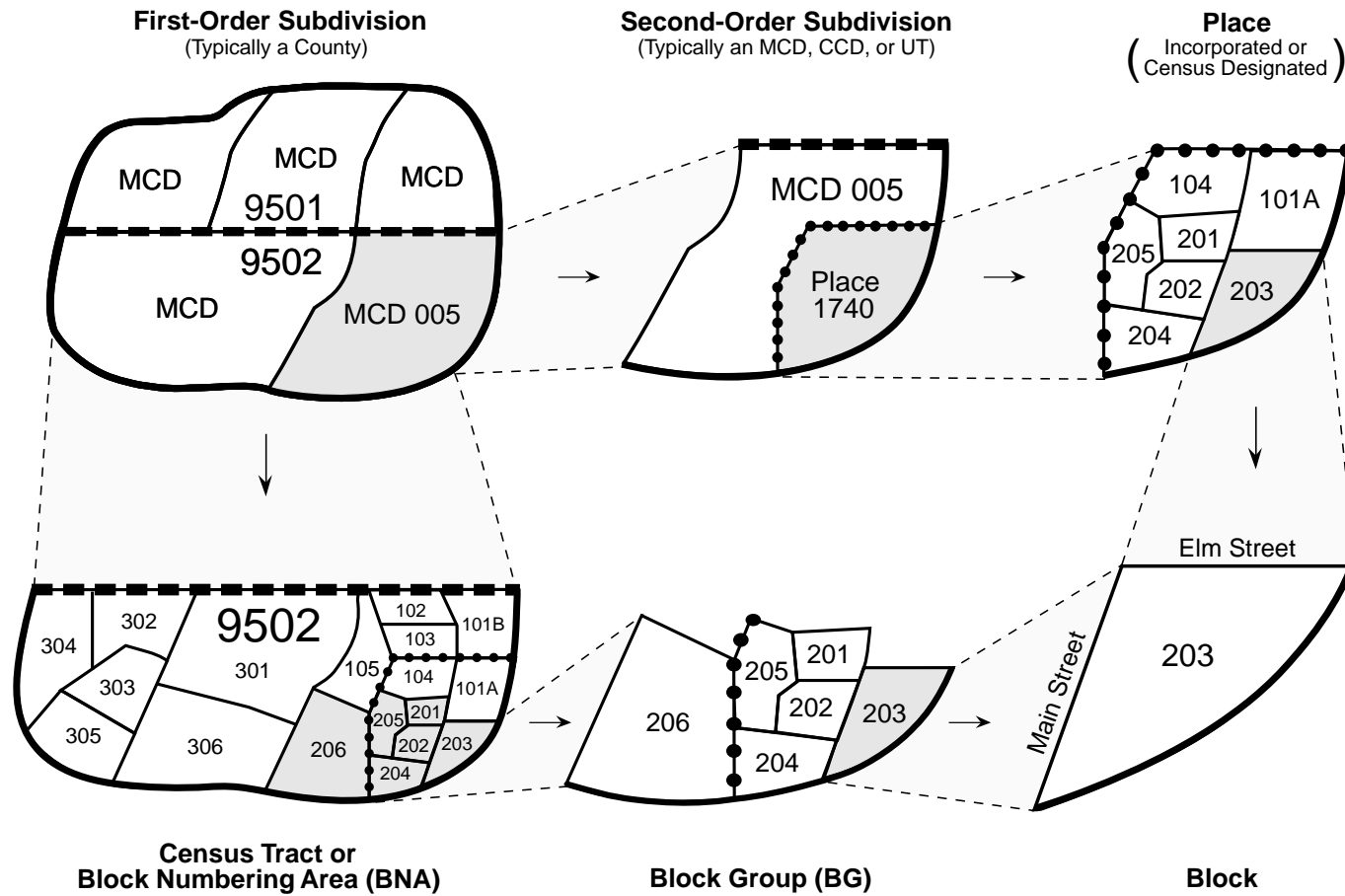


The Economic Census includes the Censuses of Retail Trade, Wholesale Trade, Manufactures, Service Industries, Construction Industries, Mineral Industries, and Transportation, along with the Enterprise Statistics Program and the Minority and Women-Owned Businesses Program.

The Census of Governments reports data for school districts and other special-purpose districts in addition to the geographic entities in the diagram above (except for ZIP Codes). These may exist at various levels of the hierarchy. The Census of Governments includes as places only incorporated places.

Unlike the Economic and Governments Censuses, the Agriculture Census does not provide data for places or MCDs. It does report data for special-purpose entities that may exist at various levels of the hierarchy.

Figure 2-3. Small Area Geography in the 1990 Census



## **Legislation**

Legislation always has had an important influence on the Census Bureau's programs for the collection of data and its presentation of those data for each component geographic entity. Throughout the 1980s, for instance, Title 13 of the United States Code, its amendments, and a number of court decisions shaped the Census Bureau's priorities, plans, operations, and data presentations for the 1990 census. Public Law 94-171, passed by the Congress in 1975 and embodied in Title 13, requires that the Census Bureau release small-area population data within one year after Census Day for purposes of legislative redistricting. Meeting the intent of this legislation influenced the Census Bureau to increase the number of areas for which it tabulated data by census block for the 1980 census and to assign block numbers to the entire Nation for the 1990 census. It also made it possible to provide decennial census data tabulated by voting district (election precinct) in both the 1980 and the 1990 censuses.

## **Needs of Other Federal Agencies**

The needs of the Congress and other Federal agencies have a major influence on the Census Bureau's data collection activities. Federal law often requires the use of Census Bureau data in specific programs, projects, studies, investigations, analyses, and reports. To ensure meeting the data needs of the affected agencies, the Office of Management and Budget (OMB), at the request of the Census Bureau, organized the Federal Agency Council (FAC) in 1974. From the FAC, which was active in the precensus planning periods for both the 1980 and the 1990 decennial censuses, the Census Bureau obtained information about the types of geographic entities that Federal agencies needed for carrying out their programs. In preparation for the next decennial census of population and housing, the OMB and the Census Bureau are conducting a survey of the Federal agency 2000 census data content requirements. Preliminary results on geographic requirements are summarized in Tables 2-3 and 2-4.



Table 2-3. **Entities Needed by Federal Agencies Using Population Data**

<b>Department of Agriculture</b>	<ul style="list-style-type: none"> <li>County</li> <li>Census Tract/BNA</li> <li>American Indian and Alaska Native Areas</li> </ul>
<b>Department of Commerce</b>	<ul style="list-style-type: none"> <li>State or Nation</li> <li>County</li> <li>Place (with or without MCDs)</li> <li>School District</li> <li>Census Block</li> <li>American Indian and Alaska Native Areas</li> </ul>
<b>Department of Defense</b>	<ul style="list-style-type: none"> <li>ZIP Code</li> <li>Census Block</li> </ul>
<b>Department of Education</b>	<ul style="list-style-type: none"> <li>School District</li> <li>Census Block</li> </ul>
<b>Department of Health and Human Services</b>	<ul style="list-style-type: none"> <li>County</li> <li>Place (with or without MCDs)</li> <li>Census Tract/BNA</li> <li>ZIP Code</li> <li>American Indian and Alaska Native Areas</li> </ul>
<b>Department of Housing and Urban Development</b>	<ul style="list-style-type: none"> <li>Place (with or without MCDs)</li> <li>Census Tract/BNA</li> <li>Block Group</li> </ul>
<b>Department of Justice</b>	<ul style="list-style-type: none"> <li>Place (with or without MCDs)</li> <li>School District</li> <li>Census Block</li> </ul>
<b>Department of Labor</b>	<ul style="list-style-type: none"> <li>County</li> <li>Census Tract/BNA</li> </ul>
<b>Department of Transportation</b>	<ul style="list-style-type: none"> <li>Traffic Analysis Zone</li> <li>Census Block</li> </ul>
<b>Department of Veteran Affairs</b>	<ul style="list-style-type: none"> <li>County</li> </ul>
<b>Environmental Protection Agency</b>	<ul style="list-style-type: none"> <li>Census Tract/BNA</li> </ul>
<b>Equal Employment Opportunity Commission</b>	<ul style="list-style-type: none"> <li>State or Nation</li> <li>Cities with <math>\geq</math> 50,000 People</li> <li>ZIP Code</li> </ul>
<b>National Science Foundation</b>	<ul style="list-style-type: none"> <li>State or Nation</li> </ul>

Source: Population Division, U.S. Bureau of the Census "Federal Agency 2000 Census Content Requirements—Summary of Submissions to OMB," (draft), August 16, 1993.

Table 2-4. **Entities Needed by Federal Agencies Using Housing Data**

<b>Department of Agriculture</b>	State or Nation BNA
<b>Department of Commerce</b>	County Census Tract/BNA Census Block
<b>Department of Energy</b>	State or Nation County Census Tract/BNA Block Group
<b>Department of Health and Human Services</b>	County Census Tract/BNA
<b>Department of Housing and Urban Development</b>	State or Nation County Place (with or without MCDs) Census Tract/BNA Block Group
<b>Department of Justice</b>	Block Group
<b>Department of Transportation</b>	Traffic Analysis Zone
<b>Environmental Protection Agency</b>	County Block Group

Source: Population Division, U.S. Bureau of the Census "Federal Agency 2000 Census Content Requirements—Summary of Submissions to OMB," (draft), September 2, 1993.

### **Tribal, State, Local, and Other Needs**

In addition to meeting with Federal agencies, the Census Bureau undertook numerous programs and activities with State agencies and selected tribal, local, and regional officials. These efforts were designed to encourage public awareness of the 1990 census, to build wide public support, to seek participation in the preparatory definitional process, to ensure the maximum return of correctly filled out questionnaires, and to determine the geographic levels for which the officials needed decennial census data to accomplish their decision-making, regulatory, and legislative mandates. As part of this outreach effort, the Census Bureau made a number of efforts to improve or revise the geographic structure for the decennial census. The *Geographic*

*Areas Reference Manual* represents one of several major ongoing efforts to improve the data user community's understanding of Census Bureau geography and its recognition of the geographic innovations introduced and considered. This manual reflects only one facet of the Census Bureau's attempt to address the many issues associated with Census Bureau geography and its relationship to census-taking and tabulation logistics.

In 1984, the Census Bureau sponsored a National Geographic Areas Conference, followed by three Regional Geographic Areas Conferences, to consider some of the geographic issues needing resolution for future decennial and economic censuses. These conferences also provided a forum in which to gather suggestions concerning both current and possible future geographic approaches. Before these conferences, both data users and Census Bureau staff expressed a need to reexamine the definitions of the geographic areas used in the Census Bureau's data presentations, to reconsider some of the procedures used in delineating the boundaries of those areas, and to ensure that the geographic area definitions reflected both the current and future needs of the data user community.

During 1984 and 1985, the Census Bureau presented a compilation of geographic options as part of its series of 65 Local Public Meetings—there was at least one meeting in each State, the District of Columbia, Puerto Rico, and the Virgin Islands, plus similar meetings in three Pacific Outlying Areas of the United States. In addition, there were 12 regional American Indian and Alaska Native meetings held between May 1985 and September 1986 to obtain advice from American Indian and Alaska Native populations on population and housing items, census geography, and outreach. The geographic program also formed a major component of the planning discussions at the 1986 series of 11 Product Planning Meetings held throughout the Nation, and in numerous meetings held with representatives from the State Data Centers, Census Bureau advisory committees, and officials interested in voting district data.

## **Census Bureau Confidentiality**

In tabulating data, the Census Bureau is concerned with the individual's right to confidentiality. Specifically, Federal law (Title 13, U.S. Code) states that:

- The information gathered by the Census Bureau is solely for statistical purposes.
- The publication of the data must be such that neither individual establishments nor people nor their residences can be identified.
- Only sworn officers and employees of the Census Bureau may examine individual responses.

All geographic statistical entities must be defined and delineated to comply with the legal requirements and the policies specified by the Census Bureau to protect the confidentiality of the collected information. These concerns are not restricted to the geographic classification component of a census or sample survey.

To provide a national structure that supports the first requirement, the Census Bureau devises geographic entities that serve as the statistical equivalents of some legal entities in order to supplement, but not to replace, governmental units. To meet the second requirement, the Census Bureau structures the criteria for the various statistical entities to ensure appropriate population size thresholds. These size criteria generally permit the Census Bureau to provide meaningful demographic and economic data, and at the same time ensure confidentiality through sufficient numbers of responses within a particular geographic entity. In this way, the geographic area criteria support both the Census Bureau's confidentiality mandate and the statistical validity goal by limiting the minimum population size of most subcounty statistical entities.

## **Technical and Budgetary Considerations**

Several technical considerations affect the data presentation for geographic entities. The Census Bureau must (1) ensure that each level of geography becomes a part of the geographic hierarchy, (2) establish a numeric coding scheme to correspond with the names of the entities, and (3) ensure that

the boundaries of the areas are suitable for depiction on maps. It also must provide the statistics and maps within the schedule data users expect. These technical considerations have provided part of the impetus for the Census Bureau's development of automated geographic reference files, address reference files, and digital boundary files. The Census Bureau began developing these files for the 1963 economic censuses, improved and expanded them for subsequent economic and decennial censuses, and increasingly will rely on automated geographic and cartographic processing resources that will provide these linkages as efficiently and accurately as possible.

Budgetary considerations are an important factor in the Census Bureau's ability to provide data. The Census Bureau must select the best overall approach within its available budget, modify its plans as the budget review and approval process changes the level of available funding, and evaluate its ability to deliver the data. The feasibility of implementing programs to tabulate data for new kinds of geographic entities depends, in part, on the ease with which the Census Bureau can integrate a new area into the existing geographic framework without unduly raising the cost of collecting, processing, and presenting the data, and of cartographically depicting the new area.

### **The Need for a General Consensus by Data Users About Geographic Concepts**

To ensure widespread acceptance of new geographic units, it is desirable that there should be a general consensus by various data users about the underlying conceptual issues. Data users also expect the Census Bureau to define its geographic entities precisely, and for such definitions to meet the needs for data comparability over time (comparability of geographic areas from one census to the next often is a major concern of data users). Accordingly, the Census Bureau proceeds with caution in establishing new geographic area definitions because, once adopted, the entities rapidly become etched into the policies and programs of other agencies. They also quickly become additions to the set of tools that researchers use to review, analyze, and portray the Nation. Consequently, the Census Bureau only tabulates data for entities whose definitions are generally accepted by most data users.

## The Underlying Foundation of Legal Entities

Legal entities are the primary component of the Census Bureau's geographic hierarchy. States, counties, incorporated places, and minor civil divisions (MCDs) have been used in the Census Bureau's enumerations and data tabulations since the first decennial census of 1790. The U.S. Constitution, Federal legislation, and more recently, Federal court decisions require that the Census Bureau collect and tabulate statistics for these and other legally defined areas.

### The Constitution and Federal Law

The Census Bureau's first and most long-standing obligation has been to provide accurate population counts for each State every ten years. This requirement dates from the founding of the Republic. In 1787, the delegates to the Constitutional Convention included a requirement for a census, and implicitly, census geography, in the Constitution:

“Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union according to their respective Numbers. The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years in such Manner as they shall by Law direct.”

Congressional statutes provide the legal basis for the taking of the Federal censuses. The first census law (March 1, 1790) directed the Federal marshals, then in charge of taking the census, to assign to their assistants:

“... a certain division of ... one or more counties, cities, towns, townships, hundreds, or parishes, or of a territory plainly and distinctly bounded by water courses, mountains, or public roads.”

Such geographic divisions were the building blocks for taking the early decennial censuses and for presenting statistical totals for States, counties, MCDs, and incorporated places. The Census Bureau always has devoted much effort to fulfilling this commitment; in fact, one of its major geographic efforts today is the periodic Boundary and Annexation Survey (BAS), by means of which it ascertains the legal boundaries, status, and names of these governmental units.

Federal law still makes provision for the Census Bureau's data collection activities and, in a general way, for the scope of the Census Bureau's geographic

hierarchy. The United States Code, a summary of Congressional legislation applying to the activities of the Federal Government, lists the major areas and territories that must be covered by the various Federal censuses:

“Each of the censuses authorized by this chapter shall include each State, the District of Columbia, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Commonwealth of Puerto Rico, and as may be determined by the Secretary, such other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty. Inclusion of other areas over which the United States exercises jurisdiction or control shall be subject to the concurrence of the Secretary of State.”<sup>1</sup>

Other titles of the United States Code contain provisions that specify the use of the Census Bureau’s statistics tabulated by geographic area for various Federal Government programs. Such geographic entities usually are governmental units, but some are statistical entities.

### **Court Decisions and Redistricting Legislation**

Court decisions directly affect Census Bureau geography as well. In the 1960s, the U.S. Supreme Court required that both Federal congressional districts and State legislative districts within each State be of nearly equal population size. The ability of public officials to achieve uniformity in the sizes of their legislative districts stems in part from the Census Bureau’s ability to provide them with population counts for small geographic areas.

In 1975, Congress passed Public Law 94-171, which specified the following amendment to Section 141 of Title 13:

“Tabulations of population for the areas identified in any plan approved by the Secretary [of Commerce] shall be completed by him as expeditiously as possible after the decennial census date and reported to the Governor of the State involved and to the officers or public bodies having responsibility for legislative apportionment or districting of such States, except that such tabulations of population of each State requesting a tabulation plan, and basic tabulations of population of each other State, shall, in any event, be completed, reported, and transmitted to each respective State within one year after the decennial census date.”<sup>2</sup>

The Census Bureau met the challenge by giving special attention to the small-area geographic framework for the 1980 census and by working with

the data user groups that needed such information. For the 1990 census, the Census Bureau undertook even more extensive efforts to improve the geographic basis of its small-area data tabulation programs. Participants in the Block Boundary Suggestion Project could suggest the addition to the Census Bureau's maps of visible features to be held as 1990 census block boundaries that would permit them to more accurately delimit the voting districts in their States. Another initiative, the 1990 Census Redistricting Data Program, allowed participants to outline their voting districts as groups of whole census blocks so that the Census Bureau could tabulate data for these entities. And finally, the Census Bureau decided to provide data *by block* throughout the Nation (as well as throughout all the territories). These activities provided State governments with timely small-area population counts for use in Congressional and State legislative redistricting. Chapters 11 and 14 provide further information.

### **New Kinds of Legal and Administrative Entities**

During the past several decades, the Census Bureau has tabulated the results of the decennial censuses of population and housing for several additional kinds of legal and administrative units. These entities include several categories of American Indian and Alaska Native areas, as well as school districts, traffic analysis zones, neighborhoods, and ZIP Codes.

For the 1980 and 1990 censuses, the Census Bureau improved its geographic delineations of American Indian reservations, their subdivisions, and related entities. It also reported more data for the Alaska Native Regional Corporations (ANRCs). For the 1990 census, the Bureau of Indian Affairs (BIA) asked tribal governments to identify their off-reservation tribal and individual trust lands; the Census Bureau designated each area of trust land as one or more separate census blocks.

The Nation's approximately 16,000 school districts are another kind of administrative area for which the Census Bureau tabulated and presented socioeconomic information from both the 1980 and the 1990 censuses. In this instance, the Census Bureau worked with the U.S. Department of



Education and the appropriate State authorities to define the geographic extent of school districts throughout the Nation. The powers, responsibilities, organization, and geographic extent of school districts often vary from State to State, or even locally within a State. To accommodate this situation, the Census Bureau devised an approach that permitted classification of school districts into four categories, each of which could constitute a geographic level in the tabulation scheme. A school district could be unified, or it could consist of component subdivisions of elementary, middle, and secondary school districts (sometimes in varying combinations). To accommodate this situation, the Census Bureau identified school districts in terms of their geographic components—counties, incorporated places, MCDs, census tracts/block numbering areas (BNAs), and census blocks. It then aggregated the statistical data for these component entities by individual school districts.

Other user needs for data summaries for a nonstandard set of geographic entities are met by the User-Defined Areas Program (UDAP). The UDAP permits local data users to delineate the areas of entities (such as neighborhoods, planning districts, or service areas) as combinations of adjacent census blocks, block groups (BGs) or parts of block groups, and census tracts/BNAs or parts of census tracts/BNAs. By participating in the UDAP, data users can obtain statistical summaries for a geographic area or areas that are not otherwise presented in the Census Bureau's standard data products.

Another new development has been the situation where an incorporated place consolidates its functions with the government of a county or MCD while this same new governmental unit continues to contain other incorporated places. To improve its representation of such entities, the Census Bureau has recognized a new class of entity, the *consolidated city*. The 1990 census recognizes six such entities, and a seventh is included in the first-time recognition of consolidated cities by the 1992 economic census.

New entities such as those listed above seldom find a straightforward niche within the standard units of the Census Bureau's geographic hierarchy. To

provide data tabulations for these new areas, the Census Bureau's processing operation must subdivide the standard units and recombine their data into sets appropriate for the new geographic areas.

### **Variations and Regional Differences**

Most of the basic legal/administrative areas appearing in the Census Bureau's tabulations are specified in Federal, State, and local law. The Census Bureau must collect information about the boundaries of these areas, understand their legal relationships, organize the names of the areas, and present the hierarchical relationships among them accurately and meaningfully. In many States, the hierarchy of geographic areas follows a straightforward pattern. There are, however, many departures that reflect the highly varied pattern of existing legal and statistical entities. In such situations, the Census Bureau strives for an impartial, neutral statement of an area's geographic status. For example, the Census Bureau treats Puerto Rico and the Outlying Areas as the *statistical equivalents* of States. Counties and entities equivalent to them are treated similarly. In most States, the counties are active, functioning, general-purpose governments that provide basic services to the population; hence, they are legally defined governmental units. There are, however, some exceptions that demand a different approach. See Chapter 4, "States, Counties, and Statistically Equivalent Entities."

At the county subdivision level, the pattern of geographic units is even more varied, consisting of legal entities, statistical entities, places not part of any legal county subdivision, and a combination of these types of entities. Chapter 8, "County Subdivisions," provides detailed explanations for the United States. Chapter 7, "Puerto Rico and the Outlying Areas," discusses similar entities in the U.S. territories. At the place level, the situation also is mixed; that is, the Census Bureau shows concentrations of population as legal entities where incorporated places exist, and as statistical units (CDPs) in situations where the settlements contain a specified minimum population. Chapters 7 and 9 provide further information.

## **The Importance of Statistical Entities**

The development and maintenance of the statistical entities comprise a significant part of the Census Bureau's total geographic effort. There are numerous types of statistical entities, both large and small in population or land area. They include the groupings of States into regions and divisions, the metropolitan areas, the urbanized areas, some types of county subdivisions, and the small-area subhierarchy of census tracts/BNAs and their subdivisions. Table 2-5 provides brief definitions of the most familiar types of statistical areas. Detailed information on the origin, development, function, and relationship of these areas within the Census Bureau's overall system of geographic entities is contained in subsequent chapters.

### **Census Bureau Considerations**

Data users often request that the Census Bureau tabulate its data in terms of a geographic entity that does not correspond with combinations of legal entities. To meet such needs, the Census Bureau offers a variety of statistical entities in its standard data products. It also offers customized data tabulations upon receipt of reimbursement, from the requesting person or agency, for the relevant costs.

The Census Bureau considers introducing new standard statistical entities when two conditions are met: (1) there must be a general consensus in favor of this new kind of geographic unit, and (2) the Census Bureau must secure the funding needed to prepare the geographic area plan, the additional data tabulations, and any required map information. Once the Census Bureau obtains the needed funding, it generally establishes a cooperative program with State, tribal, and/or local agencies to establish meaningful criteria to define the new type of entity. To implement the program, the Census Bureau generally works with State, tribal, and/or local officials to delineate and identify the statistical entities as standard units for data tabulation and dissemination.

Practice and tradition, rather than statute or legislation, have made statistical entities important elements in the Census Bureau's overall geographic

Table 2-5. **The Census Bureau's Most Commonly Used Statistical Entities**

<b>Region and Division<sup>1</sup></b>	Combination of States.
<b>Metropolitan Area (MA)<sup>1</sup></b>	One or more contiguous counties (cities and towns in New England) that are socially and economically integrated with a large densely settled population core.
<b>Urbanized Area (UA)</b>	A continuously built-up area with a population of 50,000 or more.
<b>Census County Division (CCD)</b>	A subdivision of a county that serves as the statistical equivalent of an MCD in 21 States where MCDs either do not exist or are not appropriate for decennial census data-reporting purposes.
<b>Unorganized Territory (UT)</b>	A subdivision of a county that is the statistical equivalent of an MCD for decennial census data-reporting purposes in those MCD States that have counties with part or all of their area not in any MCD.
<b>Census Designated Place (CDP)</b>	A densely settled population concentration which has a name and community identity but is not part of any incorporated place.
<b>Census Tract</b>	A statistical subdivision of selected counties—established by a local committee of data users—that is a relatively stable basis for tabulating decennial census data. Secondarily, it serves as a framework for assigning census block numbers. <i>Tabulated parts</i> occur where a county subdivision or place boundary divides a census tract.
<b>Block Numbering Area (BNA)</b>	A statistical subdivision of counties without census tracts, serving as a framework for assigning census block numbers and for tabulating decennial census data. <i>Tabulated parts</i> occur where a county subdivision or place boundary divides a BNA.
<b>Block Group (BG)</b>	A grouping of census blocks having the same first digit in their identifying number within a census tract or BNA. <i>Tabulated parts</i> occur where a county subdivision or place boundary divides a BG.
<b>Census Block</b>	The smallest Census Bureau geographic entity; it generally is an area bounded by streets, streams, and the boundaries of legal and statistical entities.

<sup>1</sup> The Census Bureau tabulates data for regions, divisions, and MAs in its data presentations for almost all censuses and sample surveys. It tabulates data for other kinds of statistical entities only in its data presentations for the decennial census of population and housing, and selectively for other censuses and sample surveys.

system. In contrast to most legal entities, whose existence and definition the Census Bureau accepts as mandatory, statistical entities tend to undergo long periods of trial by the data user community before gaining acceptance as standard geographic areas for tabulation and dissemination. Because they are defined by criteria or guidelines rather than legal statutes, they also are subject to more contention when the Census Bureau, another governmental agency, or data users want to change them or use them in a way that is inconsistent with their original purpose. To survive, statistical entities must prove satisfactory from a number of perspectives.

### **The Significance of Contributions from Outside the Census Bureau**

Although the Census Bureau often takes the lead in suggesting or promoting new categories of statistical areas when this appears to be an appropriate solution to a particular situation, other Federal, State, and local agencies, tribal officials, as well as other interested data users and groups, often are the source of suggestions and proposals for new kinds of statistical areas. Data users also suggest changes in the criteria and guidelines for the existing statistical areas.

The census tract is a prime example of a statistical area that was initiated by local data users. Local data users in several large cities were early sponsors of these subcity geographic entities. Census tracts became standard entities in decennial census publications only after the Census Bureau prepared data tabulations on a cost-reimbursable basis for these entities in three consecutive decennial censuses (1910 to 1930). During that period of time, census tracts gained recognition among data users. Thereafter, the Census Bureau accepted census tracts as standard geographic entities for its decennial census data presentations, disseminated the definitional criteria widely, and expanded the geographic coverage of the census tract program. Today, the census tract is one of the most commonly used and best known small areas for which the Census Bureau tabulates data. Chapters 3, “Local Census Statistical Areas Committees and Other Local Assistance,” and Chapter 10, “Census Tracts and Block Numbering Areas,” provide more detailed information.

Some geographic entities that served the internal administrative needs of the Census Bureau have become important to the data user community. Census blocks, enumeration districts (EDs), and block numbering areas (BNAs) were first used as operational units for taking and tabulating the census. As data users needed more small-area statistics, these operational units came into use as official entities for the tabulation and dissemination of decennial census statistics. Chapters 3, 10, and 11 provide further information.

Some kinds of statistical entities identify the settlements or territories of specific indigenous populations, the American Indians and Alaska Natives. Before the Census Bureau established boundaries for these new categories of geography, boundaries within which it would aggregate the 1990 decennial census data, the Census Bureau received assistance from tribal and Alaska Native leaders. Chapter 5, “American Indian and Alaska Native Areas,” provides further information. While the tabulation and publication of data for these entities stem from the special needs of, or requests from, the agencies and groups that especially require them, these entities also are of interest to the overall community of data users. Therefore, the Census Bureau has added these entities to the data tapes, technical documentation, maps, and publications it makes available to the general public.

All these developments reflect the Census Bureau’s commitment to provide the data user community with the best possible configuration of geographic units. Before each decennial census, the Census Bureau solicits public reaction to its programs and products. For statistical entities, the interaction that this consultative process entails requires some familiarity on the part of the data users with the specific standards and criteria that guide the creation, maintenance, and update of a particular kind of entity. To ensure future interaction, both the Census Bureau and the data user community plan to continue a periodic review of the criteria for statistical entities to ensure that the conceptual basis for each type remains appropriate and that the entity still provides the data summaries users require.

## Concepts, Criteria, and Guidelines

While both categories of geographic units, legal/administrative entities and statistical entities, serve the common purpose of presenting Census Bureau data, the concepts, principles, and criteria for recognizing the entities in each category involve different preparations by the Census Bureau. For both categories, it is critical that the Census Bureau establish and implement standards, guidelines, and criteria for defining, identifying, and delineating the geographic entities it recognizes for each census and sample survey. When the Census Bureau agrees to tabulate information for a new kind of geographic area, it must specify precise criteria for establishing the new component entities. These standards must be somewhat flexible in order to accommodate new trends and developments, yet they also must present a sturdy, consistent application of methodology and criteria that have proven themselves over time.

The status of legal/administrative entities generally is well defined. Legislation or administrative measures create them, specify their governmental or administrative functions, and contain provisions for establishing and changing their names and boundaries. Once the Census Bureau is convinced that a particular category of governmental unit is appropriate for data presentation, it:

- Ascertains the existence of the applicable units by making inquiries of relevant government agencies.
- Identifies an authoritative source of information about entities.
- Obtains names, establishes codes, and locates boundaries for entities.
- Enters this information into the TIGER data base, classifying it to correspond to entity boundaries.
- Presents accurate results for the governmental units in the appropriate data tabulations and presentations.

A similar set of operations applies to statistical entities, but there is an important difference. Once the Census Bureau justifies the need for a new type of geographic area in terms of various principles, it must establish

generally accepted criteria and guidelines for the identification and delineation of the new entity. The Census Bureau also must determine that the resulting geographic areas are suitable for tabulating and disseminating the statistical data it collects. Then it must identify sources to select and delineate the entities, usually local census statistical areas committees, State agencies, and tribal officials. The guidelines and rules for each type of area originate from (1) the requirements, needs, and preferences of the data user community; (2) the Census Bureau's own practices in data collection, processing, and map presentation; (3) the basic methodological principles for delineating geographic areas; and (4) various other criteria for identifying statistical areas. Ultimately, cost and the policies of the Federal Government form a critical underlying consideration with which the Census Bureau must deal in selecting the geographic entities for which it will provide data from its censuses and sample surveys. These elements provide a framework that defines what can be done. Within that framework, data user needs and statistical practice influence the conceptual approaches used by the Census Bureau.

### **Nationwide Consistency**

National consistency is an important consideration for the Census Bureau's geographic classifications and presentations. It is important for legal/administrative entities, particularly those comprising the basic State/county/MCD/place hierarchy. Consistency is especially relevant to statistical areas, where the Census Bureau is largely responsible for establishing and implementing the criteria, standards, and guidelines that define these areas. Using a uniform approach to control the identification and delineation of, and data presentations for, those geographic areas that are numerous and widespread (such as census blocks, BGs, census tracts and BNAs, CCDs, CDPs, UAs, and MAs) ensures a national consistency.

### **Historical Comparability**

One of the great virtues of decennial censuses is that they provide statistics spanning nearly two centuries, thereby making possible many time-series studies. Over the last several decades, the content of the decennial census questionnaire and the methodology used to tabulate and disseminate the



results have been sufficiently consistent to support a wide range of historical studies for entities both small and large in population and/or area; the same is true for many of the other censuses and sample surveys the Census Bureau conducts, although the historical trail exists for a shorter period of time. As a result, it is desirable to maintain comparability of geographic entities from one census or sample survey to the next.

For legally defined entities, such comparability generally is straightforward. To ensure this capability for statistical entities, where possible and appropriate, both the Census Bureau and the local officials participating in the establishment and review of these entities must pay careful attention to the process of delineating and redelineating each type of entity. The Census Bureau cautions against adjusting the boundaries of some statistical units (particularly census tracts and CCDs) merely to accommodate population growth, or changes and revisions in the street network.

On the other hand, it is appropriate for the boundaries of geographic areas such as UAs and CDPs to change with each decennial census. Just as cities change their boundaries as they expand to provide services to, and gain jurisdiction over, additional territory, the people who live there, and the businesses that operate there, UAs and CDPs are delineated to reflect the settlement pattern at a specific moment in time. For these types of entities, the historical comparison from one census to the next considers the areal extent as well as the numbers and characteristics of the people, homes, and institutions located there.

### **Homogeneity and Functional Integration**

The Census Bureau uses two basic principles in establishing and revising statistical entities. One recognizes a statistical entity by the similarity of its component parts, or the homogeneity principle. The functional integration principle views a statistical entity as a nucleus with its surrounding zone of influence. The two principles find various applications, depending on the purpose of the inquiry, the type of geographic area under study, and the population size of the specific geographic entity. For instance, one application may focus on the analysis of internal trends, while another

may require the comparison of external differences among several of the entities. The homogeneity principle involves combining a group of people, housing units, or business establishments with similar characteristics into a single geographic area. The purpose can be either to provide summary statistics or to ensure the statistical validity of the data collected from only a sample of respondents; in both cases, each component entity should have, insofar as feasible, a similar population, economy, land use, and/or physical environment throughout its extent. Conversely, homogeneity means identifying, as separate entities, those adjacent areas that are different. Of course, demarcation of homogeneous areas frequently involves other criteria; factors such as population size (for example, each component entity must contain approximately equal numbers of people), permanence, and the presence of appropriate boundaries usually come into play.

Sometimes the differences between two areas occur gradually throughout a transition or border zone of several blocks or even miles, rather than changing sharply on either side of a boundary line. In such cases, it is critical that the person or group defining the areas use careful and knowledgeable judgment in selecting a boundary. Sometimes several kinds of source materials may point to the existence of homogeneous characteristics within an area, thereby providing an approach to choosing boundaries. For instance, developing a layout of statistical entities may involve the combined use of past census data, maps, aerial photography, field observations, and information from local sources.

The functional integration principle involves the grouping together, into a single statistical area, the people, housing, or business establishments that share a central nucleus along with the surrounding, functionally related entities, such as a large city and its suburbs. Such areas tend to form a single geographic whole that operates as a cohesive functional entity or system. These geographic areas are integrated through the communication, movement, and interaction of persons, goods, and services. Some examples are CCDs, CDPs, and traffic analysis zones. Metropolitan areas, although defined by OMB and not by the Census Bureau, are another example. Functional

integration, like homogeneity, may derive from a single factor or from a group of related factors. Various quantitative measures such as statistics on commuting, traffic flow, trading patterns, and communications, often point to the functional cohesiveness of a particular type of geographic area. Because sources of these data generally involve looking at relationships among smaller entities, statistical entities based on functional integration often are more extensive in size than those based on homogeneity. This is particularly the case with MAs, whose purpose is to make it possible to summarize a variety of statistics from many different agencies, groups, and sources for the same geographic area.

In practice, the distinction between these two concepts is somewhat fluid. Frequently, the creation, maintenance, and update of statistical entities involves considerations of both homogeneity and functional integration. Some geographic applications may stress one concept more than the other, while other applications may aim at a balance between them. For example, while the criteria for establishing census tracts emphasize the need to acknowledge the homogeneity that exists on both sides of a major highway at a point in time, they also recognize the importance of major barriers, railroads, freeways, waterways, and topographic features, that impede functional integration, and thus separate one census tract from another.

Sometimes new uses arise for a geographic area that involve criteria different from those applied at the time the area was defined. As an example, the organizing principle for delineating census tracts has been homogeneity at the time of initial delineation. Over several decades, however, the internal characteristics of many individual census tracts have changed, resulting in greater variation in settlement patterns within each census tract. During the same period, however, the boundaries of the census tracts, which had remained stable throughout this process of internal change, became recognized as useful frameworks for making historical comparisons and analyzing trends covering several decades within the original set of areas. The value of census tracts as a stable framework of

areas came to outweigh the original criterion of homogeneity. Thus, homogeneity is the primary factor only when preparing a plan for an area that previously did not have census tracts, or when an existing, growing census tract is split into two or more parts.

### **Identification of Geographic Entities**

In accepting or devising a new kind of geographic entity, or in maintaining those that already exist, it is important to keep the geographic concept simple enough, insofar as possible, for ready comprehension and acceptance by all members of the data user community. Easy identification and recognition are key aspects in the wide acceptance of any geographic entity for which the Census Bureau presents data in its tabulations and publications. The identification of most major legal entities is a good example. Despite the fact that these areas are well known to local data users, the Census Bureau shows the names and locations of most governmental units, and displays their boundaries on appropriate maps for the benefit of data users who may be unfamiliar with the territory.

Easy identification is a greater concern for most statistical entities. The naming of statistical entities such as the regions and divisions, UAs, CCDs, and CDPs aids in their recognition by a wide audience. (The same is true of MAs, which are defined by the OMB.) In establishing names for statistical entities, the Census Bureau encourages the use of descriptive terms such as names that are known and already in local use. For several categories of statistical units—census tracts, BNAs, BGs, and census blocks—the large number of entities involved, and the diversity of the area they cover, make it easier and more practical to assign identifying numbers rather than names.

The Census Bureau presents the names or numbers of the statistical entities in its data tabulations, but few people have any concept of the extent or location of the boundaries of *Smithbury CDP*, much less the location of *Census Tract 27*. For these reasons, the Census Bureau must provide various types of maps to accompany its data tabulations. Some maps show only the names and general location of the entities in question, but most also show

the boundaries established for these entities, often including the names of the features that constitute the boundaries.

Boundaries, in particular, are an important element in communicating the exact location of a specific geographic entity to data users. State and local governments record the location of legal boundaries following the requirements of law. Such boundaries typically run through space or follow a major physical feature such as a river or ridge. The Census Bureau requires that the boundaries of statistical entities be easily recognizable linear features (roads, railroads, streams) that are identifiable through observation in the field. This requirement originally stemmed from the need for enumerators to know the exact limits of the areas they were assigned to canvass—a condition that still applied to many phases of the 1990 decennial census. The use of such definite, easily recognized boundaries also makes it possible for data users to relate information from local records or other sources to the appropriate statistical entity. To those data users not familiar with a particular area, the boundary information on Census Bureau maps depicts a definite, precise network of small geographic entities.

### **The Effect of Size, Coverage, and Shape on Statistical Entities**

Size is an important consideration in creating statistical entities and in making widespread changes to an existing set of such entities. To many data users, *size* refers to the number of people, housing units, or economic establishments within an area rather than the geographic extent of the area. The Census Bureau provides population size guidelines in its criteria for most types of statistical entities; the size criterion generally determines the maximum number of such entities that someone can establish within a given county or other jurisdiction. The observation of minimum population size guidelines for statistical entities also helps to ensure confidentiality.

In the context of *population size*, the statistical reliability of the data presented for various geographic units also becomes a significant factor. Because many of the Census Bureau's data tabulations involve the use of

sampling (collecting answers from only a selection of people or establishments and subsequently preparing estimates of what a complete count would have shown) rather than the summarizing of complete-count information, the number of sample responses has a direct bearing on the variability of the resulting data and in the confidence data users should place in them. In subdividing larger areas such as counties into smaller entities (for example, census tracts or BNAs), it is important to keep in mind their minimum desirable population size because of the many data items that are based only on sample responses. This often means observing minimum thresholds for the number of items (persons, households, housing units, business establishments) that each small area contains. If individual pieces of geography are too small, with correspondingly few persons, households, housing units, or business establishments in the sample, the resulting statistics will have lower confidence intervals and more sampling error. For such reasons, the Census Bureau recommends that a census tract contain at least 2,500 people.

*Size* also can refer to the extent of the area contained within a geographic entity, usually the number of square miles or square kilometers. For some purposes, such as developing enumerator assignment areas, the areal extent of a geographic entity can be an important consideration. Physical size also can be an important factor in data analysis. To meet the latter need, the Census Bureau provides area measurements along with many of its 1990 census data tabulations.

The geographic coverage of each type of statistical area varies according to their purpose. To be of use, major regions and subregions usually must cover the entire Nation; that is, they must provide *complete* geographic coverage. By contrast, places and UAs, whose purpose is to distinguish more densely settled areas from the rest of the country, do not attain complete national geographic coverage. (The same is true of MAs.) On the other hand, some census tables provide data for *nonmetropolitan area* and *outside of urbanized area*, thereby suggesting the notion of complete coverage. On the local level, MCDs, CCDs, and other county

subdivisions cover an entire county; census tracts or BNAs must cover an entire county and, concomitantly, so do BGs and blocks.

Compactness of shape is a desirable quality in a statistical entity, particularly for functionally defined ones; thus, it usually makes sense for their peripheries to be approximately equidistant from the centers. Twisted or elongated areas present the possibility that the statistical characteristics of the extremities will differ from those of the center or each other. If there are irregularities of shape, they should reflect geographic peculiarities related to the population, housing units, or establishments the area contains, and there should be a justification in terms of major criteria such as integration or homogeneity. Irregularities in shape result in a distinct handicap for cartographic presentation and may present problems in data analysis as well. Sometimes these irregularities are unavoidable. For example, exclaves (small portions of a legal or administrative area separated from its main part), may exist for various reasons, such as a city including an outlying reservoir or airport within its legal limits. Although the Census Bureau must recognize such legal/administrative boundaries, it generally requires statistical entities to consist of one contiguous piece of territory.

## **Future Considerations**

The successful completion of the 1990 Decennial Census of Population and Housing has brought a vast array of new options to the data user community. Perhaps nowhere within the framework of Census Bureau geography is the effect greater than at the small-area unit level (census tracts/BNAs, BGs, and census blocks). One of the most significant developments has been the extension of census block coverage to include the entire United States, as well as Puerto Rico and the Outlying Areas. For the first time, the entire Nation and its territories have data by census tract or BNA, BG, and census block. This has meant a vast expansion in the number of geographic entities in the data products of the Census Bureau, with the resulting increased opportunities for detailed data analysis.

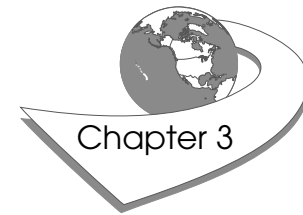
These developments obviously have far-reaching effects. For the first time, the American public has a vast fund of comparable, nationwide information

available for very small units of geography (the census block) as well as at the next higher levels (the BG and the census tract or BNA). The availability of these low-level geographic entities provides extensive flexibility for data users to obtain counts for geographic units of specific interest to them. These increased capabilities should stimulate much interest in decennial census data throughout the 1990s and beyond. As a result, many of the principles, concepts, and criteria described in this chapter, and in greater detail in the subsequent ones, will find renewed application, while others may become obsolete. Almost certainly, new concepts will emerge. The basic concepts embodied in this chapter, however, will serve to guide the continuing evolution of Census Bureau geography.



## *Notes and References*

- <sup>1</sup> U.S. Congress, Title 13, United States Code, Chapter 5—"Censuses." Subchapter V, Section 191(a).
- <sup>2</sup> U.S. Congress, *op.cit.*, Subchapter II, Section 141(c).



# Local Census Statistical Areas Committees and Other Local Assistance

## **Small-Area Geography**

Since the turn of the century, the Bureau of the Census has directed major efforts toward identifying geographic statistical units at the subcounty level that are sufficiently populous to provide statistically significant data. The Census Bureau has developed several programs to provide a geographic framework for the tabulation and analysis of demographic and economic data at a subcounty scale.

The Census Bureau recognizes numerous legally defined geographic entities for data presentation purposes, entities that generally are well known, such as States, counties, cities, and townships, whose governments function to provide services to the people living and working within their borders. These governmental units, however, usually do not provide sufficient geographic coverage to give a comprehensive, detailed picture of the distribution of the population on the landscape, especially in highly populated counties. Moreover, many of these governmental units have frequently changing boundaries, vastly differing population densities, extensive variation in population characteristics, and wide-ranging area sizes. These situations make it difficult for data users to summarize and analyze census statistics.

To meet the need for geographic areas that would effectively supplement and complement the legally established areas, the Census Bureau, in association with data users across the Nation, has devised several types of geographic entities that generally define small, relatively permanent geographic areas for which the Census Bureau can present statistics.

## **Purpose of Local Participation**

The division of counties, highly populated places, and other entities into small geographic areas based on their statistical significance, rather than on the basis of Census Bureau operational considerations alone, requires

a knowledge of local geographic conditions and small-area variations in the physical environment and local demographic and economic characteristics. On a nationwide scale, this task is not only immense, but it requires expert local knowledge that generally is not available at the Federal level of government. The most widely used subcounty statistical entity is the census tract. Other small-area statistical geographic units of analysis devised by the Census Bureau include census county divisions (CCDs), unorganized territories (UTs), census designated places (CDPs), block numbering areas (BNAs), block groups (BGs), and census blocks.<sup>1</sup>

Originally, local census tract committees, now called Census Statistical Areas Committees (CSACs), assisted the Census Bureau in establishing and maintaining census tracts for use in presenting data from each census of population and housing. In addition, they served as local liaisons between data users and the Census Bureau. Later, these committees expanded their role slightly when they identified specific census tracts as central business districts (CBDs) for the census of retail trade.

With the expanding scope of the Census Bureau's small-area geographic programs, the role of the CSACs expanded as well. During the 1970s, and even more so in the 1980s, the CSACs became advocates for, and very involved with, the delineation and review of several other small-area statistical geographic entities; areas that are no longer part of the inventory of small-area statistical geography: the data collection units for earlier decennial censuses, enumeration districts (EDs), and two entities used for several earlier censuses of retail trade, central business districts (CBDs), and major retail centers (MRCs). The 1990 census no longer required EDs, so the Census Bureau invited the CSACs to participate instead in the delineation of BGs in order to improve the usefulness of these areas to data users; although participation was optional, most committees participated to some degree.

The rather limited geographic areas served by these committees, often only one or a few counties, left large expanses of territory with no local participation. This led the Census Bureau to seek partnership with State

and tribal officials to oversee the local involvement in geographic area delineation and data user assistance. This chapter provides an overview of the specific technical functions performed by the CSACs, numerous State and other agencies, and tribal officials involved in delineating, reviewing, and maintaining small-area geographic units for purposes of data presentation. It also discusses the manner in which many of these committees, agencies, and officials operate, and their relationship to the Census Bureau's operations and to the opportunities posed by the automation of the Census Bureau's Geographic Support System.

## **Role and Function of Local Committees**

### **Development of Cooperative Efforts**

Dr. Walter Laidlaw, a clergyman, originated the concept of small, permanent geographic areas that retain their identity for long periods of time and are not subject to the vagaries of the location and relocation of boundaries of various legal entities. In 1905, he proposed dividing the city of New York into small, permanent geographic areas, later called *census tracts*. The Census Bureau adopted his plan as part of the 1910 decennial census. Beginning in the 1920s, Howard Whipple Green, a statistician in Cleveland, became a leading advocate of census tracts and other small areas. For more than 25 years, Green encouraged local citizens, via Census Tract Committees, to establish such areas and to use the resulting data for local applications. He actively promoted the Census Tract Committees as a mechanism for preparing census tract plans, and worked tirelessly to make data users aware of the value of small-area statistics.

In 1931, the American Statistical Association (ASA) appointed Green chairman of its newly created Committee on Census Enumeration Areas. This committee, with the Census Bureau's support, encouraged the creation of census tracts in the most populous cities throughout the Nation. Although the establishment of census tracts has always been a matter of local initiative, the Census Bureau has, nonetheless, taken a keen interest in the work of the Census Tract Committees. In

1934, it issued the *Census Tract Manual*, a set of instructions that specified the delineation procedures and prescribed standards such as a minimum population size and acceptable boundaries. Such guidelines assured that data could be gathered and published systematically and consistently for census tracts. The publication of the manual marked an important early effort on the part of the Census Bureau to promulgate its geographic standards at the local level. For further information about the Census Bureau's geographic standards, see Chapter 2, "Geographic Overview," and Chapter 10, "Census Tracts and Block Numbering Areas."

### **Expansion of Census Tract Committee Functions**

The functions of the committees gradually broadened through introduction by the Census Bureau of additional programs requiring the identification and delineation of new geographic units. One example of this increased local involvement occurred in the 1950s when the Census Bureau asked the Census Tract Committees to expand their functions by designating, for the census of retail trade, the whole census tract (or group of census tracts) that constituted the CBD of each metropolitan area. This expansion in functions was a direct recognition of the valuable work done by the committees on census tracts. Many committees also assisted in identifying MRCs even though these areas did not cover whole census tracts. This function continued with each of the economic censuses through 1982, after which, due to cost considerations, the declining relevance of CBD statistics, and a lack of local interest in identifying MRCs, the Census Bureau discontinued using CBDs and MRCs as standard data reporting units.

For the 1950 census, the Census Bureau officially established the concept of the CDP, then known as an *unincorporated place*. The Census Bureau consulted with the Census Tract Committees on the identification and delineation of CDPs within their area of jurisdiction for the 1960 census, and included CDP delineation as a standard part of the responsibility of each committee for the geographic preparations in advance of the 1970, 1980, and 1990 censuses.

For the 1960, 1970, and 1980 censuses, the Census Bureau offered local officials the opportunity to submit ED plans for consideration when it prepared field assignment maps. Some committees participated in this voluntary program, and the Census Bureau subsequently tabulated decennial census data for EDs. During the 1970s, a few committees became involved in the definition of BGs and the related numbering of census blocks through their work with the GBF/DIME-Files.<sup>2</sup> In 1975, the Census Bureau recognized the broadening responsibilities of the Census Tract Committees by renaming them *Census Statistical Areas Committees*. For the 1980 census, the Census Bureau asked the CSACs to review its recommended revisions to CCD plans in metropolitan areas. The present status of the CSACs is the result of decades of evolution with increasing levels of participation in the delineation of small-area geographic units.

### **Other Cooperating Agencies and Groups**

Although local census statistical areas committees are one of the most important groups involved in the definition of small-area geography, they are not the only ones. State, tribal, local officials and agencies who participate in the Census Bureau's geographic areas programs also play important roles. Over the years, their involvement has produced invaluable contributions to the Census Bureau's geographic framework of legal/administrative entities and statistical entities.

By means of the Boundary and Annexation Survey (BAS), the Census Bureau maintains an inventory of local general-purpose governments (counties, MCDs, and incorporated places) and obtains up-to-date information on their boundaries and status. The success of the BAS program is due to the cooperation of thousands of State, county, and municipal officials (see Chapter 9, "Places"). Another cooperative effort is the 1990 Census Redistricting Data Program, in which 46 State governments identified their election districts, precincts, legislative districts, and wards—generically termed *voting districts (VTDs)*—in

terms of census blocks, and were able to obtain statistical information from the Census Bureau's data tabulations (see Chapter 14, "Voting Districts").

The jurisdiction of the CSACs is limited in most cases to the most highly populated areas; elsewhere, chiefly in nonmetropolitan areas, the Census Bureau relies on State agencies to help create, maintain, and update its framework of subcounty units. Their assistance has been particularly helpful in achieving consistent standards for BNAs, BGs, CDPs, and in States where they exist, CCDs (see Chapter 8, "County Subdivisions," and Chapter 11, "Census Blocks and Block Groups").

Some geographic entities are designed to identify geographic areas of special interest to indigenous populations, the American Indians and Alaska Natives. To establish these entities, the Census Bureau works with local tribal officials and native groups, as well as the appropriate Federal and State agencies (see Chapter 5, "American Indian and Alaska Native Areas"). A similar approach is used for Puerto Rico and the Outlying Areas, where the geographic entities often differ from their stateside counterparts (see Chapter 7, "Puerto Rico and the Outlying Areas").

An important service of the CSACs, State agencies, and tribal officials is to aid in the Census Bureau's efforts to publicize the significance of the decennial census and the other censuses and surveys, and to explain the statistical data and geographic entities available to data users. Another common function for many of these groups relates to making available to the Census Bureau the expert knowledge of their members on the sometimes complex relationship between the boundaries of legally established local entities and the Census Bureau's statistical entities.

## **Evolution of a Local Census Statistical Areas Committee**

### **Establishing a Census Statistical Areas Committee**

The Census Bureau encourages the existence and active participation of a local CSAC wherever local data users are willing to organize a committee to work on the delineation of small-area geographic entities for use in various Census Bureau programs. Members of a CSAC, representing a

wide variety of public and private agencies and organizations, have extensive knowledge about the development of an area, its communities and neighborhoods, population shifts, land use, and other information pertinent to establishing or updating small-area geographic units. Moreover, they are in the best position to identify and resolve any conflicting local needs regarding the specific structure of the small areas for which both the Census Bureau and local agencies present data.

The Census Bureau offers guidance on effective techniques for establishing CSACs. If requested, the Census Bureau will send a technical expert to speak at the formative meeting of a new or reactivated committee and to (1) advise them on the operating procedures other CSACs find successful, (2) explain the types of work the Census Bureau expects them to perform, and (3) describe how they can participate in the Census Bureau's geographic programs. In return, the Census Bureau requests that the CSAC provide information regarding its membership, and that it participate meaningfully in the geographic preparatory work for the Census Bureau's programs.

The Census Bureau does not pay for any CSAC expenses; the work is all voluntary. For the local data user community, the primary benefit of the involvement of local committees in the geographic areas definition process results from the development of small, statistically significant areas of local interest for the presentation of census data. The fact that such local entities are statistically meaningful also helps both the casual and the national user. Further, as a result of their long-term familiarity with the Census Bureau's geographic programs, the members of the committees are in a position to acquire an understanding of the associated Census Bureau procedures. This enables them to serve as a conduit of accurate information from the Census Bureau to the local data user community. The committees also assist in keeping the Census Bureau informed of local data user needs.

Experience suggests that the statistical areas work is accomplished most effectively when a CSAC establishes small working subcommittees to



handle specific tasks. This organizational structure seems to work particularly well in large, multicounty metropolitan areas. In a typical situation, a subcommittee prepares a preliminary proposal for census tracts, BGs, CDPs, or other requested geographic areas using the Census Bureau's specifications, standards, criteria, and/or guidelines. In large multicounty metropolitan areas, a subcommittee often exists for each county. The subcommittee submits its proposals to the full CSAC, at which time each member has an opportunity to review and discuss all preliminary proposals and make recommendations for modifications. This in-depth review is an important part of the process because it helps to ensure that the proposal takes into consideration all important local statistical requirements. The Census Bureau assumes that all submitted recommendations have the approval of the majority of the CSAC.

### **Composition of a Census Statistical Areas Committee**

The Census Bureau considers a CSAC to be an independent body representing a wide variety of public and private agencies and organizations, and it requires that all CSACs maintain an open membership policy and include a broad spectrum of local data users. The Census Bureau recommends that a CSAC be composed of at least five individuals who represent more than one agency in the community. For these reasons, the CSAC organizer should provide opportunities for all interested local agencies, organizations, and private citizens to participate. Often, the most effective members of a CSAC are people affiliated with agencies that use small-area statistics in the planning and operation of their organization. Typically, CSAC members are involved in city, county, and regional government agencies such as planning commissions, councils of government, public transportation authorities, boards of education, local housing authorities, health departments, police departments, welfare agencies, and boards of election. Other CSAC members often come from organizations such as chambers of commerce, colleges and universities, social agencies, church federations, real estate boards, banks, savings and loan associations, newspapers, radio and television stations, public utilities, advertising agencies, market research groups,

and the local chapters of professional organizations including the American Marketing Association, the American Planning Association, and the American Statistical Association. Some CSACs have members from organizations such as State highway departments, insurance companies, neighborhood associations, local political organizations, and American Indian tribes. The Census Bureau encourages the CSACs to make their process open to all interested groups or people.

### **The Census Statistical Areas Key Person**

The Census Bureau requires that each CSAC designate one individual from its membership to serve as the liaison with the Census Bureau. This individual, originally designated as the *census tract key person*, is called the *census statistical areas key person*, in keeping with the expanded role of the local committee. The Census Bureau never selects, appoints, or designates a key person; that is the committee's responsibility. Experience shows that the most important element in the successful formation and functioning of a CSAC is the willingness of one or more energetic, dedicated, and knowledgeable individuals to provide leadership, devote time to liaison activities, and coordinate organizational tasks such as arranging for meeting rooms, finding occasional clerical or typing help, and securing limited office space for the development of geographic proposals.

The CSAC selects the key person, and the Census Bureau recognizes this person as the point of contact with the CSAC when information flows to or from the committee. The key person usually is, but does not need to be, the CSAC organizer. The designation of a key person is a requirement for official recognition of a CSAC by the Census Bureau. Most CSACs select a key person at the initial organizational meeting or soon thereafter. The designated individual serves as key person at the discretion of the committee. The Census Bureau will not automatically recognize the incumbent of a particular position within an agency as the key person.

Typically, the key person functions as the chairperson of, or secretary to, the CSAC, but this is not necessarily the role in which all key persons

function. To avoid misunderstandings and potential conflicts, the Census Bureau expects the key person to be responsible for transmitting CSAC correspondence to the Census Bureau. There are times when the Census Bureau, on very short notice, needs answers to questions concerning the CSAC's proposals or other local census-related matters; the Census Bureau expects the key person to be able to speak for the entire CSAC when there is need for such an immediate response.

The Census Bureau sends all relevant correspondence, selected census publications, procedures and guidelines, and other work materials to the key person. The key person also serves as the local point of contact when CSAC members or other data users need Census Bureau statistics. Accordingly, the Census Bureau expects the key person to make available to all local data users any information provided by the Census Bureau as a resource for the CSAC. Furthermore, the Census Bureau will refer any agency or individual with questions about the locally delineated geographic entities or with suggestions for the revision of such areas to the appropriate key person.

In some areas, the CSAC or the key person names a *work contact* in addition to the key person. Often, the work contacts serve as the chairpersons of the working subcommittees for each county in the larger metropolitan areas. If requested to do so by the key person, the Census Bureau will review procedures and discuss questions concerning geographic area proposals with the work contact rather than the key person.

In areas where there was no local interest in establishing or reactivating a CSAC, the Census Bureau sought advice and suggestions from tribal officials and from State agencies designated by the State governors' offices. By means of their assistance, it was possible to establish BNAs, BGs, CDPs, and other geographic entities. In many instances these State agencies also were involved in the Census Bureau's State Data Center program.<sup>3</sup> Only as a last resort did the Census Bureau have its own staff develop the geographic plans for an area.

## **New Developments During the 1990s**

The traditional roles of the Census Bureau's geographic areas programs are (1) to support data collection operations, (2) to provide a spatial framework for the tabulation of the collected data, and (3) to assist in presenting the final results for tabulation and dissemination. These operations are an integral part of the census process. They are present at every level of census geography and encompass all types of geographic entities, whether large or small in population or area. Local cooperation often is an important element throughout these different stages of work, so it is vital that the CSACs, State agencies, and tribal officials share a keen appreciation of the process.

Recent decades have brought major advances in automated systems. These advances have opened the door for many new applications of the Census Bureau's geographic units and maps. The Census Bureau recently completed an immense effort used initially for the 1990 decennial census, the automation of its geographic processes as part of the TIGER System. These processes include map production; the assignment of every housing unit, group quarters, and business establishment to its correct geographic location; the classification of that location to all appropriate geographic areas; the recording of boundaries and their associated names and codes, as well as a variety of cultural and physical features, into computer-readable form; and other geographic functions that support the Census Bureau's programs. This extensive project facilitated the preparation of all Census Bureau map series, including the maps used in the 1990 census field operations; permitted more flexibility in the presentation of geographic information on maps; and, most importantly, ensured consistency between the geographic information on the Census Bureau's maps and in its data presentations.

It is already evident that this scheme has provided more opportunity for participation by the CSACs, State agencies, and tribal officials. As an example, the Census Bureau encouraged these groups to participate in the BG and CDP delineation programs for the 1990 census. To do so effectively, these groups needed to be aware of the Census Bureau's operational requirements for establishing, delineating, and numbering BGs and blocks. In this

regard, the automation of the Census Bureau's geographic processes facilitated their work, but it also introduced important new tasks and challenges.

From the TIGER data base, the Census Bureau provided the CSACs, State agencies, and tribal officials with computer-prepared base maps to use in their review of CDPs, American Indian reservations, trust lands, and other selected geographic entities. As in the past with the committees, preparations for the 1990 census relied on these groups to develop, and then review, an overall geographic plan for their area of jurisdiction or interest. Procedural manuals, developed by the Census Bureau for the 1990 decennial census, documented the technical details and specific tasks that it asked them to perform.

## **Future Cooperative Relationships**

Throughout the planning period preceding a census, there is a close working relationship and interchange of technical materials between each CSAC, State agency, appropriate tribal official, and the Census Bureau. It is not unusual for committees to become dormant after a decennial census has been completed. As the Census Bureau begins implementing plans for the next decennial census, it will seek to reactivate the CSACs. When requested, the Census Bureau provides guidance by mail, telephone, or a visit, as appropriate, on technical problems a committee, key person, or other participant may encounter. The Census Bureau also informs the CSAC routinely of additional and revised technical guidelines on small-area geographic units developed during the planning for a census, reviews the proposed delineations, and, in some instances, revises the work (in consultation with the key person) in order to protect the integrity and comparability of the resulting statistics and/or to maintain a minimum standard on a national basis.

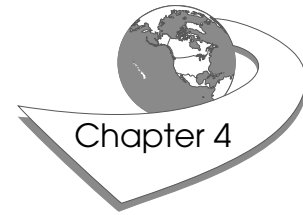
The Census Bureau attempts to keep all participants informed of other Census Bureau activities occurring in each area so that they can function effectively as the census voice for their area; promotes communication on the subjects of census tracts, other geographic units, and the related

data; and periodically may convene special meetings, sometimes in conjunction with meetings of professional associations.

Before the 1980 census, the Census Bureau dealt with most CSACs, State agencies, and tribal officials directly from its headquarters outside of Washington, DC. For the 1990 census, the Census Bureau decentralized its geographic programs in an effort to be more responsive to local needs and interests. As a result, most CSACs, State agencies, and tribal officials now deal directly with the geographic staff in the Census Bureau's 12 regional offices.

## *Notes and References*

- <sup>1</sup> For further information about these areas, consult the “County Subdivisions,” “Places,” “Census Tracts and Block Numbering Areas,” and “Census Blocks and Block Groups” chapters in this manual.
- <sup>2</sup> The GBF/DIME (Geographic Base File/Dual Independent Map Encoding)-Files are computerized versions of the Census Bureau’s Metropolitan Map Series with segment-by-segment address ranges and x, y coordinate values at intersections.
- <sup>3</sup> The State Data Center program involves over 1,300 agencies and organizations to which the Census Bureau provides selected statistical products and appropriate training for further dissemination among data users. See Appendix B, “Sources of Assistance,” in the Census Bureau’s *Census Catalog and Guide—1991*.



# States, Counties, and Statistically Equivalent Entities

States and counties are the major legally defined political and administrative units of the United States. As such, they serve as the primary geographic units for which the Bureau of the Census reports data. The Census Bureau provides statistics for these entities in every decennial census of population and housing, in every census of agriculture and governments, and in all the economic censuses. It tabulates data for States and counties in postcensal estimates and sometimes in its various intercensal sample surveys and projections as well. In certain circumstances, it classifies entities as the *statistical equivalents* of States or of counties for data presentation purposes.

Because States, counties, and statistically equivalent entities are an integral part of many Census Bureau data presentations, they occupy a prominent position in the hierarchy of the basic geographic entities (see Figure 2-1 in Chapter 2). Therefore, a major responsibility of the Census Bureau is to maintain accurate maps and records of the boundaries and names of these entities, and to identify their populations and other data items correctly throughout the various phases of the census process. This chapter describes the framework of the States, counties, and statistically equivalent entities used by the Census Bureau, and explains their function as geographic units in the process of data collection, tabulation, and dissemination.

The United States comprises the 50 States and the District of Columbia. For data presentation purposes, the Census Bureau treats the District of Columbia as the statistical equivalent of a State. Depending upon Federal law and the scope of a particular census, sample survey, estimate, or projection, the Census Bureau may apply the same treatment to the territories under U.S. sovereignty or jurisdiction; for the 1990 decennial census, these included American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, and the Virgin Islands of the United States. For several other entities under U.S. jurisdiction, the Census Bureau publishes only decennial census population counts and area measurements; for the 1990 census, these were the



Midway Islands; Wake Island; Johnston Atoll; Navassa, Baker, Howland and Jarvis Islands; Kingman Reef; and Palmyra Atoll. In recent decennial censuses, the Census Bureau also provided statistics as State equivalents for the Canal Zone and the Trust Territory of the Pacific Islands (see Chapter 7, “Puerto Rico and the Outlying Areas”). The designation *Commonwealth* is part of the official name of four States (Kentucky, Massachusetts, Pennsylvania, and Virginia), of Puerto Rico, and of the Northern Mariana Islands. In the interest of uniformity, the Census Bureau does not use the term for its data presentations.

For most States, counties are the primary administrative divisions. There are exceptions, however; Louisiana has parishes, while Alaska has boroughs for the organized portion of its territory. Because a large part of Alaska is not in any organized borough, the State and the Census Bureau cooperatively have subdivided the unorganized portion of Alaska into *census areas* for the purposes of presenting statistical data. Three States (Maryland, Missouri, and Nevada) each have one city that is governmentally independent of county organization; Virginia currently has 41 such cities. For both legal and statistical presentation purposes, these independent cities constitute primary administrative divisions of their States. Part of Yellowstone National Park in Montana is not within any county, therefore the Census Bureau treats it as the statistical equivalent of a county. The District of Columbia has no primary administrative divisions; the Census Bureau treats its entire area as the statistical equivalent of both a State and a county.

The various entities that the Census Bureau treats as the statistical equivalents of counties in Puerto Rico and the Outlying Areas (see Chapter 7 for details) are as follows:

- American Samoa—3 districts and 2 islands; the counties in American Samoa are treated as minor civil divisions
- Guam—the entire island
- The Northern Mariana Islands—4 municipalities
- Palau—16 States

- Puerto Rico—78 municipios
- The Virgin Islands of the United States—3 islands

## **Historical Background**

The formation of States and counties has been an important theme in the political and social history of the United States as the Nation acquired new areas, settled them, and organized territorial, State, and local governments. The present State boundaries evolved as the Nation expanded westward; at the same time, counties developed and spread as units of local government and administration within the States and territories. There were more than 2,000 counties formed in the period from 1790 to 1900. The various censuses of the United States have recognized these governmental units since the earliest enumerations.

### **Origin of States and Statehood**

The system of individual States within a Federal union has its roots in the American colonial experience. By the time of the American Revolution, the identity and boundaries of the original 13 States had been evolving during 150 years of British colonization and settlement. Under British rule, the colonial legislatures gradually achieved various degrees of autonomy and self-government. The present Federal Union began in 1789 under the Constitution. The original 13 States joined the United States by their act of ratification. Article IV, Section 3, of the Constitution provides for the admission of additional States. Thereby, both the national and State governments share the power to admit additional States. In the future, as in the past, an area could achieve statehood only by an act of Congress that follows the broad guidelines of this Constitutional provision.

### **States, Territories, and the First Decennial Census**

In the colonial period, census-taking was a familiar element of the American scene; the colonial authorities undertook 27 enumerations of the various colonies between 1624 and 1773. Article I, Section 2, of the Constitution calls for a population census as the basis for apportioning the seats in the Congress. The requirement for a census and, implicitly, the recognition of States in the geographic structure of the Census Bureau's

data tabulations, became part of the new Federal Government's powers and duties.

The 1790 census, the first national enumeration of the United States, included the original 13 States as well as other areas that later would be formed into States. At that time, Virginia included what is now the State of West Virginia. The first national census reported separate counts for the *districts* of Kentucky, Maine, Vermont, and the area that is now Tennessee. The actual enumeration covered only the settled area, or about one-third of the new Nation's land area. It excluded much of northern Maine, upstate New York, and western and central Pennsylvania. West of the Alleghenies, the 1790 enumeration covered only a few settlements in present-day Kentucky and Tennessee. It included only the eastern third of present-day Georgia, and none of Alabama and Mississippi. However, it did not encompass any of the Northwest Territory, because that area was not under the effective control of the U.S. Government or any of the States.

### **Westward Expansion, New States, and the Decennial Census**

New States generally originated as part of the process of western expansion and settlement, with the exceptions of Maine (created from Massachusetts) and West Virginia (created from Virginia). Census coverage followed closely behind the addition of new territory; as the frontier moved west, successive decennial enumerations covered the newly settled areas.

Identifying the many boundary shifts and name changes of the territories is beyond the scope of this chapter, as is providing detailed comparisons between the areas enumerated for the first time and the areas of the present-day States. Nevertheless, it is worthwhile to mention briefly some of these developments as they relate to the first coverage of areas in a decennial census of the United States. The maps in Figure 4-1 show the boundaries of the States and territories recognized for the 1790, 1850, and 1870 decennial censuses; the last major rearrangements of territorial boundaries and names occurred in the 1850s and 1860s. Table 4-1 shows the first decennial census that included the geographic area of each State, together with the date when each State was admitted to the Union. By the time of

the 1870 census, except for the boundary separating the Dakotas and the merger of the two territories that formed Oklahoma, the States and territorial boundaries of the conterminous United States were essentially fixed. For convenience, the list refers to the States in terms of their present area and boundaries; except for the original 13, usually that area still was a territory or part of a territory at the time of its first Federal census, sometimes with a different name.

In almost all cases, each State or part of a State (other than the original 13) appeared in at least one decennial enumeration before it achieved statehood. The exception is Texas, which was an independent republic before its admission to the Union in 1845 and first appeared in the 1850 census. The 1880 census marked the first enumeration of Alaska. The 1890 census added the Indian Territory and the Oklahoma Territory (combined in 1907 to form the State of Oklahoma), and also reported data for American Indian reservations in other States and territories. The geographic coverage of the 1900 census, which added Hawaii, encompassed the entire area of the present United States.

### **The Development and Spread of Counties**

The county originated as an administrative unit in England; early settlers brought the concept with them to the colonies. Throughout the colonial period, counties evolved as units of local government or administration. However, their importance varied from region to region in response to different economic, social, and political conditions. Long before the Revolution, three distinct systems had developed:

- In much of New England, the compact pattern of settlement favored the town as the local governing body; the county, a geographic grouping of towns, tended to be a legal entity that existed for judicial rather than general governmental purposes.
- In the South, with its dispersed farms and plantations, the county became the most important unit of local administration; towns (or townships) generally did not develop as local, self-governing units in the New England tradition.

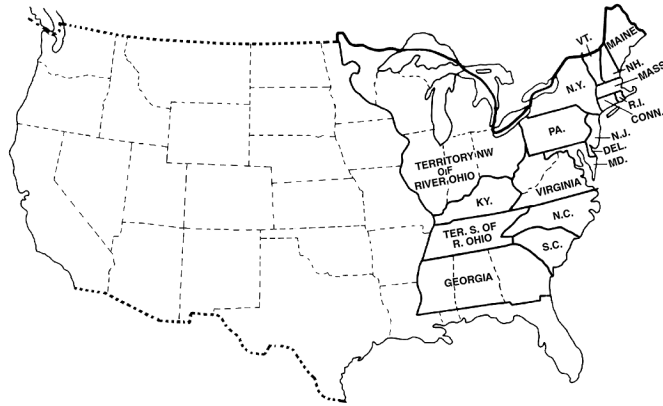
Table 4-1. **Chronology of First Decennial Census Coverage of Each State**

<u>Year of Census</u>	<u>First Decennial Census Coverage</u>	<u>Year Admitted to Statehood</u>
1790	The Original 13 States	1787 to 1790
	District of Columbia	*
	Vermont	1791
	Kentucky	1792
	Tennessee	1796
	Maine	1820
	West Virginia	1863
1800	Ohio	1803
	Indiana	1816
	Mississippi	1817
	Alabama	1819
1810	Louisiana	1812
	Illinois	1818
	Missouri	1821
	Arkansas	1836
	Michigan	1837
1820	—	—
1830	Florida	1845
1840	Iowa	1846
	Wisconsin	1846
1850	Texas	1845
	California	1850
	Minnesota	1858
	Oregon	1858
	Washington	1889
	Utah	1896
	New Mexico	1912
1860	Kansas	1861
	Nevada	1864
	Nebraska	1867
	Colorado	1876
	North Dakota	1889
	South Dakota	1889
	Arizona	1912
1870	Montana	1889
	Idaho	1890
	Wyoming	1890
1880	Alaska	1959
1890	Oklahoma	1907
1900	Hawaii	1959

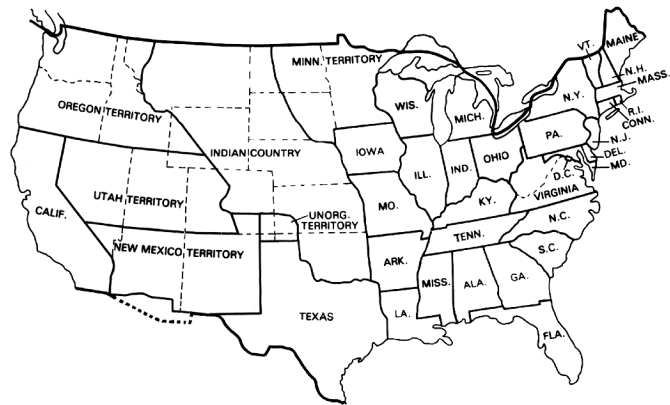
\* The District of Columbia was organized in 1800.

Figure 4-1. States and Territories in 1790, 1850, and 1870

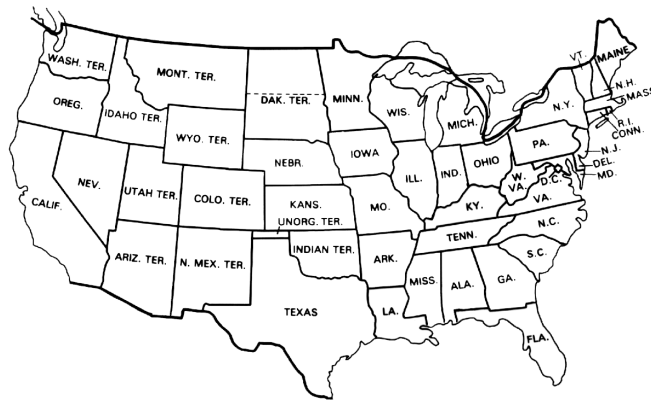
**The United States in 1790**



**The United States in 1850**



**The United States in 1870**



*Later boundaries are shown with dashed lines.*

- In the Middle Colonies of New Jersey, New York, and Pennsylvania, counties were important units of government, but they also contained townships (towns in New York), that had varying degrees of recognition and significance for some local governmental functions.

These three systems of local government continued beyond the colonial period and became embodied in State constitutions and legislative acts. The 1790 census reported data for 292 counties. As the Nation expanded westward, the county form of local government followed; thus, the nineteenth century was the most active period of county formation (see Table 4-2).

Table 4-2. **Number of Counties and Parishes in Early Decennial Censuses**

<b>Decennial Census</b>	<b>Number of Counties and Parishes</b>
1790	292
1850	1,621
1870	2,247
1900	2,713
1920	3,041

*The totals do not include statistical equivalents of counties (such as the independent cities of St. Louis and Baltimore and the cities of Virginia, some of which were independent as early as 1850).*

The Northwest Ordinance provided for the establishment of local government in the newly settled territories, which later would become States. It empowered the territorial governors to create geographic divisions, which subsequently could serve as constituent units for representation in the territorial assembly. Legislators in the territories and new States usually laid out counties for the entire area of the jurisdiction. As a result, when new States gained admission to the Union, they often already had counties, although the less-settled portions of the State might have only a few very large counties, which would subsequently be subdivided as settlement expanded.

The process of county formation continued actively into the first two decades of the twentieth century. The largest single increase occurred in 1907

when Oklahoma became a State and organized 54 new counties from the Indian Territory. There were other sizable increases in county formation between 1910 and 1920, when Montana and Idaho almost doubled their number of existing counties by adding 23 and 21 new counties, respectively.

Since 1920, there have been relatively few new counties formed; in fact, only 12 States have formed new counties since then. Although Florida added 13 counties in the 1920s, few other States created more than 1 or 2 per decade; some States even lost counties as a result of mergers. Table 4-3 shows the number of counties and statistically equivalent entities at the time of the 1920 census and at the times of the six decennial censuses from 1940 through 1990. Most of the change in the number of statistically equivalent entities represents an increase in the number of independent cities in Virginia (from 20 at the time of the 1920 census to 41 for the 1980 and 1990 censuses) and the recognition of a variety of new entities statistically equivalent to counties in Alaska beginning with the 1960 census.

Table 4-3. **Number of Counties and Statistically Equivalent Entities for the 1920 and the 1940 Through 1990 Decennial Censuses**

<b>Census Year</b>	<b>Counties/Statistical Equivalents</b>	<b>Counties/Parishes</b>	<b>Independent Cities<sup>1</sup> and Other Statistically Equivalent Entities<sup>2</sup></b>
1920	3,064	3,041	23
1940	3,100	3,070	30
1950	3,103	3,070	33
1960	3,134	3,072	62
1970	3,141	3,069	72
1980	3,137	3,068	69
1990	3,141	3,070	71

<sup>1</sup> The independent cities include Baltimore city, St. Louis city, Carson City (as of 1970), and the cities of Virginia.

<sup>2</sup> Other statistically equivalent entities include the District of Columbia, the Alaska statistical areas, and that portion of Yellowstone National Park in Montana as of 1940. The entities statistically equivalent to counties in Alaska were known as election districts in 1960, census divisions in 1970, and boroughs/census areas in 1980 and 1990.



Table 4-4 lists the number of counties and equivalent entities in each State and the District of Columbia on January 1, 1990. Between the 1980 and 1990 decennial censuses, Arizona and New Mexico each established an additional county, and Alaska established two additional boroughs. One of the boroughs established in Alaska (Northwest Arctic) in effect replaced a census area (Kobuk), resulting in a net increase of two statistically equivalent entities. Nevada formed the new county of Bullfrog in 1987; however, its creation was nullified by the courts in 1988. The total number of counties and statistically equivalent entities at the time of the 1990 census was 3,141. In Alaska, two additional entities, Denali borough (established December 1990) and Yakutat borough (established 1992), have been formed since the 1990 census.

## **Legal/Statistical Basis for Census Bureau Recognition**

States and the statistically equivalent entities for which the Census Bureau tabulates data are legal entities, with boundaries prescribed by laws, treaties, and other governmental actions. Title 13, United States Code, in Chapter 5, "Censuses," Subchapter II, sections 141 (a) and (b), mandates the counting and tabulating of the population of the individual States and entities. Therefore, the Census Bureau uses the States, the District of Columbia, and the territories of the United States as a primary level of geography; it retains their identity throughout the data collection, tabulation, and dissemination phases of every census.

### **Counties and Statistically Equivalent Entities of the United States**

Much the same situation applies to the Nation's counties and other statistically equivalent entities. All but a few of these entities are defined legally; that is, they are created by State law or some other administrative action. State constitutions or other laws generally specify counties (parishes in Louisiana, boroughs in Alaska, independent cities in four States) as the divisions of each State, and assign responsibilities to them for providing various aspects of local government. On this basis, it is logical for the Census Bureau to use these entities as the major geographic units in its data products. In addition, because counties and similar entities generally encompass the entire land area of each State and statistically equivalent

Table 4-4. **Number of Counties and Statistically Equivalent Entities, by State, as of January 1, 1990**

Alabama	67	Montana	57
Alaska	25	Nebraska	93
Arizona	15	Nevada	17
Arkansas	75	New Hampshire	10
California	58	New Jersey	21
Colorado	63	New Mexico	33
Connecticut	8	New York	62
Delaware	3	North Carolina	100
District of Columbia	1	North Dakota	53
Florida	67	Ohio	88
Georgia	159	Oklahoma	77
Hawaii	5	Oregon	36
Idaho	44	Pennsylvania	67
Illinois	102	Rhode Island	5
Indiana	92	South Carolina	46
Iowa	99	South Dakota	66
Kansas	105	Tennessee	95
Kentucky	120	Texas	254
Louisiana	64	Utah	29
Maine	16	Vermont	14
Maryland	24	Virginia	136
Massachusetts	14	Washington	39
Michigan	83	West Virginia	55
Minnesota	87	Wisconsin	72
Mississippi	82	Wyoming	23
Missouri	115		

*United States Total: 3,141*

*The United States total includes 3,006 counties; 14 boroughs and 11 census areas in Alaska; the District of Columbia; 64 parishes in Louisiana; Baltimore city, Maryland; St. Louis city, Missouri; that part of Yellowstone National Park in Montana; Carson City, Nevada; and 41 independent cities in Virginia.*

entity, they constitute a detailed, relatively stable network of geographic units at a single geographic/governmental level for the entire United States and its territories. As such, they provide convenient units for data dissemination purposes. Of course, because most of these entities represent local governmental units, their officials, as well as the officials of State and Federal agencies and other data users, require statistics for the counties from each specific census. Because most censuses and sample surveys use a single common set of counties and statistically equivalent entities, the identification of individual county units constitutes an important element in the Census Bureau's work and in its data products.

Rhode Island's counties exist only for the purpose of judicial administration and have no associated governmental structure. In 1960, Connecticut abolished its county governments and transferred their functions to the State government; however, the State retained the former counties for election and judicial purposes. Nevertheless, in both States, the Census Bureau continues to report many types of data for these county-type entities, in part to retain data comparability with earlier censuses and the data sets of other government agencies.

### **The Statistical Equivalents of Counties in Puerto Rico and the Outlying Areas**

For Puerto Rico and the Outlying Areas, the Census Bureau uses various geographic units as the statistical equivalent of stateside counties. This occurs where the size, geography, or administrative framework make the units appropriate entities for such use. As in the 50 States, the statistical equivalents of counties in the Outlying Areas provide complete geographic coverage for the entire area and population of each jurisdiction (see Chapter 7).

## **Boundaries and Codes**

To effectively collect, process, and tabulate data for States, counties, and their statistically equivalent entities, the Census Bureau must ensure that it has accurate records of the boundaries of, and names for, these entities. The Census Bureau also must develop appropriate geographic

code schemes and geographic relationship files to properly control and present the data it collects for these important governmental units.

### **Stability of State and County Boundaries**

The boundaries of the primary governmental divisions of the United States, States, counties, and their statistical equivalents, generally are static and change only rarely; however, transfers of territory do occur from time to time. By contrast, the boundaries of incorporated places and even minor civil divisions are far more subject to change in most States.

Changes in State lines may result from legislation, court decisions, and other types of governmental action; changes in county boundaries are a matter of State law. Such boundary changes also may stem from more exact geographic descriptions, better maps, and improved surveying techniques. State boundaries may change by mutual agreement of the two State legislatures, subject to approval by the Congress.

In recent years, most boundary changes for counties have been minor and have not involved substantial shifts of population or land area. The independent cities in Virginia constitute an exception because they occasionally annex territory, as do the incorporated places in many States. Because the territory annexed by a Virginia city no longer is part of the county in which it had been located, changes in the boundaries of these independent cities also affect the boundaries of the adjacent county or counties. In other States, changes to counties occur on a piecemeal basis.

### **The Boundary and Annexation Survey (BAS)**

The Census Bureau has established procedures and programs to identify changes in legal boundaries and to record when and where they occur. The Census Bureau's Boundary and Annexation Survey (BAS), conducted at periodic intervals immediately before each decennial census, and annually since 1972, determines the location of the boundaries of most major legal entities in the United States. The principal function of the BAS is to collect and maintain information on the inventory, status, boundaries,

and names of local governments (counties, minor civil divisions, and incorporated places), and to ascertain whether changes have occurred in these entities. The Census Bureau obtains information about counties by sending questionnaires and maps to an official of each county (parish in Louisiana) in the United States, excluding Alaska, Connecticut, Hawaii, and Rhode Island; in these States, because of the unusual status of the counties (boroughs in Alaska), the Census Bureau works with the appropriate State authorities to obtain the required information. However, new counties (and boroughs in Alaska) are such a rare and major event that they usually come to the Census Bureau's attention long before, and separate from, the annual BAS mailout. The Census Bureau obtains official confirmation and documentation of new counties, their boundaries, and their names from appropriate State officials.

Any changes in county boundaries may reflect changes in State boundaries as well. The proper location of State and county boundaries on Census Bureau maps is a vital element of the data collection and tabulation process. The BAS enables the Census Bureau to maintain, on a consistent basis, reasonably current records about changes in county boundaries that occur through resurveying, legal actions, or other transfers of territory that relocate county lines. In this way, the Census Bureau also accounts for changes in State lines as reported by the counties on either side of the State boundary.

### **State and County Codes**

The Census Bureau uses a system of numeric codes to identify every geographic entity in its hierarchy. These geographic codes are basic components of the geographic reference files that the Census Bureau develops and maintains to process the results of its censuses and sample surveys. The codes obviate the need to relate data to the geographic entities by name; that is, the Census Bureau's processing operations associate data with the much shorter, fixed-length, unique numeric codes rather than the variable-length names of the geographic entities in its reference files. These files provide the basis for the tabulation and dissemination of the collected data in their proper geographic units.

The Federal Government uses a unique two-digit numeric code to identify each State and State equivalent entity. These State codes are part of the Federal Information Processing Standards (FIPS), an official coding system developed by the National Institute of Standards and Technology (NIST, formerly the National Bureau of Standards), U.S. Department of Commerce, and maintained by the U.S. Geological Survey (USGS). These FIPS codes parallel the alphabetic sequence of State names, including the District of Columbia, followed by Puerto Rico and the Outlying Areas in alphabetical order (see Table 4-5). Gaps left in the State numbering sequence provide for the possibility that a major Outlying Area may attain statehood using its current name. In addition, the FIPS for States includes a two-letter alphabetic code, used by both the NIST and the U.S. Postal Service, which has been adopted by many other Federal agencies.

In addition to the FIPS codes for States, the Census Bureau devised and uses a system of two-digit codes to identify each State in a geographic sequence within its census division. Each of the nine census divisions encompasses a group of adjacent States; the first digit of the Census Bureau's State code identifies the division and the second digit refers to the geographic sequence of the individual State within that division. The territories under U.S. jurisdiction are not assigned to any of the nine census divisions, and their codes have a first digit of 0 in the Census Bureau's scheme (see Table 4-5). Chapter 6, "Statistical Groupings of States and Counties," presents a discussion of the census regions and divisions.

Another FIPS coding scheme that the Census Bureau uses identifies the counties alphabetically within each State. The FIPS 6 publication assigns each county a three-digit numeric code, with gaps in the numbering sequence to allow for additions and revisions. The independent cities appear at the end of the county list for each appropriate State, beginning with code 510.

Table 4-5. **Federal Abbreviations and Numeric Identification Codes for States, Outlying Areas, and Other Entities**

<b>State/Statistically Equivalent Entity</b>	<b>FIPS/USPS Abbreviation</b>	<b>FIPS Code</b>	<b>Census Code</b>
Alabama	AL	01	63
Alaska	AK	02	94
Arizona	AZ	04	86
Arkansas	AR	05	71
California	CA	06	93
Colorado	CO	08	84
Connecticut	CT	09	16
Delaware	DE	10	51
District of Columbia	DC	11	53
Florida	FL	12	59
Georgia	GA	13	58
Hawaii	HI	15	95
Idaho	ID	16	82
Illinois	IL	17	33
Indiana	IN	18	32
Iowa	IA	19	42
Kansas	KS	20	47
Kentucky	KY	21	61
Louisiana	LA	22	72
Maine	ME	23	11
Maryland	MD	24	52
Massachusetts	MA	25	14
Michigan	MI	26	34
Minnesota	MN	27	41
Mississippi	MS	28	64
Missouri	MO	29	43
Montana	MT	30	81
Nebraska	NE	31	46
Nevada	NV	32	88
New Hampshire	NH	33	12
New Jersey	NJ	34	22
New Mexico	NM	35	85
New York	NY	36	21
North Carolina	NC	37	56
North Dakota	ND	38	44
Ohio	OH	39	31
Oklahoma	OK	40	73
Oregon	OR	41	92

Table 4-5. (cont.)

<b>State/Statistically Equivalent Entity</b>	<b>FIPS/USPS Abbreviation</b>	<b>FIPS Code</b>	<b>Census Code</b>
Pennsylvania	PA	42	23
Rhode Island	RI	44	15
South Carolina	SC	45	57
South Dakota	SD	46	45
Tennessee	TN	47	62
Texas	TX	48	74
Utah	UT	49	87
Vermont	VT	50	13
Virginia	VA	51	54
Washington	WA	53	91
West Virginia	WV	54	55
Wisconsin	WI	55	35
Wyoming	WY	56	83
American Samoa	AS	60	03
Guam	GU	66	04
Northern Mariana Islands	MP	69	01
Palau	PW	70	02
Puerto Rico	PR	72	06
U.S. Virgin Islands	VI	78	07
Foreign Areas and International Waters <sup>1</sup>	–	99	–
U.S. Minor Outlying Islands <sup>2</sup>	OM	74	08
Baker Island	–	81	08
Howland Island	–	84	08
Jarvis Island	–	86	08
Johnston Atoll	–	67	08
Kingman Reef	–	89	08
Midway Islands	–	71	08
Navassa Island	–	76	08
Palmyra Atoll	–	95	08
Wake Island	–	79	08

<sup>1</sup> Foreign Areas and International Waters are areas bordering the United States and the Outlying Areas. They have no official NIST/USPS abbreviation and require no State-level code.

<sup>2</sup> The individual islands of the U.S. Minor Outlying Islands have no official NIST/USPS abbreviation.



## **Relationships to Other Geographic Entities**

Both States and counties provide complete coverage of all land area and population in the United States at their geographic levels. Almost all other geographic entities included in the Census Bureau's data tabulations respect the boundaries of States. American Indian reservations, however, may cross State boundaries. Also, some U.S. Postal Service five-digit ZIP Codes extend into a second State. By design, statistical areas respect State lines, with two exceptions: both metropolitan areas (defined by the Office of Management and Budget) and urbanized areas may cross State boundaries.

### **Combinations of States and Counties**

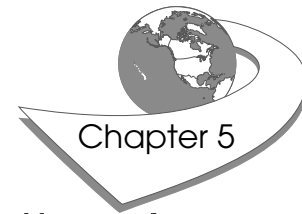
Two types of statistical entities, the census region and the census division, encompass combinations of adjacent States. Both regions and divisions are convenient geographic units for summarizing census and sample survey data. For instance, the six New England States compose a single division; together with the Middle Atlantic Division, they form the Northeast Region (see Chapter 6, "Statistical Groupings of States and Counties").

The nationwide geographic framework provided by the county makes it possible to combine counties and statistically equivalent entities into larger statistical units, which may encompass an entire State or selected parts of several States. One of the best known examples of county combinations are metropolitan areas (see Chapter 13, "Metropolitan Areas").

### **Relationships in the Census Bureau's Geographic Hierarchy**

At lower levels of the geographic hierarchy, most geographic areas respect the boundaries of counties and county equivalents. The county subdivisions, census county divisions, minor civil divisions, and unorganized territories, provide complete coverage of all land area and population within each county and statistically equivalent entity. On the other hand, in most States, incorporated places may cross county lines; census designated places may do so in all States. Some incorporated places, such as Philadelphia and San Francisco, comprise the entire area of a county (the city of New York encompasses five entire counties); for such entities, the city and county usually have a single government. In five instances at the time of the 1990

census, a county and city consolidated their governments, and yet other incorporated places continued to function within the county; the Census Bureau treats these entities as both counties and consolidated cities (see Chapter 9, “Places”). The small-area components of decennial census geography, census tracts/block numbering areas and their subdivisions (block groups and census blocks, and enumeration districts prior to the 1990 census), always observe county boundaries.



# American Indian and Alaska Native Areas

## Classification of Areas

The Bureau of the Census tabulates and publishes population and housing census data for several geographic entities that cover areas of American Indian and Alaska Native settlement, collectively termed *American Indian and Alaska Native areas (AIANAs)*. The major types of AIANAs are American Indian reservations and trust lands, tribal jurisdiction statistical areas (TJSAs), Alaska Native Regional Corporations (ANRCs), Alaska Native village statistical areas (ANVSAs), and tribal designated statistical areas (TDSAs). Table 5-1 lists the number and kind of AIANAs in each of the 36 States that include such entities.

### American Indian Reservations

American Indian reservations are areas with boundaries established by treaty, statute, and/or executive or court order. The reservations and their boundaries are identified for the Census Bureau by the Bureau of Indian Affairs (BIA), an agency in the U.S. Department of the Interior, or by State governments. Federal reservations may cross State boundaries; both Federal and State reservations may cross the boundaries of counties, county subdivisions, and places.<sup>1</sup> Where lands are claimed by two tribes or are administered jointly, the Census Bureau identifies them as separate geographic entities called *joint use areas*; it treats joint use areas as distinct entities for data tabulation and presentation. The Census Bureau first began to report data systematically for American Indian reservations in conjunction with the 1970 census. For the 1990 census, the Census Bureau tabulated and published data for 310 reservations.

### Trust Lands

Trust lands are real property, held in trust by the Federal Government, that is associated with a specific American Indian reservation or tribe, or, in some cases, individual American Indians. Land held in trust for a tribe is referred to as *tribal trust land*, and land held in trust for an individual member of a tribe is called *individual trust land*. Trust lands may be located within a reservation or outside of a reservation; however, the

Census Bureau recognizes and tabulates data separately only for the inhabited off-reservation trust lands; on-reservation trust lands are included as part of the reservation. As with American Indian reservations, the trust lands of a tribe or individual may cross State boundaries. Not all Federal reservations have trust lands associated with them, and there are no trust lands recognized for State reservations. The Census Bureau first reported data for tribal trust lands in conjunction with the 1980 census and for individual trust lands in conjunction with the 1990 census. The BIA provided the Census Bureau with maps identifying the trust land boundaries.

### **Tribal Jurisdiction Statistical Areas**

Tribal jurisdiction statistical areas (TJSAs) are delineated by those Federally recognized tribes in Oklahoma that no longer have a reservation. The territory covered by a TJSA contains the American Indian population over which a tribal government has jurisdiction. In situations where two tribal governments claim the same territory, the Census Bureau created a joint use area to represent the geographic overlap, and treated it as a separate TJSA for data presentation purposes. The TJSAs replace the *Historic Areas of Oklahoma* used in conjunction with the 1980 census (see subsection, “The 1980 Census”).

### **Tribal Designated Statistical Areas**

Tribal designated statistical areas (TDSAs) are geographic entities delineated by Federally and State-recognized tribes without a land base, that is, with no reservation or trust lands. In general, a TDSA consists of (1) territory that contains the American Indian population over which a Federally recognized tribe has jurisdiction or (2) territory within which a State-recognized tribe provides benefits and services to its members. TDSAs must conform to Census Bureau criteria: they cannot overlap onto reservations or trust lands, they cannot cross State lines, and their boundaries must follow established census block boundaries. There are no TDSAs in Oklahoma, where tribal jurisdiction statistical areas (TJSAs) fulfill a similar function as geographic entities for data tabulation and presentation. The Census Bureau recognized TDSAs for the first time in conjunction with the 1990 census.

Table 5-1. **American Indian and Alaska Native Areas (AIANAs), by State, in 1990**

<b>State</b>	<b>Type of AIANA</b>	<b>Number</b>	<b>Level</b>
Alabama	<i>American Indian reservation</i> with trust lands	1	Federal
Alaska	<i>American Indian reservation</i>	1	Federal
	<i>Alaska Native village statistical areas (ANVSAs)</i>	217	Federal
	<i>Alaska Native Regional Corporations (ANRCs)</i>	12	Federal
Arizona	<i>American Indian reservations</i> (four have associated trust lands; five extend into other States)	23	Federal
California	<i>American Indian reservations</i> (three have trust lands; three extend into other States)	99	Federal
	<i>Entity</i> consisting only of trust lands	1	Federal
Colorado	<i>American Indian reservations</i> (one extends into two other States)	2	Federal
Connecticut	<i>American Indian reservations</i>	1, 3	Federal, State
	<i>Tribal designated statistical area (TDSA)</i>	1	State
Florida	<i>American Indian reservations</i>	4	Federal
	<i>Entity</i> consisting only of trust lands	1	Federal
	<i>Tribal designated statistical area (TDSA)</i>	1	State
Georgia	<i>American Indian reservation</i>	1	State
Idaho	<i>American Indian reservations</i> (two have trust lands; one extends into another State)	5	Federal
Iowa	<i>American Indian reservations</i> (one extends into another State)	2	Federal
Kansas	<i>American Indian reservations</i> (one has trust lands; two extend into another State)	4	Federal
	<i>Tribal designated statistical area (TDSA)</i>	1	State
Louisiana	<i>American Indian reservations</i>	3	Federal
	<i>Tribal designated statistical areas (TDSAs)</i>	4	State
Maine	<i>American Indian reservations</i> (one has associated trust lands)	3	Federal
	<i>Entity</i> consisting only of trust lands	1	Federal

Table 5-1. (cont.)

<b>State</b>	<b>Type of AIANA</b>	<b>Number</b>	<b>Level</b>
Massachusetts	<b>American Indian reservation</b>	1	State
	<b>Tribal designated statistical area (TDSA)</b> (this TDSA was a State-recognized reservation in the 1980 census, but is no longer recognized by the State; it is now pending Federal recognition as a reservation)	1	Federal
Michigan	<b>American Indian reservations</b> (five have associated trust lands)	8, 1	Federal, State
Minnesota	<b>American Indian reservations</b>	14	Federal
	<b>Entity</b> consisting only of trust lands	1	Federal
Mississippi	<b>American Indian reservation</b> (has associated trust lands)	1	Federal
Montana	<b>American Indian reservations</b> (four reservations have associated trust lands; one of these reservations has trust lands that extend into another State, but has no reservation lands in that other State)	7	Federal
	<b>Additional entity</b> consisting of lands identified as belonging to two reservations	1	Federal
Nebraska	<b>American Indian reservations</b> (one reservation has trust lands; three reservations extend into another State, and one out-of-State reservation has trust lands)	5	Federal
	<b>Tribal designated statistical area (TDSA)</b>	1	State
Nevada	<b>American Indian reservations</b> (two have associated trust lands; four extend into other States)	22	Federal
New Jersey	<b>American Indian reservation</b>	1	State
	<b>Tribal designated statistical area (TDSA)</b>	1	State
New Mexico	<b>American Indian reservations</b> (eight have associated trust lands; three extend into other States)	26	Federal
	<b>Additional entity</b> consisting of lands identified as belonging to two reservations	2	Federal
New York	<b>American Indian reservations</b>	8, 2	Federal, State
North Carolina	<b>American Indian reservation</b>	1	Federal
	<b>Tribal designated statistical areas (TDSAs)</b>	5	State

Table 5-1. (cont.)

<b>State</b>	<b>Type of AIANA</b>	<b>Number</b>	<b>Level</b>
North Dakota	<b>American Indian reservations</b> (two extend into another State; one reservation has trust lands that extend into another State, but has no reservation lands in that other State)	5	Federal
Oklahoma	<b>American Indian reservation</b>	1	Federal
	<b>Tribal jurisdiction statistical areas (TJSAs)</b>	15	Federal
	<b>Additional TJSAs</b> consisting of lands claimed by two different tribes	2	Federal
Oregon	<b>American Indian reservations</b> (two have trust lands; one extends into another State)	8	Federal
	<b>Tribal designated statistical areas (TDSAs)</b>	2	Federal
Rhode Island	<b>American Indian reservation</b>	1	Federal
South Carolina	<b>American Indian reservation</b>	1	State
South Dakota	<b>American Indian reservations</b> (two have associated trust lands; two extend into another State; one has associated trust lands that extend into another State, but has no reservation lands in that State; there are trust lands associated with two out-of-State reservations)	9	Federal
Texas	<b>American Indian reservations</b>	2	Federal
Utah	<b>American Indian reservations</b> (one has associated trust lands; three extend into other States)	7	Federal
Virginia	<b>American Indian reservations</b>	2	State
	<b>Tribal designated statistical areas (TDSAs)</b>	2	State
Washington	<b>American Indian reservations</b> (seven have associated trust lands)	27	Federal
Wisconsin	<b>American Indian reservations</b> (five have associated trust lands)	11	Federal
Wyoming	<b>American Indian reservation</b>	1	Federal

## **Alaska Native Regional Corporations**

Alaska Native Regional Corporations (ANRCs) are corporate entities established under the Alaska Native Claims Settlement Act (ANCSA) of 1972 (Public Law 92-203, as amended by Public Law 94-204) to conduct the business and nonprofit affairs of Alaska Natives. Alaska is divided into 12 ANRCs that cover the entire State, except for the Annette Islands Reserve, which is an American Indian reservation.<sup>2</sup> The boundaries of the 12 ANRCs were established by the Department of the Interior in cooperation with the Alaska Natives. Each ANRC was designed to include, as far as practicable, Alaska Natives with a common heritage and common interests. The ANRC boundaries were first identified in conjunction with the 1980 census, although there were no data presentations for ANRCs as geographic entities.

## **Alaska Native Village Statistical Areas**

Alaska Native Villages (ANVs) are tribes, bands, clans, groups, villages, communities, or associations in Alaska that are recognized pursuant to the ANCSA of 1972. The Census Bureau established Alaska Native village statistical areas (ANVSAs) as geographic entities for data tabulation purposes. For the 1990 census, the Census Bureau worked with officials of the nonprofit corporation within each ANRC, as well as with other knowledgeable officials, to delineate boundaries for the settled portion of each ANV. The ANVSAs are located within the ANRCs and do not cross ANRC boundaries. The ANVSAs for the 1990 census replace the ANVs that the Census Bureau recognized in conjunction with the 1980 census.

## **Background**

### **Censuses Before 1970**

The U.S. Government identified American Indian settlement areas as early as the census of 1790. This identification, however, constituted a form of reverse recognition, since the objective was to not include American Indian settlement areas as part of the United States, but rather to exclude such areas from the enumeration process. Enumerators identified such settlements as non-enumeration areas because American Indians living in these settlements (and, later, on American Indian reservations) were not taxed. It was not until



1860 that the Federal census enumerated the American Indian population directly, counting only that portion of the population living outside of reservations (in other words, only those American Indians who were taxable). The American Indians enumerated were included in the general population, without separate recognition as American Indians in the data tabulations and publications.

The 1870 census was the first to include a separate category for *Indians* on the census schedule. Since the 1870 census, the Census Bureau has increased the types of data collected for American Indians, and instituted special procedures to enumerate them more accurately. The enumeration techniques and demographic classification methods applied to the American Indian and Alaska Native populations, and the recognition of different types of AIANAs, have varied from census to census. In decennial censuses before 1970, the Census Bureau used various enumeration techniques.<sup>3</sup> There were, however, no geographic programs or special geographic entities (apart from enumeration districts and an occasional CCD) used to collect, tabulate, and publish data for American Indians, Eskimos, and Aleuts and their settlements.

### **The 1970 Census**

By 1970, government agencies, American Indians, and Alaska Natives all were becoming interested in census data for indigenous population groups. Tribes and native groups had assumed a more active role in self-government, and the agencies responsible for the distribution of State and Federal program monies began using census data to allocate funds.

For the 1970 census, the BIA identified 115 American Indian reservations for which the Census Bureau tabulated and presented data. To identify these entities, the Census Bureau used the reservation boundaries shown on its enumeration maps. In many cases, these reservation boundaries proved to be inaccurate and incomplete; also, map features often were insufficiently detailed within many small reservations and Alaska Native settlements. These shortcomings resulted in inaccurate data tabulations.

### **The 1980 Census**

The 1970 census had demonstrated the inaccuracy of many of the maps and boundaries used to identify American Indian reservations, and for the 1980 census, the Census Bureau worked to improve this information. For the 1980 census, the Census Bureau also made other major geographic improvements to support the collection and tabulation of data for the AIANA populations. It worked with the BIA and State certifying officials to identify the official names of all Federally and State-recognized reservations and to obtain maps of the reservation boundaries. The Census Bureau also worked with officials in Alaska to determine boundaries for the Alaska Native villages.

One other improvement for the 1980 census was the recognition of the Historic Areas of Oklahoma. Oklahoma has a very high percentage of the Nation's American Indian population, but has only one reservation, the Osage Reservation. Discussions with over 30 tribal governments and organizations led the Census Bureau to delineate a single geographic entity that included all lands associated with former reservations elsewhere in the State.<sup>4</sup> (The Historic Areas did not extend into urbanized areas or into major cities.)

### **Geographic Programs for AIANAs in the 1990 Census**

For the 1990 census, the Census Bureau expanded the geographic programs for AIANAs. This resulted in an increase in the number of areas eligible to participate in various geographic programs offered to other governmental organizations, and more involvement in the geographic delineations by tribal and Alaska Native officials. Also, for the 1990 census, the Census Bureau designed and introduced the TIGER System, a digital geographic support system and data base containing all the geographic information necessary to take the census.<sup>5</sup> This new development affected the AIANAs as well as all other geographic entities included in the 1990 census.

A variety of organizations and sources were involved in building the TIGER data base. In the early 1980s, the Census Bureau contacted tribal officials to

obtain up-to-date map feature information for some of the larger reservations. Such feature update information was solicited from many organizations at that time, and was a necessary basis for the polygon structure of the TIGER data base. For a more detailed discussion, see Chapter 11, “Census Blocks and Block Groups.”

### **Planning, Preparation, and Outreach**

Throughout the 1980s, the Census Bureau consulted with an advisory committee on American Indian and Alaska Native issues—one of four minority advisory committees formed to provide advice and counsel to the Census Bureau on key issues for the decennial census. In addition, the Census Bureau formed an American Indian and Alaska Native Task Force, made up of staff members whose primary mission was to improve the enumeration of, and to further outreach to, these populations. Both the advisory committee and the task force were instrumental in bringing about one of the major improvements that the Census Bureau made for the enumeration of the AIANA populations in the 1990 census—the Tribal Liaison Program. Although not a geographic program, per se, the Tribal Liaison Program gave American Indian tribal liaisons the chance to review the reservation and trust land boundaries that the Census Bureau intended to recognize for the 1990 census. For Alaska, there was a comparable program—the Alaska Native Village Liaison Program.

In 1985 and 1986, the Census Bureau sponsored 12 regional meetings for the American Indian and Alaska Native communities. Participants included staff from the BIA, the departments of Health and Human Services (HHS), Education, Housing and Urban Development (HUD), and representatives of local community-based organizations and tribal governments. The purpose of the meetings was to solicit input for 1990 plans and receive recommendations concerning three key decennial census issues affecting the American Indian and Alaska Native community: geographic area identification, census outreach and promotion, and the 1990 census questionnaire content.

Each regional meeting included a geographic presentation tailored to the unique needs and geographic situation of the AIANA populations in that part of the United States. As a result of holding these regional meetings, Census Bureau staff became more aware of the importance of geographic issues affecting American Indian and Alaska Natives. In addition, these meetings led tribal and village officials to recognize their critical role in helping the Census Bureau to identify and delineate geographic entities for the 1990 census.

### **Boundary Review**

The delineation of boundaries for American Indian and Alaska Native areas poses unique challenges for the Census Bureau. This is particularly true of legally or governmentally defined entities such as reservations and trust lands, the most important geographic units for the tabulation and presentation of decennial census data for the American Indian populations. The Census Bureau obtains boundaries for Federally recognized reservations and trust lands from the BIA, which certifies the accuracy of the boundaries depicted for these entities. One recommendation for the 1990 census was to have the tribes review the reservation/trust land boundaries. To implement this suggestion, the Census Bureau and the BIA signed a memorandum of understanding for the purpose of achieving a more inclusive exchange of boundary information between the two agencies and the tribal authorities. This agreement provided the framework for the Tribal Review Program.

### **The Tribal Review Program for Reservations and Trust Lands**

The Census Bureau inserted the 1980 census geographic information for American Indian reservations and trust lands (geographic codes and boundaries) into the TIGER data base, and then made corrections, changes, and additions using information provided by the Tribal Review Program. Under the Tribal Review Program, the BIA delivered boundary information for Federally recognized reservations and off-reservation trust lands (both individual and tribal).<sup>6</sup> The Census Bureau supplied copies of computer-plotted maps to the BIA for each reservation and trust land area. These maps were

produced after the Census Bureau had conducted a boundary review in two phases.

In the first phase of the Tribal Review Program, the Census Bureau obtained maps of the new boundaries from the certifying agencies (the BIA and the appropriate State authorities) or sought confirmation from these authorities that the boundary locations had not changed since January 1, 1980. The Census Bureau then sent these maps to the respective tribal governments. The tribal officials reviewed the maps and contacted the BIA or the State certifying official if they found problems with the boundaries. After working with tribal officials to resolve such problems, the certifying agency or official then recertified the boundary and sent the corrected information to the Census Bureau.

In the second phase of the Tribal Review Program, tribal officials identified any remaining concerns about the boundaries and submitted them directly to the Census Bureau. The process continued until mid-1989 when the Census Bureau produced the first set of computer-derived maps showing the American Indian reservation and trust land boundaries. The Census Bureau sent these maps, called the Tribal Review Maps, to the tribes for approval and one more opportunity for correction. The Census Bureau then took the responsibility for presenting that revision/correction to the BIA or the State certifying official, and, upon certification, changing the boundary in the TIGER data base.

The Tribal Review Program was very successful in improving the accuracy of the reservation and trust land information used for the 1990 census. It identified 310 reservations: 298 Federally recognized and 12 State-recognized. Four of the Federally recognized reservations consisted of trust land areas that had certified boundaries, thereby defining entities equivalent to a reservation for decennial census purposes; 52 other Federally recognized reservations had tribal and/or individual trust lands associated with them.

### **American Indian Areas in Oklahoma**

The Historic Areas of Oklahoma delineated for the 1980 census resulted in data tabulations for many tribes linked to one large geographic area. This was an improvement over past censuses, but both the Oklahoma tribes and the Census Bureau wanted to develop a better approach for the 1990 census, one that associated tribes with appropriate smaller geographic areas. To meet this need, the Census Bureau developed the Tribal Jurisdiction Statistical Area (TJSA) Program. To implement this program, the Census Bureau worked with individual tribes or groups of tribes (excluding the Osage Tribe, which has a reservation) to delineate boundaries defining the area associated with their jurisdiction. There were 17 TJSAs delineated for the 1990 census.

The TJSA boundaries had to follow the boundaries of census blocks; that is, they had to conform either to physical features or to the boundaries of other governmental or administrative entities. There were no minimum population or housing requirements for an area to qualify as a TJSA. Territory in an urbanized area could be included in a TJSA. One geographic constraint was that a TJSA could not extend outside the State. As a result, some tribes in northeastern Oklahoma chose not to participate because they wanted to include territory in neighboring States within their TJSA. Territory claimed by two different tribes was identified separately as a joint use area in the 1990 census data tabulations.

### **Statistical Areas for Tribes With No Land Base**

Some Federally and State-recognized tribes do not have a legally established land base. However, these tribes often have an area that has customarily been associated with, or influenced by, their tribe. To identify this area of tribal influence, the Census Bureau established a new geographic entity, the tribal designated statistical area (TDSA). Throughout the Nation (except in Alaska and Oklahoma), the Census Bureau worked directly with tribes not having a land base to establish boundaries for 19 TDSAs. The criteria for TDSAs are very similar to those for TJSAs: a TDSA cannot extend onto a Federally or State-recognized reservation

or trust land, it cannot cross a State line, and its boundaries must follow census block boundaries.

### **Alaska Native Areas**

The Census Bureau also worked to improve the delineation of geographic entities with concentrations of Alaska Native populations. The Bureau of Land Management (BLM), another agency in the U.S. Department of the Interior, is the Federal agency responsible for information regarding the boundaries for areas resulting from the ANCSA of 1972; these include the ANRCs and the Alaska Native village corporations known as Alaska Native villages (ANVs). Because the ANRCs were established to conduct both the business and nonprofit affairs of Alaska Natives, the corporations divided their functions into two corporate entities: the business or *profit* corporation, and the *nonprofit* organization, whose purpose was to conduct the sociocultural functions of the corporation. The ANRCs requested that the Census Bureau work directly with the nonprofit corporations for all 1990 census geographic programs.

Using a BLM source map, the Census Bureau plotted the ANRC boundaries onto a set of the U.S. Geological Survey's (USGS) 1:250,000-scale maps, which it then used to improve and correct the 1980 ANRC boundaries in the TIGER data base. (In unpopulated areas, the ANRC boundaries had been generalized during 1980 census mapping operations.) To verify the accuracy of the ANRC boundaries in the TIGER data base, the Census Bureau implemented a review process similar to the second phase of the Tribal Review Program.

Alaska Native villages often include thousands of acres of land used by Alaska Natives for hunting and fishing. The Census Bureau worked with ANRC officials to delineate areas of concentrated settlement (where people lived most of the year) for purposes of data tabulation and presentation. The boundaries had to follow physical features or nonvisible boundaries of other governmental or administrative entities. Because these boundaries usually do not represent the legal limits of the ANV

set up by the ANCSA, the Census Bureau considers the ANVSAs to be statistically defined entities.

There were 217 ANVSAs delineated for the 1990 census. There was no minimum population size for an ANVSA. Moreover, the ANV boundaries were not constrained by other geographic entities in the census hierarchy; an ANVSA could be located inside or outside of an incorporated place or census designated place (CDP), or it could straddle a place boundary. Often, the ANVSAs had the same boundary as a CDP or city of the same name. No ANVSA boundary crossed an ANRC boundary and there were no ANVSAs on the Annette Islands Reserve, an American Indian reservation.

### **Other Geographic Programs**

In addition to the initiatives discussed above, the Census Bureau sought to make tribal officials aware of other 1990 census programs and solicited their help in proposing and constructing small-area geographic entities for the tabulation and presentation of 1990 census data by AIANA. These other programs included the following:

**Block numbering areas and block groups** The Block Numbering Area and Block Group (BNA/BG) Program allowed local participation in the delineation of small-area geographic entities. To be eligible to participate, a reservation had to include at least 1,000 inhabitants or at least 500 dwelling units (the minimum number needed to define two BGs), and these had to be located on a single contiguous piece of territory. For reservations extending in more than one county, each county portion with at least 1,000 inhabitants or at least 500 dwelling units was eligible. These size criteria limited the number of tribes that could participate.

**Census tracts** The Census Bureau also urged tribes in metropolitan and more populous counties to participate in the Census Tract/BG Program. (For details, see Chapter 10, “Census Tracts and Block Numbering Areas.”) The tribal leaders could, if they so desired, become active members of the Census Statistical Areas Committees, which are local data user groups made up of planners, educators, local government officials, and others



interested in census tracts and other small-area geographic entities. (For details, see Chapter 3, “Local Census Statistical Areas Committees and Other Local Assistance.”)

**Census blocks** The delineation of census blocks for the 1990 census offered another program in which the tribes could become involved. Within BNAs, census tracts, and BGs, the Census Bureau assigns a three-digit census block number to each polygon formed by the intersection of geographic features. (For details, see Chapter 11, “Census Blocks and Block Groups.”) In preparation for the 1990 census, the Census Bureau provided an opportunity for State governments to identify block boundaries as part of its preparations to meet the requirements of Public Law 94-171. (For details, see Chapter 14, “Voting Districts.”) At the same time, the Census Bureau provided an opportunity for American Indian tribes to suggest visible geographic features that they would like to have used as census block boundaries, a process called the Block Definition Project (BDP). Participants in both the P.L. 94-171 program and the BDP had to identify, during a visit to one of the Census Bureau’s 12 regional offices, the visible block boundaries they wanted held. In spite of this constraint, for tribal officials who participated, the BDP provided an opportunity to have input into the TIGER data base and to learn what geographic features would appear on the 1990 census maps for their reservations.

**Census designated places** Still another 1990 geographic program of interest to American Indian and Alaska Native communities was the Census Designated Place (CDP) Program. CDPs are population concentrations that function as a community, are locally recognized as such, but are not legally incorporated. To recognize the significance of unincorporated communities located on American Indian reservations, the Census Bureau lowered the minimum population size for such CDPs to 250 people for the 1990 census. This provision applied to reservations in the coterminous 48 States.<sup>7</sup>

In Alaska, communities often are very small, and several families sometimes constitute a settlement that functions economically and socially as a community with a cohesiveness characterized by larger places in other

States. To account for these conditions, the minimum population size for CDPs in Alaska is 25 people.

## **1990 Census Data for AIANAs**

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 publication series contain data for AIANAs:

- CPH-1 Summary Population and Housing Characteristics
- CPH-4 Population and Housing Characteristics for Congressional Districts of the 103rd Congress
- CPH-5 Summary Social, Economic, and Housing Characteristics
- CP-1 General Population Characteristics
- CP-1A General Population Characteristics for American Indian and Alaska Native Areas
- CP-2 Social and Economic Characteristics
- CP-2-1A Social and Economic Characteristics for American Indian and Alaska Native Areas
- CP-3 Population Subject Reports
- CH-1 General Housing Characteristics
- CH-1-1A General Housing Characteristics for American Indian and Alaska Native Areas
- CH-2 Detailed Housing Characteristics
- CP-2-1A Detailed Housing Characteristics for American Indian and Alaska Native Areas

Data items, geographic coverage, and presentation format vary with each report series. For instance, the CPH-1 series, Summary Population and Housing Characteristics, contains 100-percent data issued in a U.S. Summary report, and individual reports for each State and statistically equivalent entity. Reports contain several important items of data for the AIANA populations. Tables 17 and 18 of the individual reports provide selected population and housing characteristics for AIANAs within the State, as well as land area for each reservation and trust land in square kilometers

and square miles. Appendix G of each report consists of page-size maps of the State showing counties, county subdivisions, AIANAs, and places.

Of particular interest are two publications in the Population Subject Reports series, *American Indians, Eskimos, and Aleuts in the United States*, and *Characteristics of American Indians by Tribe and Language for Selected Areas*. These reports provide cross-tabulations of selected population and housing characteristics. The AIANA data also are available on computer tape as part of the Summary Tape File (STF) series: The STF 1 files (STF 1A, 1B, 1C, and 1D); the STF 2B and 2C; the STF 3A and 3C; and the STF 4B and 4C. Some of these STFs are available on compact disc—read-only memory (CD-ROM). Another computer tape and CD-ROM product that includes population data and housing unit counts for AIANAs is the Public Law 94-171 (Redistricting) Data File.

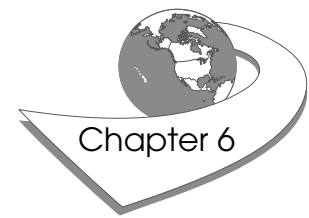
For more detailed information about the data products listed above, the reader should consult the following series of figures that appear in many of the Census Bureau's publications and users' guides:

- Figure 1. 1990 Census Content
- Figure 2. 1990 Census Printed Reports
- Figure 3. 1990 Census Summary Tape Files
- Figure 4. Other 1990 Census Data Products

This set of figures appears in many of the Census Bureau's 1990 census publications. For instance, it constitutes Appendix F, "Data Products and User Assistance," in the CPH-1 series. It also appears in Chapter 5, "Data Products," in the *1990 Census of Population and Housing Guide, Part A. Text (CPH-R-1A)* as well as in the 1990 Census of Population and Housing brochure, *Tabulation and Publication Program*.

## Notes and References

- <sup>1</sup> Figure 2-1 in Chapter 2 of the *Geographic Areas Reference Manual* depicts the relationship of American Indian reservations to other census geographic entities.
- <sup>2</sup> A thirteenth, *nongeographic*, ANRC was established for Alaska Natives who are not permanent residents of the State and who chose not to enroll in one of the 12 ANRCs; there are no decennial census data products for this ANRC.
- <sup>3</sup> For instance, there were special enumeration procedures used in the 1910, 1930, and 1950 censuses, but none in the 1920, 1940, and 1960 censuses. The interested reader can consult Frederick G. Bohme's *200 Years of U.S. Census Taking: Population and Housing Questions, 1790-1990*, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1989.
- <sup>4</sup> Apart from the Osage Reservation, the tribal governments in the State have jurisdiction over their tribal members, but their associated reservations were dissolved by the Federal Government during the two- to three-year period preceding the statehood of Oklahoma in 1907.
- <sup>5</sup> The TIGER (Topologically Integrated Geographic Encoding and Referencing) data base (often called the TIGER File) is the set of computer files at the heart of the TIGER System. This computer 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>6</sup> The Tribal Review Program did not include ANVSAs, TDSAs, or TJSAs because these entities, defined solely for statistical purposes, were established during cooperative programs between the Census Bureau and tribal or village officials. These programs did not involve the authorities the Census Bureau relies on for certifying the accuracy of American Indian legal boundaries; that is, the BIA and State agencies.
- <sup>7</sup> Various minimum population sizes for CDPs apply throughout the United States: 2,500 people for CDPs in urbanized areas (except in Hawaii), 1,000 people for CDPs outside of urbanized areas (except in Hawaii and Alaska), and 300 people for CDPs in Hawaii (see Chapter 9, "Places").



# Statistical Groupings of States and Counties

Users of Census Bureau data find it advantageous to relate these data to geographic entities that represent major sections of the United States. These geographic regions usually comprise combinations of States or counties. Such groupings are particularly appropriate for a large nation such as the United States, with its diverse physical and cultural geography, and its numerous State and county components.

This chapter discusses the Census Bureau's system of State groupings, the Census Bureau's regions and divisions, as well as other combinations based on groupings of contiguous counties. Figure 6-1 shows the Census Bureau's current two-level system for the regional subdivision of the United States. Each of the current nine census divisions consists of several States (including the District of Columbia, located in the South Atlantic Division); each of the four current census regions consists of two or three divisions (the Midwest Region was designated as the North Central Region until June 1984). At both the region and division level, the framework of areas provides complete coverage of the entire Nation. The purpose of this framework is to provide large units that are roughly similar in terms of historical development, population characteristics, economy, and the like. As a result, the regions and divisions serve not only to summarize data for the same groups of States over a long period of time, but also to provide a larger geographic framework for comparative statistical analysis.

The current regions and divisions have been standard data tabulation units in almost all Census Bureau tabulation and publication programs since the early 1900s. They appear in many summary tables of the decennial censuses of population and housing, in the publications of the economic and agriculture censuses, and in other statistical presentations, not only those of the Census Bureau, but also of other Federal agencies and private groups. The Census Bureau has no official summary units, other than the regions and divisions, that combine all the Nation's counties and statistically equivalent entities into a more concise set of general-purpose areas.

Figure 6-1. Census Regions and Divisions of the United States



## Historical Perspective

The recognition of geographic regions goes back to the colonial period of American history. By the 18th century, the names *New England*, the *Middle Colonies*, and the *South* had come to refer to major sections of the Atlantic seaboard. Each of these regions encompassed several adjacent colonies or areas of settlement. The regional designations reflected particularities of location, climate, topography, economic systems, ethnic composition of the settlers, and systems of local government. One early use of these areas in a statistical compilation dates from before the American Revolution, when the British Government grouped the North American colonies into *major colonial regions* to summarize foreign trade information. These regions were New England, Middle Colonies, Upper South, and Lower South.

These colonial groupings were the forerunners of the State combinations that appear in the census publications. In fact, the area called New England in colonial times has maintained its geographic identity to the present day. Much the same is true of the Middle Colonies; except for Delaware, which is now in the Census Bureau's South Atlantic Division, New Jersey, New York, and Pennsylvania remain the component States of the Middle Atlantic Division. (Maryland and Virginia constituted the Upper South; North Carolina, South Carolina, and Georgia, the Lower South.) On a smaller scale, there were other regional designations that appeared in the geographic structure of later censuses; names such as *tidewater*, *coastal plain*, *piedmont*, and *the back country* were known and in general use even before the American Revolution. These groupings were of interest from the standpoint of statistical presentations because they referred to relatively homogeneous subareas within several colonies (or States). Such geographic subdivisions appeared in several U.S. publications, often as county groupings that represented areas having similar physical and socioeconomic characteristics.

### Regional Designations in Early U.S. Censuses

Although 13 States were in place by the time of the first U.S. census in 1790, they were treated as judicial districts in census publications and

for purposes of data collection. The published data made no use of State combinations. Instead, the summary table listed the 13 States (Connecticut, Delaware, Georgia, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, and Virginia) and three districts (Kentucky, Maine, and Vermont) under one heading, "Districts." Two territories (Territory Northwest of River Ohio, and Territory South of River Ohio) also were under the heading of "Districts" but below the grand totals for the 16 areas listed above.

In 1790, U. S. marshals conducted the decennial census within judicial districts (this method of enumeration continued until 1870) while Territory South of River Ohio was enumerated by the Governor. Indian warfare prevented the 1790 enumeration of Territory Northwest of River Ohio. Figure 6-2 shows the major geographic entities of the first U.S. Census.

With one exception, the published returns of the 1790 census did not use any geographic combinations of counties within States; the listing of counties within States was alphabetical, with minor civil divisions and some incorporated places appearing in similar sequence. The table for Maryland was the exception; it arranged the county totals by *western shore* and *eastern shore*. Although the geographic pattern of the States and territories shifted frequently over the next half-century, decennial census publications from 1800 to 1840 made no use of large-area summary units. In general, States were listed in geographic order, beginning with Maine.

### **The 1850 Census**

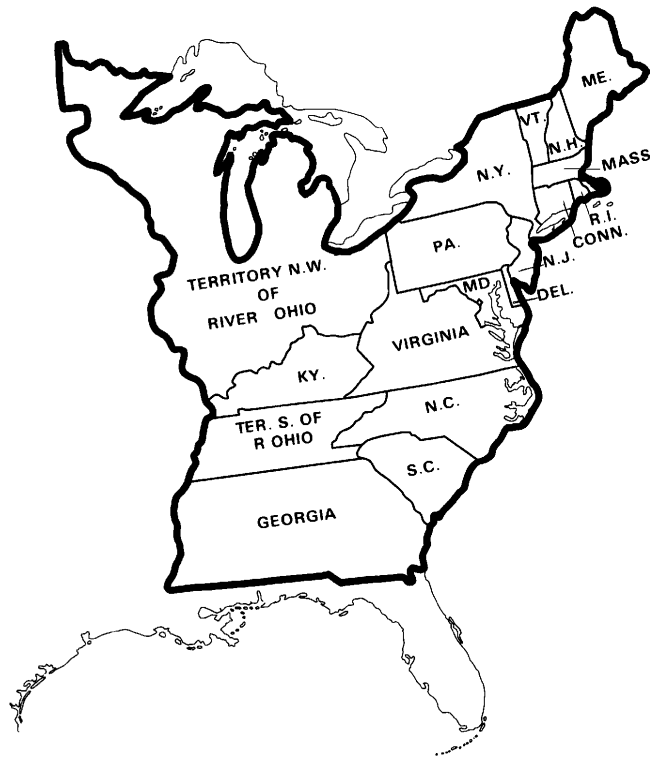
The 1850 decennial census brought considerable change to the enumeration process and the tabular presentation of statistical compilations. The published reports received the attention of the well-known editor, journalist, and statistician, James D. B. DeBow, who became the Superintendent of the Census in 1853. He directed the statistical compilations of the 1850 decennial census and completed the publication of several printed



Figure 6-2. The Geography of the First U.S. Census

**The United States in 1790**

- 13 States
- 3 Individual Districts (Kentucky, Maine, and Vermont)
- 2 Territories



reports. One volume, a *compendium*, is of particular interest because it was the first pocket-size Census Bureau publication; it contained an extensive explanatory text together with a series of summary tables. The volume introduced several kinds of large-area geographic regions, for which it presented an extensive array of socioeconomic information.

The compendium also featured the first map to appear in a Census Bureau publication. This map showed the area of the conterminous United States subdivided into major slopes, or drainage basins. The interest in drainage basins appears to have had an economic basis. Navigable rivers, canals, and

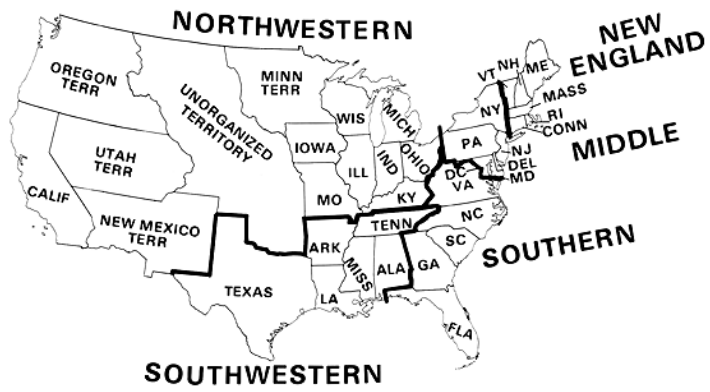
overland railways were important elements in the Nation's transportation and communication systems; the network of canals and railroads existing at the time, along with the plans for expansion of these networks, depended on drainage and topography as well as the population settlement pattern. This map and the several geographic divisions in the accompanying table served as the framework for summarizing the population totals from the first seven decennial censuses. This was the first time that a decennial census publication depicted large-area regions that combined entire States and territories (or portions of them) into summary units.

This publication is significant in that numerous statistical tables are presented using the *five great divisions*, the first set of standard geographic groupings to appear in a U.S. census publication. Some divisions consisted of several States, others of several States and territories. A more significant fact is that some of the divisions are quite similar to the current census divisions. New England still encompasses the same six States. With the exception of Delaware, the District of Columbia, and Maryland, the Middle States of 1850 correspond to the present Middle Atlantic Division. With the addition of these same three areas, today's South Atlantic Division corresponds to the 1850 Southern Division (see Figure 6-3).

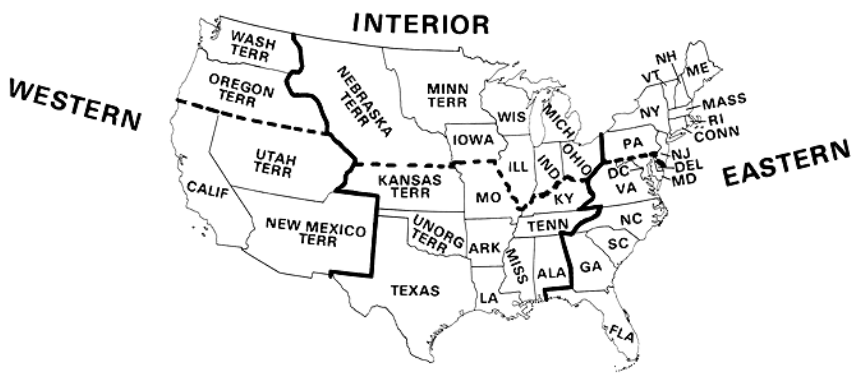
Although the 1850 compendium made extensive use of the five great divisions, DeBow was not satisfied, because Kentucky and Missouri were separated from Tennessee and Arkansas and included with the Northwestern Division associated with California, Oregon, and the other territories. In search of a better set of areas, DeBow devised a new geographic arrangement for future use. This classification divided the country into three great sections: (1) the Eastern on the Atlantic Coast; (2) the Western on the Pacific Coast; and (3) the Interior, encompassing the States of Alabama, Arkansas, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Ohio, Tennessee, Texas, Wisconsin; the territories of Kansas, Minnesota, Nebraska; and the Unorganized Territory of Oklahoma (see Figure 6-3).

Figure 6-3. The 1850 Groupings and DeBow's Suggested Rearrangement

**The Five Great Divisions of the 1850 Census Compendium (1850 Areas/Boundaries)**



**Three Great Sections Proposed for Census Use by DeBow (1854 Areas/Boundaries)**



Each great section had its own north and south divisions, designated as Northeastern, Southeastern, Northern Interior, Southern Interior, Northwest, and Southwest. In effect, DeBow's system was a sweeping new geographic arrangement that restated the three major drainage areas: (1) the Appalachian or Atlantic; (2) the Mississippi Valley or Central; and (3) the Pacific or Western, as combinations of entire States, or of entire States and territories.

In many respects, DeBow's *great sections and divisions* anticipated the present arrangement of census regions and divisions (see Figure 6-1). The Northern Division of the Eastern Section is today's Northeast Region, the Southern Division of the Eastern Section comprises the present South Atlantic Division, the Southern Interior corresponds largely to today's East and West South Central Divisions, the Northern Interior resembles the Midwest Region, and the name Western Section still applies to much the same area now referred to as the *West*.

### **Geographic Summaries for the 1850 and 1860 Censuses**

Other tables (and consequently maps) from the 1850 and 1860 censuses arranged the States differently than the 1850 compendium. Map A in Figure 6-4 depicts the arrangement of States into sections or groups according to geographical situation, production, climate, the pursuits of the inhabitants, and other prominent characteristics. Texas, the Central Slave States, and the Coast Planting States approximated the South. These three sections corresponded to DeBow's Southeast and Southern Interior, excluding the District of Columbia, Delaware, and Maryland. Some aspects of the sections or groups presented a rather unusual arrangement; for instance, the Middle States of the Atlantic seaboard also included Ohio, and the designation Northwestern States (often including all the territories) appears to be somewhat lacking in geographic precision. On an overall basis, the arrangement probably proved less versatile than the five divisions of the 1860 census. It appeared only once in the 1850 publication, and was featured in one historical table in the 1860 summary volume.

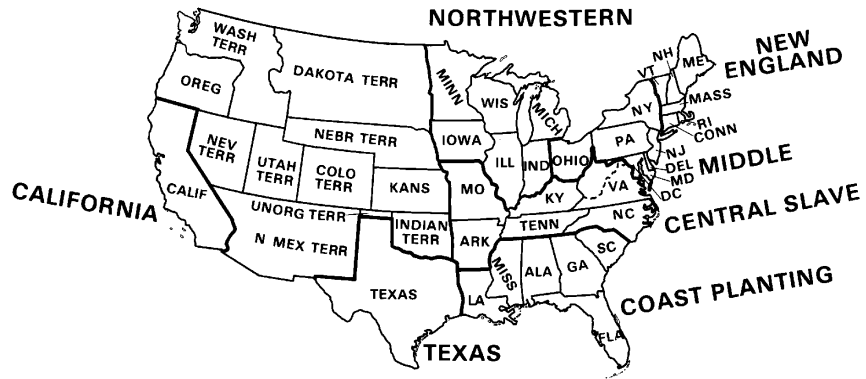
The summary tables in the 1860 census publication presented a different approach to large-area combinations. Map B in Figure 6-4 shows the standard grouping as a general-purpose arrangement into five divisions, which appeared in a number of statistical tables on agriculture and manufacturing. Two of the divisions, New England and the Middle States, were identical to the official *Great Divisions* of 1850 (see Figure 6-3). One innovation of this publication was the use of the word *Western* (in the Western Division) instead of Northwest to designate the interior part of the Nation; another was the name *Pacific*, appearing for the first time to designate a combination of States.

Another grouping of States (Map C in Figure 6-4) appeared in a specialized table of railroad mileage and costs. This arrangement made some changes to the framework of the five 1860 divisions. It combined Arkansas, Kentucky, and Tennessee into Interior South; it retitled much of the Western Division as Interior North; and it subdivided the remainder of the Southern Division into Southern Atlantic and Gulf. New England and the Middle Divisions did not change.

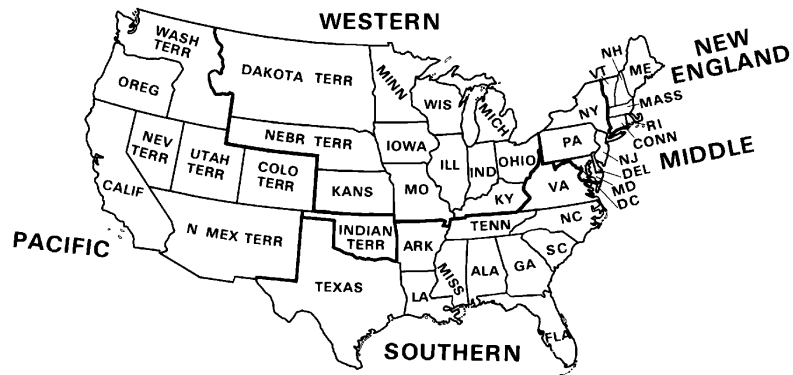
The 1850 and 1860 censuses involved a general enumeration of annual deaths; the compilations appeared in several tables of mortality statistics that featured various kinds of large-area summary units. One table on mortality statistics used seven natural divisions for comparing 1850 and 1860 information. This approach summarized information on the basis of the physical aspects of the country (see Table 6-1). The geographic coverage is selective and includes only part of the Nation. Some categories represent groups of entire States (Pacific Coast, Northeastern, and Northwestern States), while others refer to groups of counties or parts of States. This regional categorization reflected a continuation of DeBow's attempts to divide the Nation into natural regions, albeit from a different perspective. The use of counties as building blocks cumulating to larger geographic areas foreshadowed later efforts in statistical and map presentations in the 1870, 1880, 1890, and 1900 censuses.

Figure 6-4. Other Groupings of States from the 1850 and 1860 Censuses

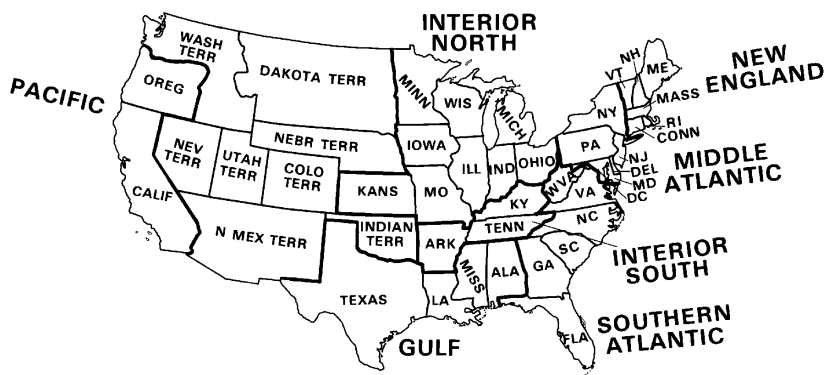
**A. Groupings for Land Area, Population, and Density Table (1850/1860)**



**B. Five Divisions Used in Many Summary Tables (1860)**



**C. Areas for Summarizing Railroad Mileage and Costs (1860)**



Source: Preliminary Report on the Eighth Census, 1862.

Table 6-1. **Great Natural Divisions for Summarizing Mortality Statistics From the 1850 and 1860 Censuses**

<b><i>Northeastern States</i></b>	Maine, New Hampshire, and Vermont
<b><i>Lowlands of the Atlantic Coast</i></b>	Comprising a general breadth of two counties along the Atlantic from Delaware to Florida, inclusive
<b><i>Intermediate Region</i></b>	Surrounding the Alleghenies, and extending to the lowlands of the Atlantic and to the Mississippi Valley
<b><i>Allegheny Region</i></b>	From Pennsylvania, through Virginia and eastern Tennessee to northern Alabama
<b><i>Lower Mississippi Valley</i></b>	Comprising Louisiana and a breadth of two counties along each bank of the river northward to Cape Girardeau in Missouri
<b><i>Northwestern States</i></b>	Wisconsin, Iowa, and Minnesota
<b><i>Pacific Coast</i></b>	California, Oregon, and Washington

### **State Groupings From 1870 to 1900**

Contrasted with the 1850 and 1860 census reports, the 1870 census publication tables showed scarcely any further development or use of State groupings. The agriculture volume included one table showing the distribution of sheep and wool. Although it grouped States geographically, this table did not provide titles for the various groupings. By 1880, except for the consolidation of Oklahoma and the division of the Dakota Territory into North and South, the boundaries and areas of States and territories in the contiguous 48 States resembled those of today.

Henry Gannett, Geographer of the Census Office during the 1880s, presented a plan for grouping States into larger summary units. Gannett divided the country primarily into three great divisions: the Atlantic, the Great Valley, and the Western, which corresponded to the three primary topographical divisions of the country. The two eastern divisions were divided by a line running approximately east and west. The line between the two sections of the Atlantic Division followed Mason's and Dixon's line; the line between the two sections of the Great Valley followed the

Ohio River and the southern boundary of Missouri. The east-west line separated districts that were very sharply distinguished from one another by population, social conditions, and interests, as well as climate.

In large part, Gannett's proposal restated the 1850 formulations. His Great Valley of the Mississippi corresponds to DeBow's interior, central, or middle group of States. Gannett's arrangement evolved into today's system of groupings, and pointed toward the present system in that it presented a two-tiered approach: five *major geographic divisions*, counterparts of today's census regions, and eleven *minor geographic divisions*; many of the latter correspond to the current groupings of States into census divisions. For instance, Southern North Atlantic is now the Middle Atlantic Division; together with New England, it now comprises the Northeast Region (instead of the North Atlantic Region). The two minor divisions, Northern South Atlantic (the Upper South of colonial times) and Southern South Atlantic, later merged into the South Atlantic Division of today. A later combination grouped the Rocky Mountain and the Basin and Plateau States into the Mountain Division. Table 6-2 lists Gannett's 1900 arrangement and shows how it evolved into the present system of groupings.

The summary statistics for the 1880 census of agriculture made use of the five major divisions mentioned above. The 1890 and 1900 publications extended the practice to include data on land area and demographic items, such as the geographical distribution of counties and minor civil divisions, as well as city, urban, and rural populations. The introductory text of one 1890 census report considered this fivefold combination as a natural grouping that brought out many characteristic features of the Nation's different sections. Among these features were economic specialization, the evolution of population concentrations in cities, and the stage of progress. It described the North Atlantic as the manufacturing section, and designated agriculture as the predominant industry of the North Central States. It further characterized the South Atlantic and South Central States as almost entirely agricultural, in contrast to the West, for which the leading industries were agriculture, mining, and grazing. Such perceptions doubtlessly



became fixed in the public's mind, and served to perpetuate the use of this set of standard groupings in the Census Bureau's publications.

The 1883 edition of the *Statistical Atlas* (privately published as *Scribner's Statistical Atlas of the United States*) also used Gannett's groupings of States. The chapter on physical geography has a section on "Natural Grouping of States," including a map of the five major geographic divisions. The chapter on population has a few short tables that group the States by these geographic divisions.

Table 6-2. **Shifts in the Naming and Arrangement of Regions and Divisions**

1880-1890	1900	1910-1940	1950-1990
<b>North Atlantic</b>	<b>North Atlantic</b> New England Southern North Atlantic	<b>North</b> New England Middle Atlantic East North Central West North Central	<b>Northeast</b> New England Middle Atlantic  <b>Midwest</b> ( <i>name changed from North Central in 1984</i> ) East North Central West North Central
<b>Northern Central</b>	<b>North Central</b> Eastern North Central Western North Central		
<b>South Atlantic</b>	<b>South Atlantic</b> Northern South Atlantic Southern South Atlantic	<b>South</b> South Atlantic East South Central West South Central	<b>South</b> South Atlantic East South Central West South Central
<b>South Central</b>	<b>South Central</b> Eastern South Central Western South Central		
<b>Western</b>	<b>Western</b> Basin and Plateau Pacific Rocky Mountain	<b>West</b> Mountain Pacific	<b>West</b> Mountain Pacific

### **Groupings of Counties into Physiographic Regions**

The publications for the 1870 through the 1900 census reflected a continuing interest in the use of counties as geographic building blocks for regions, particularly those regions based on physiography, topography, drainage basins, or river systems. Over the period 1850 through 1900, the number of counties and statistically equivalent entities increased from 1,621 to 2,828; the 1900 layout of county areas and boundaries largely resembled the present pattern. For census purposes, counties were becoming a stable framework of geographic units; this development favored their use as building blocks for data tabulation and presentation. They also served the need for a smaller set of geographic units on which to base regional configurations.

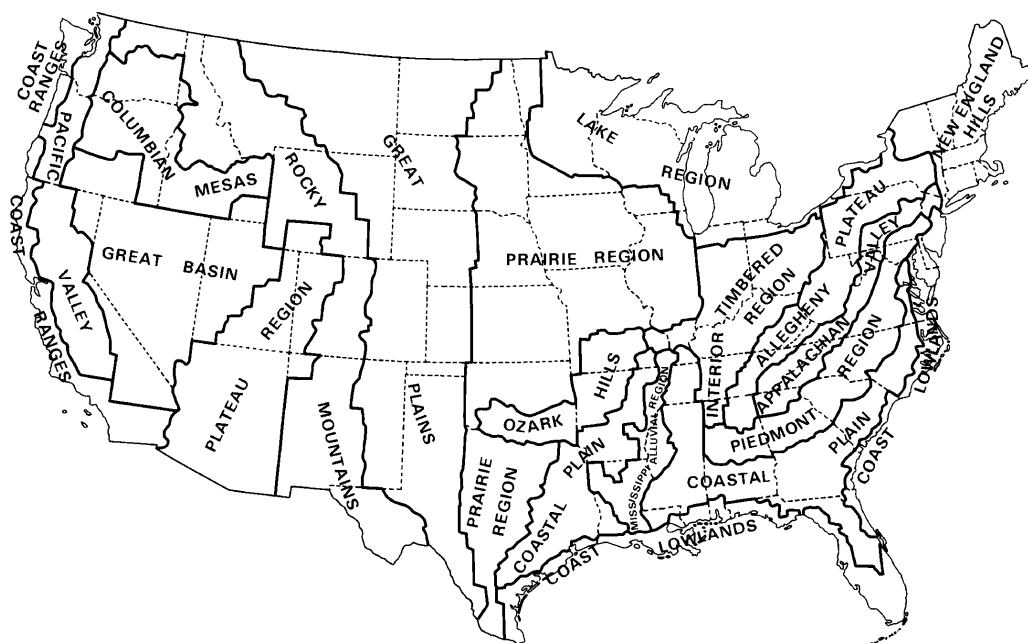
The Census Office's *1874 Statistical Atlas* contained a discussion of the physical features of the country, prepared by Professor J. D. Whitney. The atlas had no accompanying statistical tables, but Whitney's discussion of physiographic regions in the text became the basis for a presentation of data by regions based on physical features in the 1880 census report. Before the publication of the 1874 text in the statistical atlas, the 1850 and 1860 census mortality tables also made partial use of county groupings as summary areas.

Gannett continued this approach in the 1880, 1890, and 1900 census publications. The 1880 census report presents some summary data by 21 topographic regions, a practice continued in the publications of the 1890 census and, with minor modifications, the 1900 census as well. The population report for 1890 focused extensively on geographic distributions by natural regions. These included not only demographic statistics by topographic divisions, but also others: drainage basins, altitude, mean annual temperature, and rainfall. All 1890 census tables contained historical information from 1870 and 1880 recomputed or rearranged to conform to topographic regions and other areas shown in maps from the *1874 Statistical Atlas*. The 1900 census publication continued these presentations.

A 1900 census report shows the 19 topographic divisions delineated for that census, and lists the number of counties and statistically equivalent entities in each division. Geographic arrangements of natural regions present a

different picture from any groupings of States because most of the topographic divisions subdivide States and comprise portions of several States. Delaware, Iowa, Nevada, and the six New England States are the only States that appear in their entirety within their division. Figure 6-5 shows the 19 topographic divisions delineated for the 1900 population census report, and lists the number of counties and statistically equivalent entities in each division.

Figure 6-5. 1900 Census Topographic Divisions Based on Physiography



**Number of Counties in Each Topographic Division**

New England Hills	91	Ozark Hills	59
Coast Lowlands	99	Coastal Plain (west of Mississippi River)	110
Coastal Plain (east of Mississippi River)	278	Great Plains	227
Piedmont Region	189	Rocky Mountains	73
Appalachian Valley	129	Columbian Mesas	37
Allegheny Plateau	181	Great Basin	45
Lake Region	223	Plateau Region	32
Interior Timbered Region	293	Pacific Valley	57
Mississippi Alluvial Region	60	Coast Ranges	31
Prairie Region	614		

Total Counties and Statistically Equivalent Entities in the Continental United States: 2,828

A 1900 Census Office bulletin stated that in order for topographic divisions to serve statistical purposes, the lines between them must coincide with the boundaries of areas for which statistics are given separately by the census. Since the smallest available entity at that time was the county, Gannett adjusted the topographic division boundaries to coincide with county lines. To this day, one of the most basic operational rules of the Census Bureau's geographic hierarchy is that geographic statistical entities for presenting census data must correspond to the geographic units for which the information otherwise is collected or tabulated. In delineating the divisions, he found that it was necessary to balance the different variables of geology, topography, altitude, rainfall, and temperature in order to create a physically homogeneous geographic entity enclosed by county boundaries.

Aside from Gannett's participation in delineating geographic divisions, both for the decennial census publications from 1880 through 1900, and for historical compilations involving the 1870 statistics by county, his observations set forth in the 1900 Census Office bulletin also include the mention of *geographic splits*; that is, the operational subdivision of existing collection units that must serve as the building blocks for some different kind of geographic entity in a data tabulation or publication. This practice continues in selected census tabulations; for instance, the Census Bureau frequently splits other standard geographic units to provide data for entities such as incorporated places (see Chapter 9, "Places").

### **Stability of State Groupings as Census Summary Units**

By the late 19th Century, the geographic designations Northeast, South, Interior, and West had come to mean much the same as they do today. This general acceptance undoubtedly favored the retention of the 1880 pattern of State groupings in the Census Bureau's statistical presentations rather than creating other combinations. Starting with the 1900 census, the statistical tables presented fewer alternative geographic groupings; instead, they made increasing use of a single, standard set of summary areas. The introductory texts in subsequent publications of the Census

Bureau tended to be shorter, with fewer presentations or explanations of other approaches.

The 1880 census grouping of States into divisions and major sections therefore became the geographic summary units recognized for all subsequent censuses from 1890 through 1990. With some minor modifications, Census Bureau publications used them throughout the first several decades of this century to present information from the censuses of population, agriculture, and industry. The same set of areas also were used during the 1930s and 1940s for the new censuses of business, construction, housing, and services.

The nine divisions as presently constituted, except for Alaska and Hawaii, first appeared in the population report of the 1910 decennial census. In addition to divisions, the report contained information for the North, South, and West sections, as well as a separate summary by States east and west of the Mississippi River. The 1910 Census of Agriculture used a similar arrangement, as did the decennial census of 1920.

The 1930 population and agriculture census publications also used nine geographic divisions; however, the population census omitted summarizing data for the three sections, as well as the designation of areas as east and west of the Mississippi River. The agriculture census reports continued to use the three major sections, North, South, and West. The 1940 population and housing census reports revived these three areas; they also continued to present statistics for the nine divisions. The 1950 census publications presented summaries for the same nine geographic divisions in use since 1910. At a higher level, some slight modifications took place—the use of the name *region* instead of *section*, and the rearrangement of the four northern divisions that composed the North Section into the Northeast and North Central Regions, each consisting of two geographic divisions. The 1960 census saw the addition of Alaska and Hawaii to the Pacific Division; the 1970 and 1980 census publications brought no further changes. Except for the 1984 renaming of the North

Central Region as Midwest, the Census Bureau continued the same system of geographic units for the 1990 census publications.

### **Publication of Census Data**

Several Census Bureau publications use the regions and divisions to summarize data tabulations from the decennial censuses. Among these, the most important reports constitute chapters of major subject-matter fields that summarize population and housing characteristics. These reports present summaries of both complete-count and sample data from the census of population and housing for the Nation as a whole, as well as data for the regions, divisions, States, urban and rural areas, the metropolitan and nonmetropolitan categories, and the other basic geographic units. In addition, various presentations from the other censuses and sample surveys use regions and divisions as part of their geographic summary units.

### **Some Alternate Approaches to State Groupings**

Although the system of regions and divisions has remained largely unchanged for many decades, the data user community periodically suggests new approaches to large-area summary geography. The Census Bureau, in turn, examines these proposals and considers them as possible improvements to the existing framework of State groupings.

One major review took place after the 1950 census, when an interagency committee within the Department of Commerce compared the existing Census Bureau regions and divisions to other schemes of regionalization and assessed the usefulness of an alternative system. Because the existing State groupings resulted largely from tradition, with few major changes from the 1880 set of summary units, it seemed worthwhile to test these combinations by using more modern statistical approaches and techniques. The following ground rules guided the study:

- Socioeconomic homogeneity is the principal criterion for grouping States into regions.
- Each combination should consist of two or more adjacent States.

- Objective statistical analysis is the primary basis for the classification.
- The number of eventual combinations should range from 6 to 12.

By using various statistical indexes, it was possible to identify almost three-quarters of the States (34 out of 48) as homogeneous cores of a region or division. The remaining 14 States proved to be somewhat marginal; the statistical evidence was less certain; they fell between two regions and, therefore, could belong to either. It is interesting that the proposed new arrangement contained the same number of groupings (four regions and nine divisions) as the existing system. It retained the same names for the four regions, but made a number of changes in grouping the States. The proposal assigned many States that were on the border of an existing region to a different region, and some to entirely new divisions. For instance, it shifted Delaware, the District of Columbia, and Maryland from the South Region to the Middle Atlantic Division of the Northeast Region; it combined Texas, Oklahoma, Arizona, and New Mexico to form a Southwest Division within an expanded West Region; it grouped Nevada with the Pacific States as part of a Far West Division; and it revamped the South into two divisions, each comprising an upper and lower tier of States. It renamed all but two divisions (New England and the Middle Atlantic). Only three of the resulting nine divisions maintained their original State components: (1) New England, (2) the Plains (formerly West North Central), and (3) the Great Lakes (formerly East North Central).

This suggested reclassification had its merits, for on a purely statistical basis it provided a more homogeneous set of areas than any others then in use by the Department of Commerce. However, the new system did not win enough overall acceptance among data users to warrant adoption as an official new set of general-purpose State groupings. The previous development of many series of statistics, arranged and issued over long periods of time on the basis of the existing State groupings, favored the retention of the summary units of the current regions and divisions (see Figure 6-1).

In the 1970s, the Federal Government developed another set of summary areas for use in statistical presentations based on groupings of States. The Office of Management and Budget (OMB) directed the use of Standard Federal Administrative Regions (SFARs) by all Federal agencies that publish regional data. The SFARs consist of ten regions that cover not only the 50 States and the District of Columbia, but also Guam, Puerto Rico, and the Virgin Islands of the United States. The resulting geographic pattern is quite different from the layout of census regions and divisions; New England is the only instance where the two sets of areas coincide.

The SFAR framework resulted from an OMB survey of State officials that sought an arrangement of States different from the traditional regions and divisions. The OMB directive prescribed that Federal agencies publishing data supplied directly by States use the SFARs for such presentations. Other arrangements were permissible, either for special analytical purposes or for maintaining the continuity of a historical data series. On this basis, the Census Bureau continued to use its system of regions and divisions in the 1980 and 1990 decennial census publications.

### **Coding Schemes for State Groupings**

Tables 6-3 and 6-4 show the numeric schemes for identifying the SFARs and the census regions and divisions. The State identification codes in the SFAR framework are from the Federal Information Processing Standards (FIPS), an official system developed by the National Institute of Standards and Technology (formerly known as the National Bureau of Standards) and maintained by the U.S. Geological Survey. The FIPS State codes are numbered in alphabetic sequence. By contrast, the Census Bureau uses a supplementary set of State codes that follow a geographic sequence within each census division; this permits processing the 50 States and the District of Columbia by geographic division. A one-digit code represents each division; the same number appears as the first digit in the Census Bureau's two-digit State code. At a separate, higher level, a one-digit code represents each of the four regions.



## **County Combinations to Supplement the State Groupings**

The Census Bureau has used a variety of statistical groupings of counties to present data in recent decades. Its most significant nationwide set of county combination schemes consisted of the State economic areas (SEAs) and economic subregions (ESRs) first defined for the 1950 census. The SEA/ESR framework provided a sub-State counterpart of regions and divisions; both groupings, the one using States and the other using counties, covered the entire United States. They both served as sets of general-purpose summary units in the Census Bureau's statistical presentations for several censuses.

The SEAs and ESRs were the product of a special study that the Census Bureau sponsored in cooperation with the Bureau of Agricultural Economics, U.S. Department of Agriculture, and several State and private agencies. The statistical criteria looked for homogeneity of socioeconomic characteristics, industry, land use, and agriculture. In terms of size, each SEA had to contain at least 100,000 people and use counties as the building blocks. Each SEA usually consisted of several counties that, with certain rare exceptions, had to be contiguous. Moreover, within a State, the geographic pattern of the SEAs was designed to facilitate further combination across State lines into ESRs. The SEAs also took into account the framework of metropolitan areas that appeared for the first time in the 1950 census publications. Where a metropolitan area extended across a State line, the segment within each State comprised a single SEA.

The SEAs and ESRs appeared in several publications of the 1950 decennial census. The Census Bureau continued to use the SEA/ESR system, with minor changes, in its publications of the 1960 and 1970 decennial censuses. The boundaries and the component units of SEAs remained largely unchanged following their initial establishment. In the 1950 census, the Census Bureau reported data for 501 SEAs; in the 1960 census, for 509; and, in the 1970 and 1980 censuses, 510. The Census Bureau discontinued the tabulation and publication of summary data by SEAs

and ESRs for the 1980 and 1990 censuses as a result of apparent user disinterest in this information.

Finally, the Census Bureau uses one other approach that combines counties. This county grouping is of the Census Bureau's public-use microdata samples (PUMS). The PUMS data product differs from the standard printed reports, computer tapes, microfiche, and the like, that present statistical summaries of all responses, either of complete-count information or of information collected from only a sample of households. By contrast, the PUMS files use a sample of raw data for areas of 100,000 or greater population; PUMS areas typically comprise large cities, groupings of counties, or remainders of counties. From these samples, the data users can select and manipulate specific responses to create customized decennial census tabulations in much the same way as if they had collected the information in their own census or sample survey. Strictly speaking, the PUMS microdata areas are not official geographic units, as the Census Bureau provides neither totals nor summary information for them. Instead, they are part of an ad hoc geographic framework established for data users who wish to analyze the diverse relationships among responses to standard questions.

## **Proposals for Changes in the Future**

As geographic combinations, the regions and divisions are familiar within the data user community. The Census Bureau intends to continue preparing data tabulations for these entities as standard parts of its tabulation and publication programs in future decennial censuses of population and housing, its quinquennial agricultural and economic censuses, its many current sample surveys, and its other compilations and compendia. As part of its continuing effort to improve the definition and delineation of geographic areas for each decennial census, the Census Bureau's Statistical Areas Committee will review the components of the regions and divisions to ensure that they continue to represent the most useful combinations of States and State equivalents.

Table 6-3. **Numeric Identification System for the SFARs**

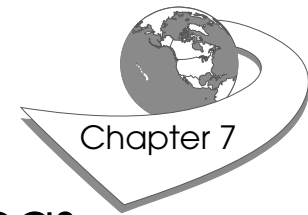
	<u>States</u>	<u>FIPS Codes</u>		<u>States</u>	<u>FIPS Codes</u>
SFAR 01	Connecticut	09	SFAR 06	Arkansas	05
	Maine	23		Louisiana	22
	Massachusetts	25		New Mexico	35
	New Hampshire	33		Oklahoma	40
	Rhode Island	44		Texas	48
	Vermont	50			
SFAR 02	New Jersey	34	SFAR 07	Iowa	19
	New York	36		Kansas	20
	Puerto Rico	72		Missouri	29
	Virgin Islands	78		Nebraska	31
SFAR 03	Delaware	10	SFAR 08	Colorado	08
	District of Columbia	11		Montana	30
	Maryland	24		North Dakota	38
	Pennsylvania	42		South Dakota	46
	Virginia	51		Utah	49
	West Virginia	54		Wyoming	56
SFAR 04	Alabama	01	SFAR 09	Arizona	04
	Florida	12		California	06
	Georgia	13		Guam	66
	Kentucky	21		Hawaii	15
	Mississippi	28	Nevada	32	
	North Carolina	37	SFAR 10	Alaska	02
	South Carolina	45		Idaho	16
	Tennessee	47		Oregon	41
		Washington		53	
SFAR 05	Illinois	17			
	Indiana	18			
	Michigan	26			
	Minnesota	27			
	Ohio	39			
	Wisconsin	55			

Table 6-4. **Census Codes for Regions and Divisions**

Region 1: Northeast	<b>Division 1: New England</b>		<b>Division 2: Middle Atlantic</b>	
	Maine	11	New York	21
	New Hampshire	12	New Jersey	22
	Vermont	13	Pennsylvania	23
	Massachusetts	14		
	Rhode Island	15		
	Connecticut	16		
Region 2: Midwest*	<b>Division 3: East North Central</b>		<b>Division 4: West North Central</b>	
	Ohio	31	Minnesota	41
	Indiana	32	Iowa	42
	Illinois	33	Missouri	43
	Michigan	34	North Dakota	44
	Wisconsin	35	South Dakota	45
			Nebraska	46
		Kansas	47	
Region 3: South	<b>Division 5: South Atlantic</b>		<b>Division 6: East South Central</b>	
	Delaware	51	Kentucky	61
	Maryland	52	Tennessee	62
	District of Columbia	53	Alabama	63
	Virginia	54	Mississippi	64
	West Virginia	55		
	North Carolina	56	<b>Division 7: West South Central</b>	
	South Carolina	57	Arkansas	71
	Georgia	58	Louisiana	72
	Florida	59	Oklahoma	73
		Texas	74	
Region 4: West	<b>Division 8: Mountain</b>		<b>Division 9: Pacific</b>	
	Montana	81	Washington	91
	Idaho	82	Oregon	92
	Wyoming	83	California	93
	Colorado	84	Alaska	94
	New Mexico	85	Hawaii	95
	Arizona	86		
	Utah	87		
Nevada	88			

\*The Midwest Region was designated as the North Central Region until June 1984.

The Census Bureau keeps abreast of new concepts and approaches, and weighs their possible use in its geographic hierarchy for data presentations. New geographic designations appear frequently, and a few find their way into public usage. Although the names *Sunbelt*, *Frostbelt*, and *Rustbelt* have found favor in some quarters, these terms often mean one particular combination of States (and sometimes, counties) to some people and a different combination of States and counties to others. Moreover, the perception of regions can shift in terms of both names and boundaries with changing circumstances; today's *Energy Belt* may be tomorrow's *Oil Bust Belt*. Such geographic combinations appear to fit, more properly, into special, one-of-a-kind statistical tabulations that some data users request from a particular census or survey. The Census Bureau sometimes uses such large-area regions to meet the particular needs of special data presentations. Examples are *travel regions*, which are groupings of States, and *oil and gas districts*, which represent combinations of selected producing counties. Also, the Census Bureau always is ready to provide special tabulations, at cost, for almost any set of geographic combinations data users may request. However, the acceptance of new general-purpose geographic regions by the Census Bureau hinges upon an overall favorable consensus of the data user community regarding a long-standing set of statistical entities.



# Puerto Rico and the Outlying Areas

## Background

Title 13 of the U.S. Code states that each of the censuses it authorizes “shall include each State, the District of Columbia, the Virgin Islands [of the United States], Guam, the Commonwealth of the Northern Mariana Islands, and the Commonwealth of Puerto Rico, and as may be determined by the Secretary [of Commerce], such other possessions and areas over which the United States exercises jurisdiction, control, or sovereignty. Inclusion of other areas ...shall be subject to the concurrence of the Secretary of State.” Accordingly, for the 1990 census, the Bureau of the Census enumerated and tabulated data for the following entities, and treated each as the statistical equivalent of a State for consistency in its data presentations and tabulations:

- American Samoa
- Guam
- The Northern Mariana Islands (legally referred to since 1986 as the Commonwealth of the Northern Mariana Islands)
- Palau (referred to since 1979 as the Republic of Palau, and also known locally as Belau)
- Puerto Rico (legally referred to since 1952 as the Commonwealth of Puerto Rico)
- The Virgin Islands of the United States (informally referred to as the Virgin Islands)

The Census Bureau refers to these entities collectively as *Puerto Rico and the Outlying Areas*. All these entities except Palau also are included in the Census of Agriculture, and all except American Samoa and Palau are included in the economic censuses. Table 7-1 shows the first year each entity participated in the decennial, agriculture, and economic censuses. In the Virgin Islands and the Pacific Outlying Areas, the Census Bureau takes the various censuses as joint projects with the local governments, which actually conduct the censuses. In Puerto Rico, the Census Bureau conducts the census.

Table 7-1. **First Census Participation for Puerto Rico and the Outlying Areas**

<b>Entity</b>	<b>Decennial</b>	<b>Agriculture</b>	<b>Economic</b>
American Samoa	1920	1920	—
Guam	1920	1920	1958
Northern Mariana Islands	1970	1970	1982
Palau	1970	—	—
Puerto Rico	1910	1910	1910
Virgin Islands of the United States	1930	1930	1958

The Census Bureau included two other entities as Outlying Areas in earlier decennial censuses:

- *The Canal Zone (or Panama Canal Zone)* was first enumerated by the United States in 1904, after it came under U.S. jurisdiction by treaty with Panama on November 18, 1903. It was included in the decennial censuses from 1920 through 1970. On October 1, 1979, the United States transferred sovereignty over the Canal Zone to Panama in accordance with the terms of a treaty signed in September 1977 and ratified the following April.
- *The Trust Territory of the Pacific Islands (TTPI)* was administered by the United States as a United Nations trusteeship beginning July 18, 1947. The TTPI included the Marshall Islands, the Caroline Islands, and the Northern Mariana Islands. The U.S. Navy conducted a population census of the TTPI in 1950; the Office of the High Commissioner of the TTPI conducted censuses in 1958 and 1973; and the Census Bureau conducted the censuses in 1970 and 1980. However, for the 1980 census, the Census Bureau reported the Northern Mariana Islands as a separate entity rather than with the other entities that composed the TTPI. On November 3, 1986, a presidential proclamation cancelled the trusteeship agreement as it applied to the Northern Mariana Islands, and that entity became a commonwealth of the United States. As a result of the proclamation, effective November 9, 1986, the Federated States of Micronesia—comprising the TTPI administrative districts of Kosrae, Ponape (now Pohnpei), Truk (now Chuuk), and Yap—and, retroactive to October 21, 1986, the Republic of the Marshall Islands, became freely associated States, independent of the United States except for U.S. responsibility for their security and defense. On December 22,

1990, the U.N. Security Council officially terminated the TTPI jurisdiction over all areas except Palau. Palau also has voted to become a freely associated State, a status which is scheduled to become effective October 1, 1994. Unless there are unforeseen objections or postponements, the TTPI jurisdiction will cease completely on that date.

Population censuses of the Philippine Islands (or The Philippines), which the United States acquired from Spain in 1898, were conducted in 1903, 1918, and 1939. However, this entity was never enumerated as part of a decennial census before obtaining its independence in 1946.

The Census Bureau also has provided population counts for certain small islands under U.S. jurisdiction, in accordance with an agreement with the Department of State. Beginning in 1980, these counts, which consist only of total population figures (no demographic characteristics), have been based on information provided by the appropriate Federal Government agency that had jurisdiction over each one, rather than by direct enumeration. These entities, technically referred to as *possessions*, are classified into two areas, the Caribbean and the Pacific. The *Caribbean area* consists of the following:

- *Corn Islands*

Counts shown in the reports for the 1950 census (covering both 1940 and 1950) and the 1960 census were from the same-year censuses of Nicaragua; counts were not reported with the 1970 census. The United States and Nicaragua terminated their 1914 lease agreement on April 15, 1971, when full control of the islands reverted to Nicaragua.

- *Navassa Island*

This island, located between Jamaica and Haiti, was mentioned, but not enumerated, in the 1950 and 1960 censuses, and was reported in subsequent censuses to be unpopulated. A U.S. possession since 1856, the island is the site of a lighthouse under the jurisdiction of the U.S. Coast Guard.



- *Quita Sueño Bank, Roncador Cay, and Serrana Bank*  
These islands were mentioned, but not enumerated, in the 1950 and 1960 censuses. A December 1973 treaty recognized Colombia's sovereignty over them.
- *The Swan Islands*  
The 1950, 1960, and 1970 censuses reported population counts for these islands. Sovereignty over the Swan Islands passed to Honduras on September 1, 1972, under the terms of a treaty signed on November 2, 1971.

The *Pacific area* consists of the following:

- *Baker, Howland, and Jarvis Islands*  
These islands have been administered by the Department of the Interior since 1936, and have served as wildlife refuges under the jurisdiction of the U.S. Fish and Wildlife Service since 1974. Population counts for these islands were reported as part of Hawaii for the 1940 census. Subsequently, they have been reported as a separate, single unpopulated entity.
- *Canton and Enderbury Islands*  
Population counts for these islands were reported as part of Hawaii for the 1940 census, and as a separate area in 1950 and 1960, when Canton Island was important as a stopover on Pacific air routes. The 1970 and 1980 censuses reported no population. The United States signed a treaty on September 20, 1979, relinquishing the islands to Kiribati, which took possession in June 1983.
- *Johnston Atoll (four small islands)*  
Referred to in some censuses as Johnston Island and Sand Island, Johnston Atoll was annexed by the United States in 1856, and is administered by the Defense Nuclear Agency under a 1973 agreement with the U.S. Air Force. It was reported as part of Hawaii for the 1940 census; its population counts—only Johnston Island is inhabited—have been reported separately starting with the 1950 census.
- *Kingman Reef*  
Kingman Reef was annexed to the United States in 1922, and has been under the jurisdiction of the U.S. Navy since 1934. It was mentioned, but

not enumerated, in the 1950 and 1960 censuses; it was not mentioned in 1970. Kingman Reef was reported as unpopulated for the 1980 and 1990 censuses.

- *The Midway Islands*

The Midway Islands, which lie amid the west end of Hawaii's northwestern islands, consist of two islets, Eastern and Sand. They became a U.S. possession in 1867, and have been administered by the U.S. Navy since 1903. The Census Bureau reported the population of the Midway Islands as part of Hawaii in each decennial census from 1910 through 1940, and as a separate entity starting with the 1950 census.

- *Palmyra Atoll*

Palmyra Atoll (or, incorrectly, Palmyra Island), consisting of more than 50 islets, became a U.S. possession in 1898 as part of Hawaii, and is privately owned. The Census Bureau reported the population of Palmyra as part of Hawaii for the 1940 census; the atoll was mentioned, but not enumerated, in the 1950 and 1960 censuses; and it has been reported separately as an unpopulated area since the 1970 census.

- *Wake Island*

Wake Island has been reported as a populated area starting with the 1950 census. It became a U.S. possession in 1898, and has been administered by the U.S. Air Force since 1962.

Figures 7-1 and 7-2 depict the locations of all the Outlying Areas for which the Census Bureau reported data at the time of the last decennial census in which each was included. Tables 7-2 and 7-3 show both population and areal data for each entity included in the 1990 census or other recent decennial censuses. Numerous other atolls and islands, primarily in the Line, Phoenix, Tokelau, and Northern Cook Islands, were mentioned, but not enumerated, in the 1950 and 1960 censuses. The U.S. Government relinquished sovereignty over these islands, claimed jointly with the United Kingdom, to the new nations of Cook Islands, Kiribati, and Tokelau in the early 1980s.

Figure 7-1. Caribbean Area

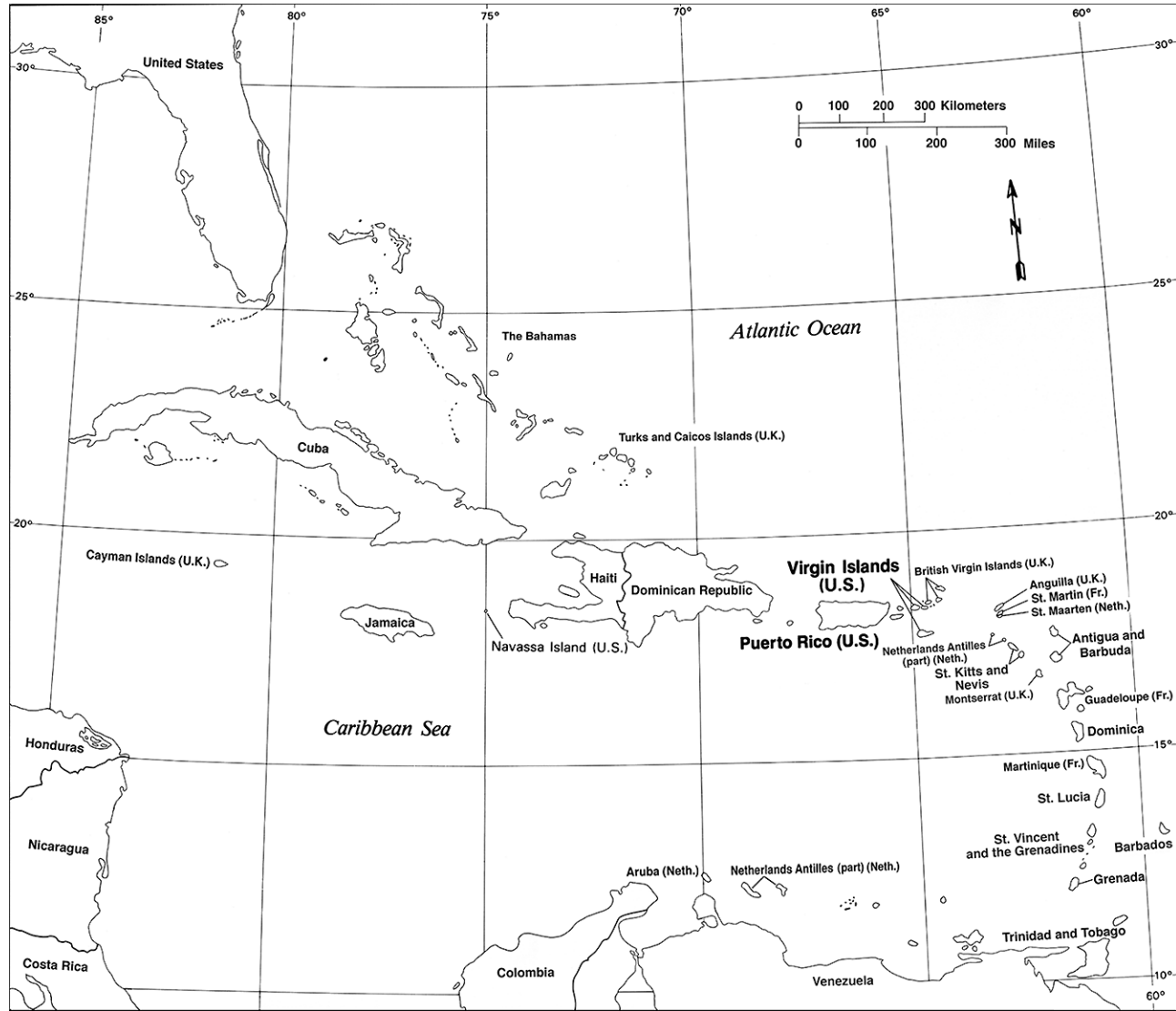


Figure 7-2. Pacific Area

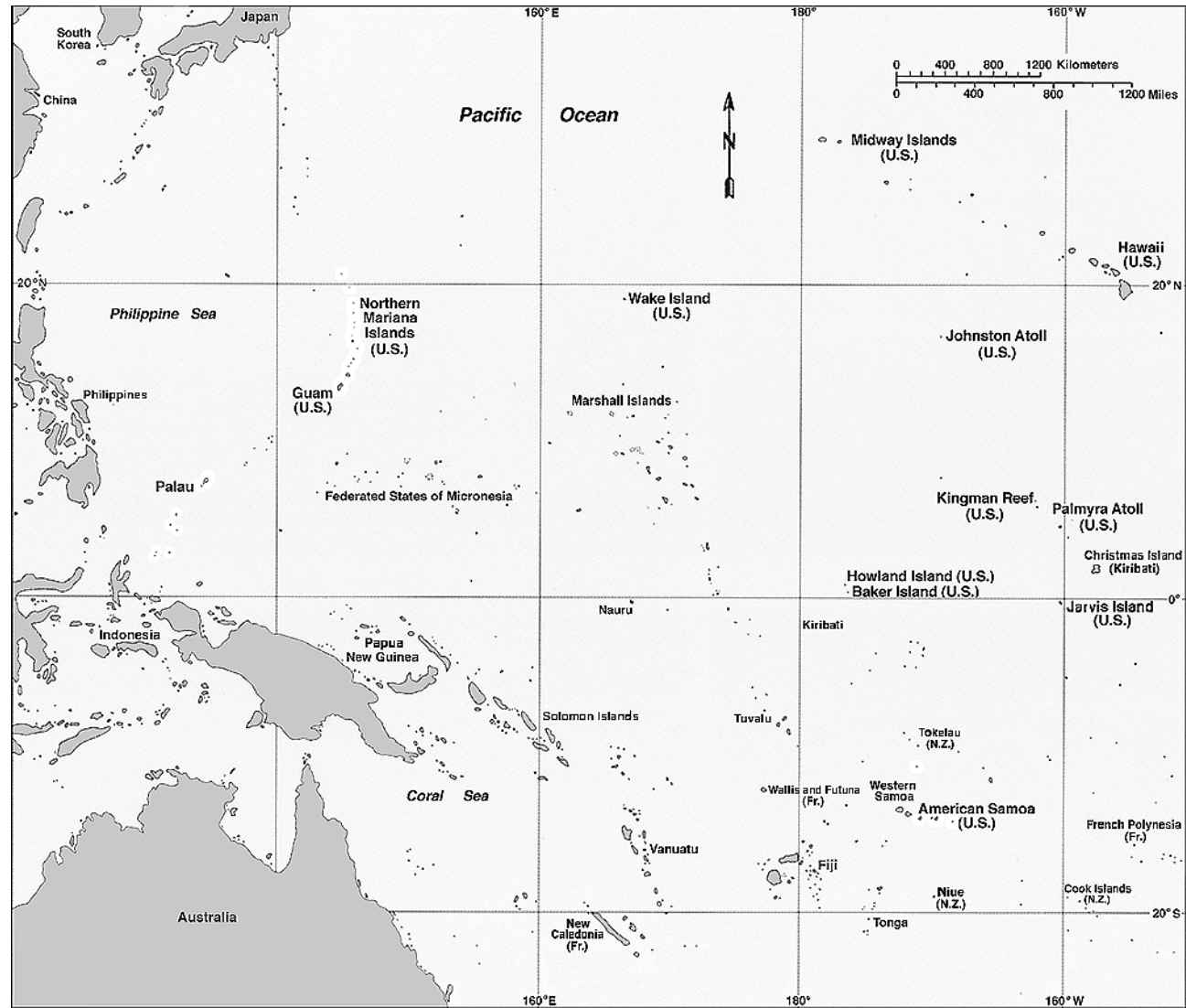


Table 7-2. **1990 Population Density of Puerto Rico and the Outlying Areas**

	<b>Population</b> <i>(total)</i>	<b>Land Area</b> <i>(square miles)</i>	<b>Population Density</b> <i>(per square mile)</i>
American Samoa	46,773	77.3	604.9
Guam	133,152	209.8	634.6
Northern Mariana Islands	43,345	179.0	242.1
Palau	15,122	177.3	85.3
Puerto Rico	3,522,037	3,426.5	1,027.9
Virgin Islands of the United States	101,809	133.8	760.9
Baker, Howland, and Jarvis Islands	0	2.9	0.0
Canal Zone <sup>1</sup>	44,198	362.0	122.1
Canton and Enderbury Islands <sup>2</sup>	0	3.9	0.0
Johnston Atoll	173	1.1	157.3
Kingman Reef	0	0.4	0.0
Midway Islands	13	2.5	5.2
Navassa Island	0	2.0	0.0
Palmyra Atoll	0	4.6	0.0
Swan Islands <sup>1</sup>	22	1.0	22.0
Trust Territory of the Pacific Islands <sup>3</sup>	116,149	533.0	217.9
Wake Island	7	2.5	2.8

<sup>1</sup> Data are from the 1970 census.

<sup>2</sup> Data are from the 1980 census.

<sup>3</sup> Data are from the 1980 census; excludes the Northern Mariana Islands, but includes Palau.

Note: Area and density figures may vary slightly from those in publications and/or on data tapes. Multiply square miles by 2.59 to convert to square kilometers.

Table 7-3. **Land and Water Area of Puerto Rico and the Outlying Areas**

	<b>Land Area</b> (square miles)	<b>Inland Water Area</b> (square miles)	<b>Total Water Area<sup>1</sup></b> (square miles)
American Samoa	77.3	7.1	505.9
Guam	209.8	6.8	360.8
Northern Mariana Islands	179.0	2.2	1,770.9
Palau	177.3	40.1	452.6
Puerto Rico	3,426.5	65.2	1,898.2
Virgin Islands of the United States	133.8	17.0	603.7
Baker, Howland, and Jarvis Islands	2.9	NA	NA
Canal Zone	362.0	191.0	NA
Canton and Enderbury Islands	3.9	18.0	NA
Johnston Atoll	1.1	NA	NA
Kingman Reef	0.4	NA	NA
Midway Islands	2.5	NA	NA
Navassa Island	2.0	NA	NA
Palmyra Atoll	4.6	NA	NA
Swan Islands	1.0	NA	NA
Trust Territory of the Pacific Islands	533.0	NA	6,001.0
Wake Island	2.5	NA	NA

<sup>1</sup>Total water area consists of inland, coastal, and territorial water.

Note: The symbol "NA" indicates that data are not available. Area and density figures may vary slightly from those in publications and/or on data tapes. Multiply square miles by 2.59 to convert to square kilometers.

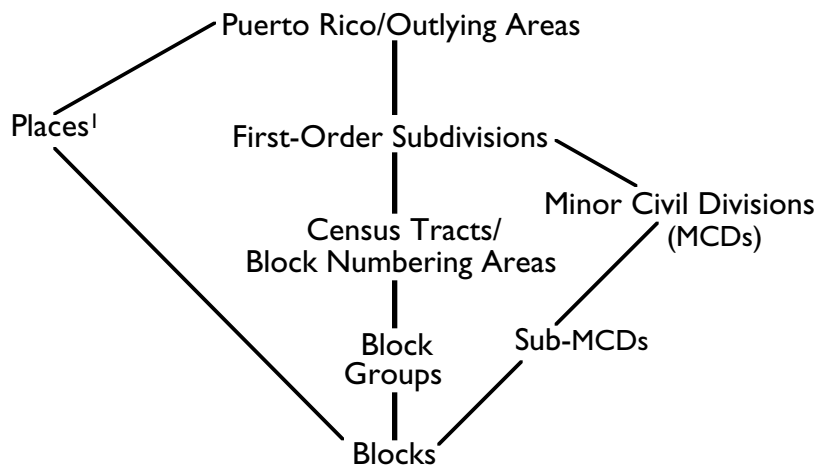
## Geographic Entities

The geographic components of Puerto Rico and the Outlying Areas vary as a result of each entity's history, governmental and administrative structure, and the pattern of human settlement. The Census Bureau presents data for the geographic components in terms of a standard framework, the same geographic hierarchy it uses for the States (see Figures 7-3 and 7-4). It also presents the data for some components in an inventory listing, such as all places within an Outlying Area or all census tracts or block numbering areas within a *county*. The high-level geography for each entity is provided in Table 7-4 and explained later in this chapter. (The hierarchy applies only to American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico,

and the Virgin Islands. The Census Bureau treats each of the other islands mentioned in this chapter as a single geographic unit.)

As noted previously, for purposes of data presentation, the Census Bureau treats Puerto Rico and each Outlying Area as the statistical equivalent of a State. Each entity is divided into first-order subdivisions, similar to counties in most States; however, they are called a variety of terms, none of which is *county*. (The legal entities called *counties* in American Samoa represent second-order subdivisions, or minor civil divisions (MCDs); see Chapter 8, “County Subdivisions.”) For the 1990 census, every first-order subdivision is divided into census tracts or block numbering areas (BNAs), which in turn consist of block groups (BGs) and blocks; in the Outlying Areas, only Puerto Rico has census tracts. For previous decennial censuses, except for portions of Puerto Rico that had census blocks identified in recent censuses, the smallest level of geography was the enumeration district (ED). See Chapters 10 and 11 for more information on census tracts/BNAs, BGs, blocks, and EDs.

Figure 7-3. **The Basic Geographic Hierarchy**



<sup>1</sup> Places include incorporated places and census designated places.

Figure 7-4. Small-Area Geography in the 1990 Census

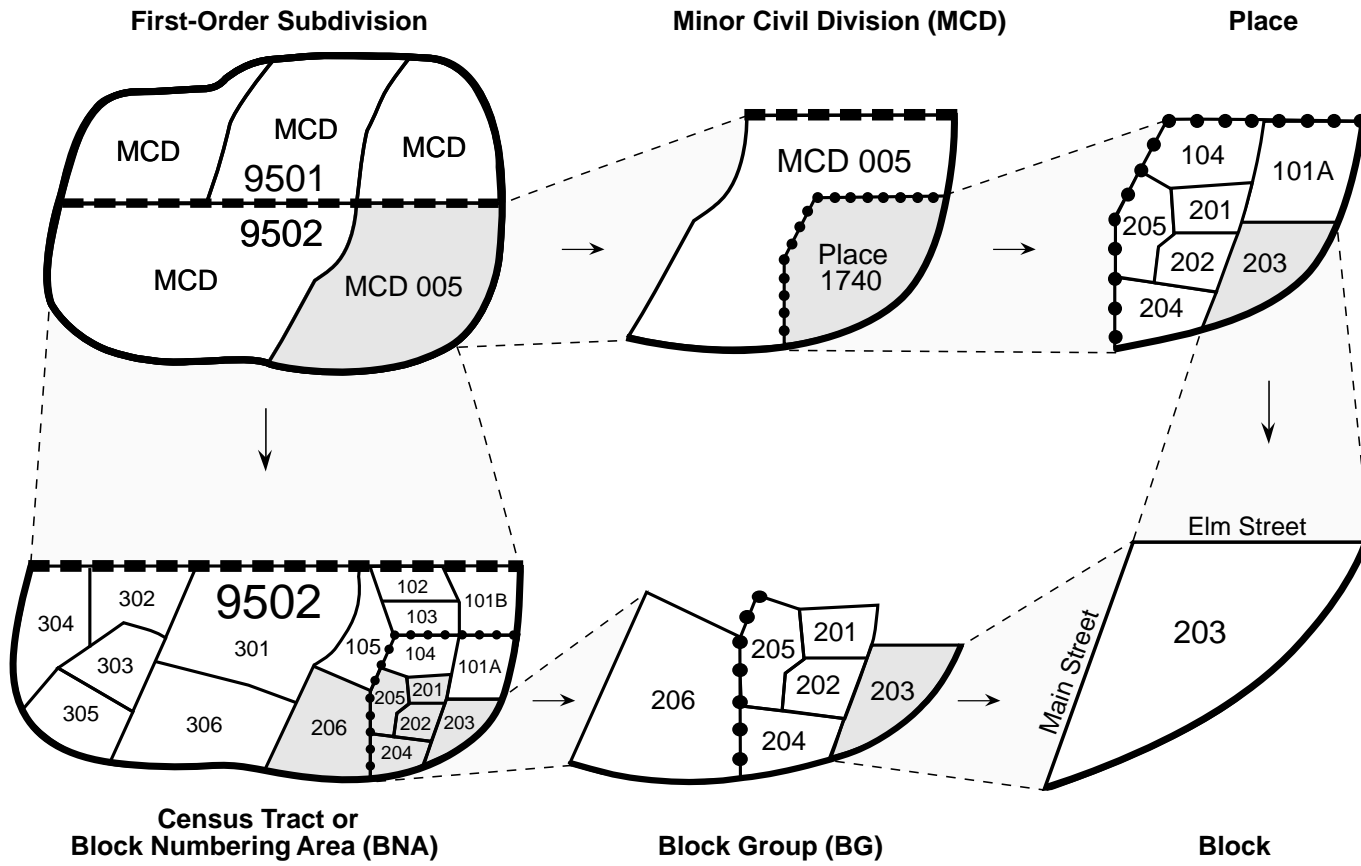




Table 7-4. **Geographic Entities of Puerto Rico and the Outlying Areas in 1990**

	<b>Entity</b>	<b>Generic Term</b>	<b>Status</b>
Puerto Rico <sup>1</sup>	Puerto Rico	State	Functioning
	Municipio	First-Order Subdivision	Functioning
	Barrio	MCD	Nonfunctioning
	Barrio-Pueblo	MCD	Nonfunctioning
	Zona Urbana	Place	Statistical
	Comunidad	Place	Statistical
American Samoa	American Samoa	State	Functioning
	District	First-Order Subdivision	Functioning
	Island	First-Order Subdivision	Nonfunctioning
	County	MCD	Functioning
	Island	MCD	False <sup>2</sup>
	Village	Place	Functioning
Guam	Guam	State	Functioning
	Guam	First-Order Subdivision	False <sup>2</sup>
	Election District	MCD	Nonfunctioning
	CDP	Place	Statistical
Northern Mariana Islands	Northern Mariana Is.	State	Functioning
	Municipality	First-Order Subdivision	Functioning
	Municipal District	MCD	Nonfunctioning
	CDP	Place	Statistical
Palau	Palau	State	Functioning
	State	First-Order Subdivision	False <sup>2</sup>
	State	MCD	False <sup>2</sup>
	Municipality	MCD	Functioning
	CDP	Place	Statistical
Virgin Islands	Virgin Islands	State	Functioning
	Island	First-Order Subdivision	Nonfunctioning
	Census Subdistrict	MCD	Statistical
	Town	Place	Nonfunctioning
	CDP	Place	Statistical

<sup>1</sup> In Puerto Rico, some MCDs (barrios and barrios-pueblo) are divided into sub-MCDs (subbarrios), which are nonfunctioning entities.

<sup>2</sup> A false entity is a geographic entity that is established to create complete coverage at a specific geographic level; for example, a place also serves as an MCD in order to provide complete coverage at the MCD level.

Census Bureau data presentations for Puerto Rico and the Outlying Areas are different from the stateside presentations for geographic entities in several ways:

- Puerto Rico and the Outlying Areas are not part of any census region or division (see Chapter 6).
- The census data (such as population and housing) for Puerto Rico and the Outlying Areas are not included with that of the United States.
- With the exception of Puerto Rico, none of the Outlying Areas have metropolitan areas (MAs) or urbanized areas (UAs). (See Chapters 12 and 13 for more information.)
- Puerto Rico has an additional, unique level of geography to represent the Commonwealth's subbarrios, which are subdivisions of the MCD—that is, the Census Bureau treats the subbarrios as sub-MCDs. Prior to the 1990 census, the TTPI and the Northern Mariana Islands also had sub-MCDs.
- The decennial census does not report ZIP Code data for Puerto Rico or the Outlying Areas.

The remainder of this chapter takes a brief look at the history and administrative structure of each of the six entities enumerated in the 1990 census, and then provides a comprehensive overview of their census geography. The entities are discussed in alphabetical order.

### **American Samoa**

American Samoa is an unorganized, unincorporated territory of the United States. It consists of five major volcanic islands and two coral atolls (see Figure 7-5) that lie in the heart of Polynesia, 2,500 miles south-southwest of Honolulu and 1,800 miles north-northeast of New Zealand. It is the only U.S. jurisdiction that lies south of the equator. Tutuila Island, which contains the historic capital of Pago Pago, the seat of government at Fagatogo, and the office of the Governor at Utulei, encompasses 70 percent of American Samoa's 77.3 square miles and over 95 percent of its 46,773 inhabitants (see Table 7-5).

In 1839, the visit of an American naval vessel marked the first official United States contact with this area. In 1872, the need for a coaling station brought about an agreement between the commander of the U.S. naval vessel *Nar-ragansett* and the chief of Pago Pago; although the agreement was never ratified by the U.S. Senate, it prevented other nations from making claims on Pago Pago Harbor as international competition for bases in the South Pacific increased.

On December 2, 1899, the United States, Great Britain, and Germany signed a convention wherein the United States retained Eastern Samoa but gave up claims to the islands that now constitute the independent nation of Western Samoa; the convention was ratified by Congress on February 16, 1900. Three days later, President William McKinley, seeking a suitable harbor and fueling station for American vessels in the South Pacific, directed the U.S. Navy to establish United States authority over the area. This was followed by negotiation of a series of deeds of cession with the chiefs of Tutuila (concluded on April 17, 1900) and the chief of the Manu'a group (in July 1904). Swains Island, a coral atoll, was settled by an American in 1856, and his citizenship tied it to the United States; the island officially became part of American Samoa in 1925.

The U.S. Navy governed American Samoa until June 29, 1951, when an Executive Order transferred the administration of the territory to the Department of the Interior. In 1960, American Samoa adopted a constitution. Since 1981, American Samoa has been represented in the U.S. House of Representatives by a nonvoting delegate. (The 103rd Congress gave the delegates from those Outlying Areas represented in the House of Representatives the right to vote in the Committee of the Whole, but not on matters before the entire House.) The Samoan language is spoken commonly in the territory.

Figure 7-5. American Samoa

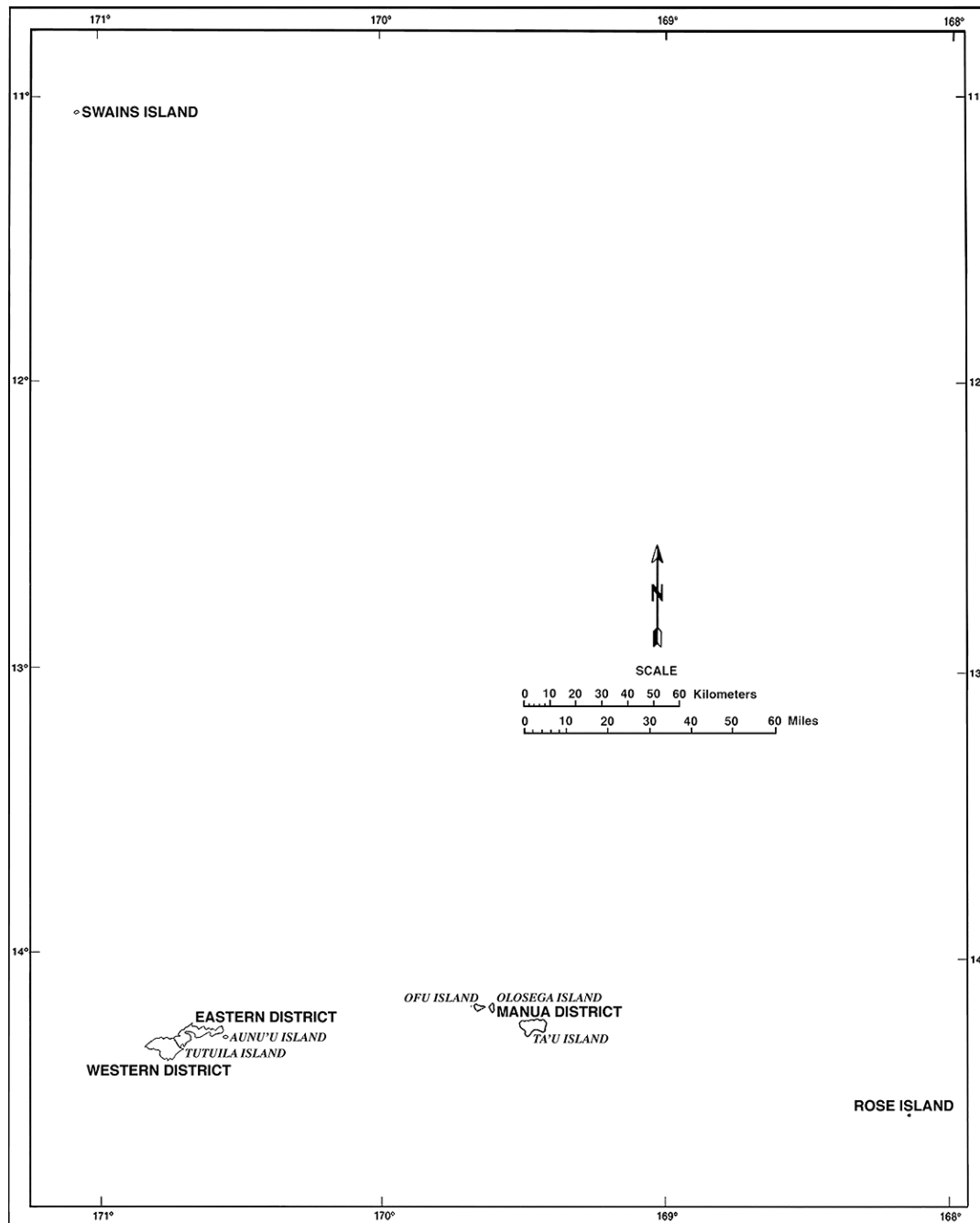


Table 7-5. **1990 Census Data for American Samoa, the Northern Mariana Islands, Palau, and the Virgin Islands**

	<b>Population</b> <i>(total)</i>	<b>Population</b> <i>(percent)</i>	<b>Land Area</b> <i>(square miles)</i>	<b>Land Area</b> <i>(percent)</i>
<b>American Samoa</b>	46,773	100.0	77.3	100.0
Tutuila Island	44,580	95.3	54.2	70.1
Eastern District	21,175	45.3	25.9	33.5
Aunu'u Island	463	1.0	0.6	0.8
Western District	23,868	51.0	28.9	37.4
Manu'a Islands	1,714	3.7	21.9	28.3
Ofu Island <i>(includes Nu'u Island)</i>	353	0.8	2.8	3.6
Olosega Island	225	0.5	2.0	2.6
Ta'u Island	1,136	2.4	17.1	22.1
Rose Island	0	0.0	0.1	0.1
Swains Island	16	< 0.05	0.6	0.8
<b>Northern Mariana Islands</b>	43,345	100.0	179.0	100.0
Northern Islands	36	0.1	59.8	33.4
Agrihan Island	9	< 0.05	18.0	10.1
Alamagan Island	5	< 0.05	4.0	2.2
Anatahan Island	22	< 0.05	12.0	6.7
Pagan Island	0	< 0.05	18.0	10.1
Rota Island	2,295	5.3	33.0	18.4
Saipan Island	38,896	89.7	44.6	24.9
Tinian Island	2,118	4.9	41.7	23.3
<b>Palau</b>	15,122	100.0	177.0	100.0
Angaur Island	206	1.4	3.2	1.8
Babelthuap <i>(Babeldaob)</i> Island	3,594	23.8	139.5	78.8
Kayangel Island	137	0.9	0.6	0.3
Koror and vicinity	10,480	69.4	4.8	2.7
Koror Island	8,372	55.4	3.6	2.0
Arakabesan Island	1,462	9.7	0.9	0.5
Malakal Island	646	4.3	0.3	0.2
Peleliu Island	601	4.0	6.8	3.8
Sonsorol Islands	61	0.4	1.2	0.7
Tobi Island/Helen Reef	22	0.1	0.3	0.2
Other islands <i>(mainly the Rock Islands)</i>	218	0.1	20.6	11.6
<b>Virgin Islands <i>(with nearby islets and cays)</i></b>	101,809	100.0	133.8	100.0
St. Croix	50,139	49.2	82.9	62.0
St. John	3,504	3.4	19.6	14.6
St. Thomas	48,166	47.3	31.2	23.3

Note: Multiply square miles by 2.59 to convert to square kilometers.

There are four levels of government in American Samoa, corresponding to the four types of legal geographic entities:

- From 1951 to 1977, the Department of the Interior appointed American Samoa's governors; beginning in 1977, Samoans have been able to elect their own governor and lieutenant governor. There also is an 18-member senate chosen by Samoan custom from the 14 counties, and a 20-member house of representatives elected by popular vote; the latter also includes a nonvoting delegate elected from Swains Island. The two legislative bodies constitute the Fono.
- There are three districts that make up the first-order subdivisions: Eastern and Western on Tutuila Island (Eastern District also includes the island of Aunu'u) and Manu'a (composed of Ofu, Olosega, and Ta'u Islands). Each has a district governor, appointed by the Governor of American Samoa, and a district council, "chosen . . . in accordance with Samoan custom" (American Samoa Code, 1981). Swains Island and Rose Island are not in any district. Swains Island is administered by the village government and a representative of the Governor. Rose Island is an unpopulated coral atoll that is a wildlife refuge under the jurisdiction of the American Samoa government, but is administered by the U.S. Fish and Wildlife Service.
- The districts are divided into 14 counties that compose the MCDs. Each county has a county chief, appointed by the Governor of American Samoa, and a county council, chosen in accordance with Samoan custom.
- All land area of American Samoa except Rose Island is assigned to a village. Each village has a village chief, or pulenuu, whom the Governor of American Samoa appoints from among the chiefs resident in each village, and a village council, which consists of all the chiefs and heads of families resident in the village. Accordingly, the Census Bureau treats the villages as if they were incorporated places. The villages are defined by land ownership, or land *usership*, rather than legally established boundaries. Land surveyed before 1900 (pre-U.S. acquisition) belongs to a specific owner; however, native custom and usage is by far the most common form of land tenure in American Samoa, affecting over 96 percent of all land. The villages are based on traditional communities, which regulate the use and

occupancy of the land by Samoan custom. Traditional boundaries are based both on the borders as they have been recognized historically, and on which village actually is using the land. Efforts to undertake a land survey to document the current situation have been unsuccessful. Thus, the boundaries of most villages do not have specific locations, are not property lines, and are not recorded in writing. Furthermore, boundaries can change as owned lands are sold or developed, and the location of a boundary can be open to interpretation; villages may appeal to the High Court of American Samoa for a final legal adjudication of the location of disputed boundaries. New villages may be established from existing ones, with boundaries based on mutual agreement. Villages may merge by deciding to share a chief and council.

The Census Bureau, for statistical purposes, recognizes only those villages with *both* a pulenuu *and* a village council in accordance with the American Samoa Code. (Some villages have a single council, but have pulenuus associated with separate areas; in those instances, the Census Bureau identified block boundaries that approximately delimited each such area so that data users could allocate 1990 census figures to each portion of the village.) Because the village boundaries are traditional and not fixed by law, the Census Bureau recognizes them on its maps as traditional boundaries rather than as legally documented corporate limits, and does not show village boundaries at all, if possible. Contrary to information that the American Samoa government provided to the Census Bureau for the 1980 census, the county boundaries—but not the district boundaries—change as village boundaries adjust to changing ownership and court decisions. Thus, for the 1990 census, the villages nested within counties except where a village crossed a district line (only Nu'uuli village does so).

As it had in the past, the Economic Development Planning Office of the American Samoa government provided the information necessary for the Census Bureau to identify and delineate the several legal entities. The Census Bureau also worked with that agency to establish BNAs and BGs that would result in 1990 census data for meaningful geographic units. The BNAs were to contain, as an optimum, 300 housing units, but could

range from 250 to 900; BGs were to contain 70 housing units as an optimum, but could range from 50 to 100. The BGs also served as the basic geographic units—called address register areas (ARAs)—used as enumerator assignments for performing the enumeration. For the 1980 census, the Census Bureau assigned one ED to each village or village part, with oversized EDs to be split in the field to facilitate the enumeration.

In both 1980 and 1990, the Census Bureau took a census of agriculture in American Samoa in conjunction with the decennial census, using the EDs/ARAs as the geographic basis for the enumerations. The census of agriculture reports data for American Samoa and the first-order subdivisions; however, Swains Island is counted with Manu'a District, and tabulations do not include Rose Island, which is unpopulated. American Samoa is not included in the economic censuses.

## **Guam**

Guam is the largest and southernmost island of a chain of volcanic islands in part of Micronesia known as the Marianas Archipelago (see Figures 7-2 and 7-6). It is an organized, unincorporated territory of the United States and is located in the western Pacific Ocean, 6,000 miles southwest of San Francisco, 3,700 miles west of Honolulu, 1,500 miles south of Tokyo, and 1,500 miles east of Manila. Inhabited for more than 3,500 years, the discovery of *Guaban* or *Guan* (as the Spanish documented the name apparently used by the indigenous population) in 1521 by Ferdinand Magellan was the basis for Guam coming under Spanish rule. Spain claimed Guam and the Marianas in 1565, established a supply station on Guam the next year, and established the first permanent Spanish settlement in 1668. As a result of the Spanish-American war, Spain ceded Guam to the United States by the Treaty of Paris on December 10, 1898.

Diseases and conflicts resulted in the near annihilation of the original Guamanians, known as Chamorros. Inter-marriage of Spaniards and Filipinos with Chamorros during the 18th and 19th centuries gave rise to the modern Guamanian race and culture, and Chamorro is still commonly spoken in Guam. Over 90 years of American influence also has had its effect on



modern-day Guam, as did the Japanese occupation during World War II. Guam became a major military site for the United States after its liberation in August 1944. In fact, since the end of World War II, approximately one-third of Guam's land area has been owned by the Federal Government, most of it in military reservations; in 1980, almost 20,000 people, or over 18 percent of Guam's population, lived on military bases—primarily Andersen Air Force Base, Finegayan Naval Communication Station, and Apra Harbor Naval Reservation—and on U.S. Navy ships for which Guam was the home port.

The U.S. Navy was responsible for the administration of Guam from 1898 until June 30, 1950, when the U.S. Government transferred that obligation to the Department of the Interior. The Organic Act of Guam (1950) enabled Guamanians to elect their own legislature, an at-large 21-member senate. The President of the United States appointed the governor of Guam until 1970; since that year, as a result of legislation signed by President Lyndon Johnson on September 11, 1968, Guamanians have elected a governor and lieutenant governor. In addition, since 1973, Guam has been represented in the U.S. Congress by an elected nonvoting delegate (see parenthetical statement on page 7-14 in the section on “American Samoa”). In recent years, Guam has been trying to obtain commonwealth status, which would give it more control of some of its affairs than the current home rule it now exercises.

The Census Bureau recognizes no first-order subdivisions of Guam, so the entire island serves as a single county equivalent for census statistical purposes. Guam is subdivided into 19 election districts, which the Census Bureau treats as MCDs. These entities do not have functioning governments; they are administrative areas for electing mayors (as explained later in this paragraph). The island also is divided into 15 municipalities, or villages. By legislation effective August 14, 1956, the 15 municipalities underwent an extensive reorganization to match the current election districts for the express purpose of facilitating the election of the mayors of the municipalities. That is, each municipality is headed by a mayor

elected by the residents of the municipality; prior to September 6, 1989, this title was *commissioner*. A mayor has the legal authority to carry out certain municipal functions, resolves community concerns and problems, and serves as a liaison with both the Territorial Government and the legislature. Since the mayor cannot pass laws or raise taxes, the municipalities do not actually have a local, self-governing capability. The mayor's office usually is located in the portion of a municipality known locally as the *village*, and therefore some mayors still may be known as *village commissioners*. The municipalities also are used for land recordation. At the request of the Guam government, the Census Bureau has recognized the current election districts as MCDs since the 1960 census; prior to that time, the decennial census recognized the following:

- 1920—towns, barrios, one city (Agana, the capital), one district, and one municipality
- 1930—eight municipalities and a naval reservation; the municipalities primarily consisted of towns, barrios, and Agana city
- 1940—15 municipalities, consisting of towns and barrios; 1 was coextensive with Agana city, which was further divided into 10 districts
- 1950—15 municipalities, which included 19 villages and 1 city

Until the 1980 census, the Census Bureau referred to the places in Guam as cities, towns, and villages even though they were not incorporated places in the stateside sense of that term. For the 1980 census, 32 unincorporated settlements were identified more accurately as census designated places (CDPs). To qualify as a CDP, an area delineated by local officials as a potential CDP had to contain at least 300 people. The same 32 CDPs appeared in the 1990 census; 6 of the CDPs represented military housing areas. To ensure that Agana would appear in the census tabulations, a special criterion permitted it to qualify as a CDP regardless of its population count; as it turned out, the special rule was not needed because instead of an anticipated decline, Agana grew from a population of 896 in 1980 to 1,139 in 1990.

Guam was block-numbered for the first time in the 1990 census. To provide data for locally useful areas, local officials delineated a BNA and BG plan

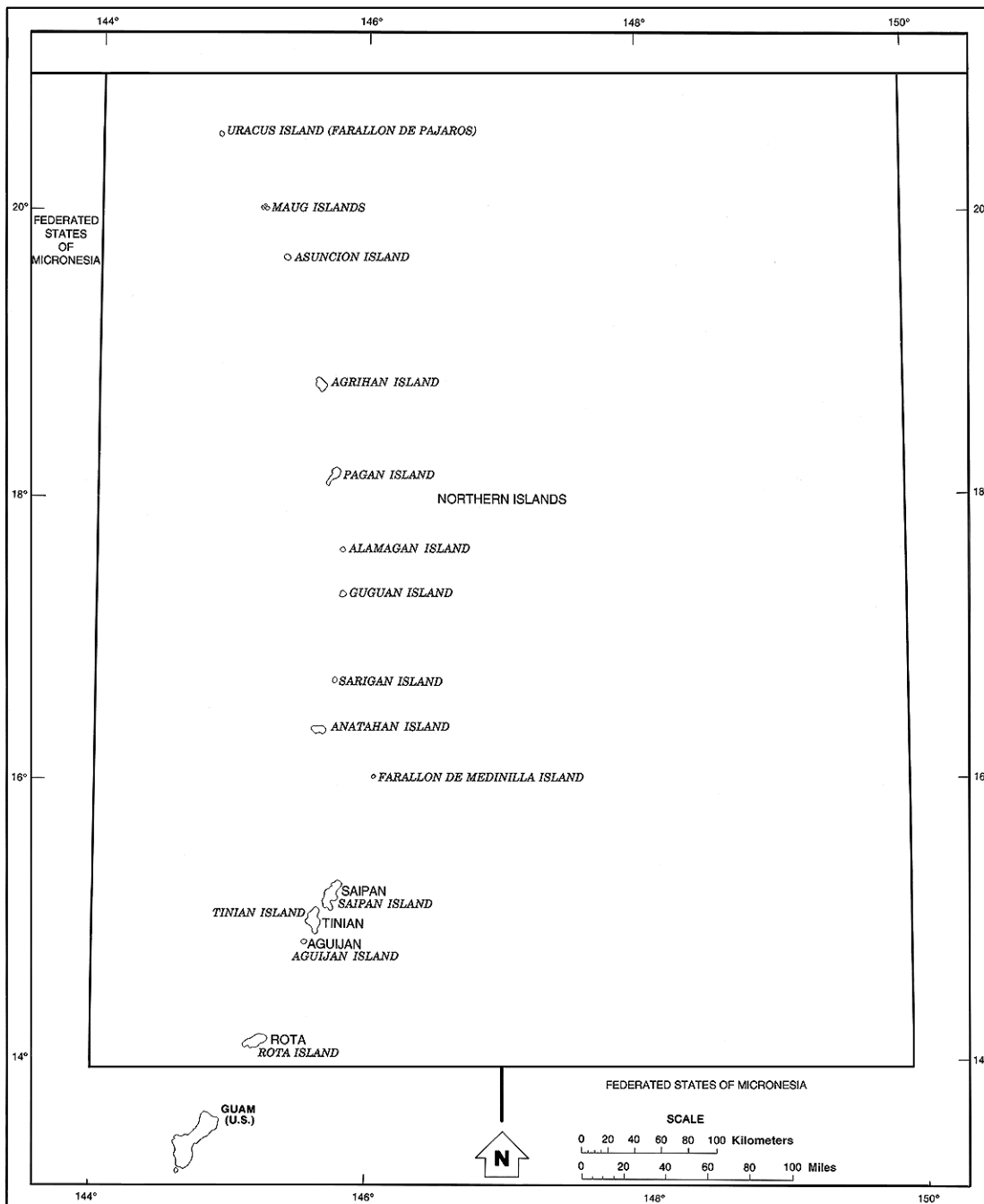
for the Census Bureau. The BNAs for Guam were to contain an optimum of 650 housing units, but could range from 500 to 1,200; BGs were to contain an optimum of 140 housing units and could range from 90 to 190. For the 1980 census, local officials designed the EDs, using an optimum of 140 and a range of approximately 100 to 160 housing units as the criteria. In both censuses, the Census Bureau worked with two Guam agencies—the Bureau of Planning and the Department of Commerce—to obtain information about both legal and statistical entities, and to conduct the decennial, economic, and agriculture censuses. In turn, these agencies worked with appropriate territorial agencies to ensure that the census geographic units would be meaningful entities for local data users.

The agriculture and economic censuses report data for Guam and each election district. However, the census of agriculture treats the districts as special geographic entities while the economic censuses treat them as the statistical equivalents of places.

### **The Northern Mariana Islands**

The Northern Mariana Islands, which is part of Micronesia, comprises the former Mariana Islands District of the Trust Territory of the Pacific Islands. It consists of three main islands—Saipan, Tinian, and Rota—and several small islands and atolls (see Figure 7-6). It is located just north of Guam; Saipan lies about 125 miles northeast of Guam, but southernmost Rota is less than 50 miles from Guam. The islands that constitute the Northern Marianas encompass some 430 miles from Rota in the south to Uracus Island in the north, but it is only 75 miles from Rota to Saipan; the lightly populated Northern Islands (an exodus, primarily due to volcanic activity, reduced the number to only 36 in 1990 and even fewer by 1992) stretch over some 300 miles of the Pacific. The Commonwealth's capital is Saipan, but no locality on that island is recognized specifically as the capital; several (but not all) government offices are located in the CDP of Capital Hill, but the legislature meets in Susupe. Almost 90 percent of the population lives on Saipan (see Table 7-5). As in Guam, Chamorro is the most common native language spoken in the Northern Mariana Islands.

Figure 7-6. Guam and the Northern Mariana Islands



The early history of these islands paralleled that of Guam. Spanish and other explorers first visited the islands in the 16th century. Spain began colonizing the islands in 1668. Originally called *Islas de Ladrones* (Islands of Thieves), the Spanish renamed them in 1688 in honor of Queen Mariana of Spain. Spain sold the Marianas, as well as the Carolines and Marshalls, to Germany in 1899 to raise money after the Spanish-American War. In 1914, during World War I, Japan claimed jurisdiction over all these islands after entering the war on the side of the Allied Powers; it retained them officially under a 1919 mandate of the League of Nations. The United States gained control of the islands through military victories in 1944, and established a military government following World War II. On July 18, 1947, under a joint resolution of the U.S. Congress, President Harry Truman approved a trusteeship agreement between the United States and the Security Council of the United Nations, with the administrative authority resting with the Department of the Interior since June 29, 1951; however, because of their strategic significance, the Northern Mariana Islands remained under military control until 1961.

During the 30 years that followed, the U.S. Government provided the basis for the entities within the Trust Territory of the Pacific Islands (TTPI) to make a steady movement toward self-government. After extensive negotiations, the United States and the Northern Mariana Islands concluded a covenant on February 15, 1975, that would result in that entity becoming a commonwealth of the United States. In 1977, the U.S. Government announced its intention to terminate the trusteeship as soon as possible. Over several years, the governmental framework of the TTPI restructured itself into four separate entities, one of which corresponded to the Northern Mariana Islands; each adopted a new constitution, held elections, established its own government, and began to function autonomously, although within the framework of the trusteeship. The establishment of a separate government for the Northern Mariana Islands took place in January 1978 with the reorganization of the Mariana Islands District of the TTPI as the Commonwealth of the Northern Mariana Islands (CNMI). Final commonwealth status did not come until November 3, 1986, when President Ronald Reagan issued a proclamation that dissolved the trusteeship agreement for all of the TTPI except Palau.

However, the Census Bureau treated the CNMI separately from the TTPI in the 1980 census tabulations because the legal structure for its commonwealth relationship with the United States was already in place. Citizens of the CNMI elect a governor and lieutenant governor, a 15-member House of Representatives, and a 9-member Senate. The CNMI does not have representation in the U.S. Congress.

Population censuses were conducted under the authority of the government of Japan (1925 through 1940), the Department of the Navy (1950), the Department of the Interior (1955), and the High Commissioner of the TTPI (1958 and 1973). The 1970 census was the first decennial census that included the CNMI; at the same time, the Census Bureau took an agriculture census of the CNMI, the results of which were published with the 1969 Census of Agriculture. In 1997, the CNMI will be included with the regular five-year agriculture census cycle, rather than having that census conducted in conjunction with the decennial census. The economic censuses included the CNMI for the first time in 1982.

For the 1990 census, the Census Bureau dropped the Mariana Islands District of the TTPI from its records; previously it had served as the county-equivalent first-order subdivision of the CNMI. Accordingly, each lower-level entity was elevated one step in the hierarchy; that is, municipalities were no longer treated as MCDs but as the statistical equivalents of counties, and municipal districts were recognized as MCDs rather than sub-MCDs (see Table 7-4). The municipalities of Rota, Saipan, and Tinian each coincided with one of the major islands, except that Tinian also included uninhabited Aguijan (or Aguiguan) Island. The municipalities are governmental units, each with its own elected mayor and municipal council, except that Saipan's municipal council also serves the Northern Islands Municipality and its mayor. The mayors and the chairpersons of the municipal councils also serve as part of an advisory council that works with the Governor on government operations and local matters.

The 11 municipal districts are subdivisions delineated by law, but they no longer serve any governmental function; until 1978, each district elected its own commissioner, similar to the commissioners (mayors) in Guam. Nevertheless, late in the 1990 census process, the CNMI government informed the Census Bureau that the districts, though obsolete, were to be retained for the 1990 census, presumably for historical comparability and because they are the basis for defining Saipan's four election districts. The Census Bureau will need to reexamine the districts for the 2000 census to determine whether they and their boundaries are still valid and/or appropriate; indeed, the CNMI government has asked the Census Bureau to provide assistance in relocating the boundaries from nonvisible lines to appropriate permanent, visible features for the 2000 census of Saipan Municipality. The obsolete districts for Rota and Tinian Municipalities may be replaced in each area by the current single election district, which is coextensive with the municipality; data for smaller geographic areas would be available by BGs and blocks, or combinations thereof.

The places in the CNMI, which the 1970 census incorrectly referred to as towns and villages, are CDPs. For the 1980 census, 11 places qualified as CDPs; that is, they had at least 300 people. There were 16 such places for the 1990 census. The CNMI was block-numbered for the first time for the 1990 census. To provide data for locally useful areas, the Census Bureau tried to delineate BGs that approximated the EDs that the TTPI had used for the 1973 census and the Census Bureau repeated, insofar as possible, for the 1980 census; the Census Bureau then worked with the CNMI's Department of Commerce and Labor—which also delineated the CDPs and undertook the 1990 census—to review and refine these areas and then group them into statistically useful BNAs.

The agriculture and economic censuses report data for the CNMI and each municipality. Prior to the 1990 census of agriculture and the 1992 economic censuses, when the municipalities were not yet treated as the statistical equivalents of counties, the municipalities were identified as special geographic entities for the agriculture census and as the statistical equivalents of places for the economic censuses.

## Palau

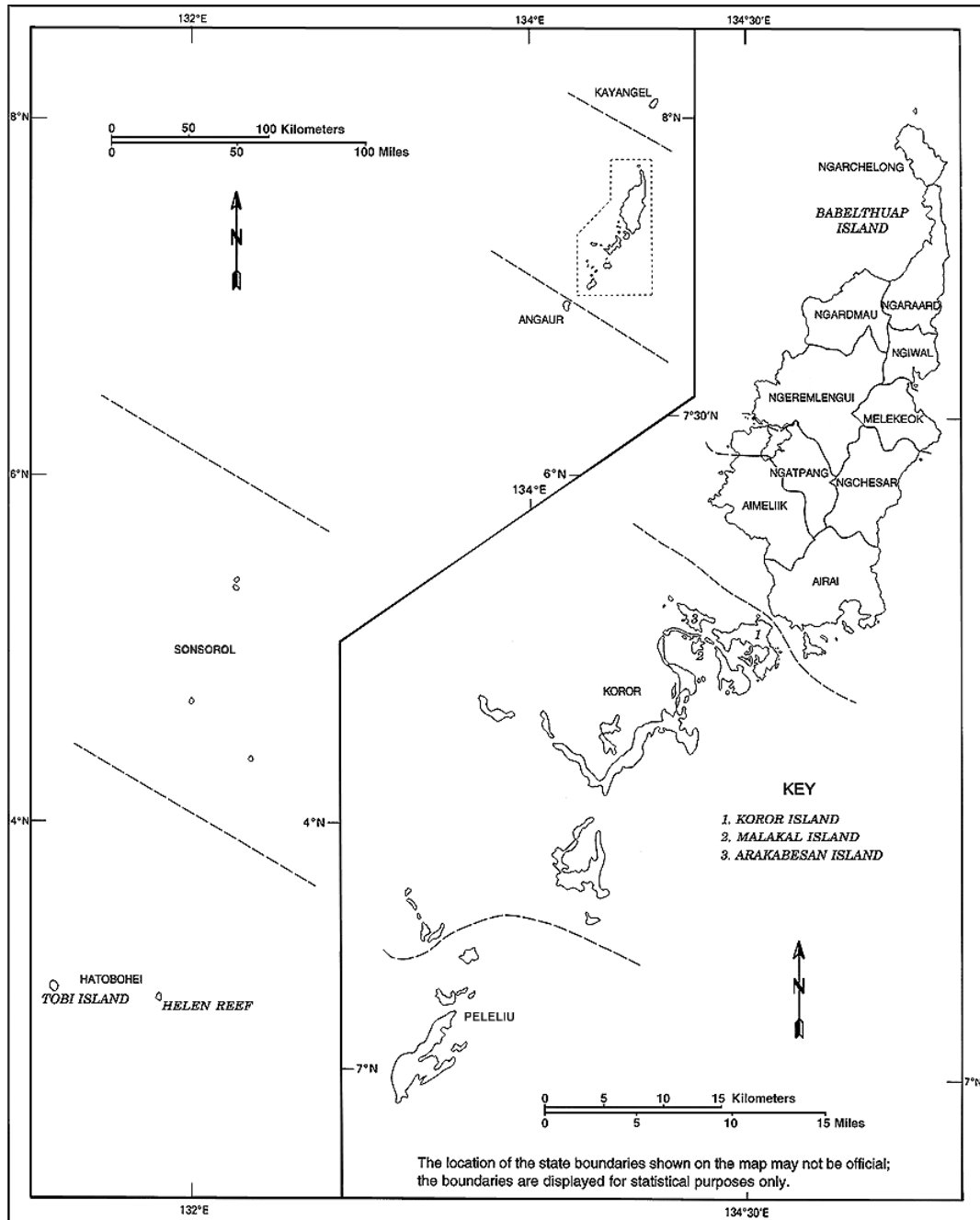
Palau is the westernmost group of the Caroline Islands. It lies some 500 miles southwest of Guam and 1,000 miles southeast of Manila. It consists of one very large island (Babelthuap, or Babeldaob), three islands that contain most of the population in and near the capital of Koror, and hundreds of other islands, islets, and atolls spread out over some 420 miles of the Pacific (see Figure 7-7 and Table 7-5). Both its early and recent history parallel that of the Northern Mariana Islands with one exception; it is the last remaining area that is still part of the TTPI. The Republic of Palau (or Belau, as it also is known) functions autonomously, but six plebiscites failed to approve the compact that would have allowed Palau to follow the rest of Micronesia into independence via free association with the United States; the last one before the decennial census, requiring 75 percent of the vote to approve the compact passed by the 99th Congress (Public Law 99-658) and amended by the 101st Congress (P.L. 101-219), received only 61 percent on February 6, 1990. Because it was still under United States jurisdiction on January 1, 1990, the Census Bureau included Palau in the 1990 census. On November 4, 1992, voters reduced the constitutional requirement for passage of a compact of free association to a simple majority, with the intention of facilitating passage at some future time, and thereby taking Palau into free association before the 2000 census. In a plebiscite on November 9, 1993, Palauans approved the compact with 68 percent of the vote. Establishment of a freely associated State is pending final Congressional approval, and independence is tentatively scheduled for October 1, 1994.

Palauans elect a president and vice president, a 16-member House of Delegates, and a 14-member Senate; the two legislative bodies constitute the Olbiil Era Kelulau. The president also is advised on traditional matters by a Council of Chiefs, one from the council of chiefs of each state. Palauan is the language commonly spoken in Palau.

Palau was included in the same population censuses as the CNMI, but it has never been included in the economic or agriculture censuses. The Census Bureau treats Palau as the statistical equivalent of a State.



Figure 7-7. Palau



For the 1990 census, the Census Bureau dropped the Palau District of the TTPI—it had served as the county-equivalent first-order subdivision of Palau—and elevated each lower-level entity one step in the hierarchy. The 16 municipalities, reported as MCDs in the 1980 census, were superseded by *States* upon ratification of Palau’s constitution on July 9, 1981; the Census Bureau treats the States as the statistical equivalents of counties. Each of the 16 States has its own constitution and officials. Maps certified by the Palau government for the Census Bureau’s use in the 1990 census relocated many of the boundaries of the former municipalities, but all the changes—some minor, some substantial—occurred in uninhabited territory. However, because some of the boundaries are in dispute, the Palau government—and, more specifically, its Division of Lands and Surveys—authorized their use for the 1990 census only; the maps will need to be reviewed and the boundaries reconfirmed if the Census Bureau includes Palau in the 2000 census. The 1980 census identified the numerous islands between Koror and Peleliu as unorganized territory; the 1990 census corrected this error by reassigning the islands to the States of Koror (primarily) and Peleliu. Only Sonsorol State is divided into MCDs, called municipalities—one for each of its four islands; for the other States, the Census Bureau represents the MCD level by a coextensive *false entity* that repeats the State name. The municipal districts, reported as sub-MCDs in the 1980 census, no longer exist.

The 1970 census reported data for only one place—Koror—which was referred to incorrectly as a town. For the 1980 and 1990 censuses, the Census Bureau recognized places as CDPs, provided that they had a census population of at least 300. Three settlements qualified as CDPs for both the 1980 and 1990 censuses. In their constitutions, five of the States identify place-type entities: municipalities in Ngarchelong; villages in Airai; and hamlets in Aimeliik, Ngchesar, and Ngiwal. These very small settlements, which sometimes adjoin one another, are based only on tradition and who lives in which house; each has its own chief, but does not have formal boundaries—nor could Palauan officials draw approximate boundaries that would permit the Census Bureau to recognize these traditional entities for the 1990 census similar to the villages of American Samoa.

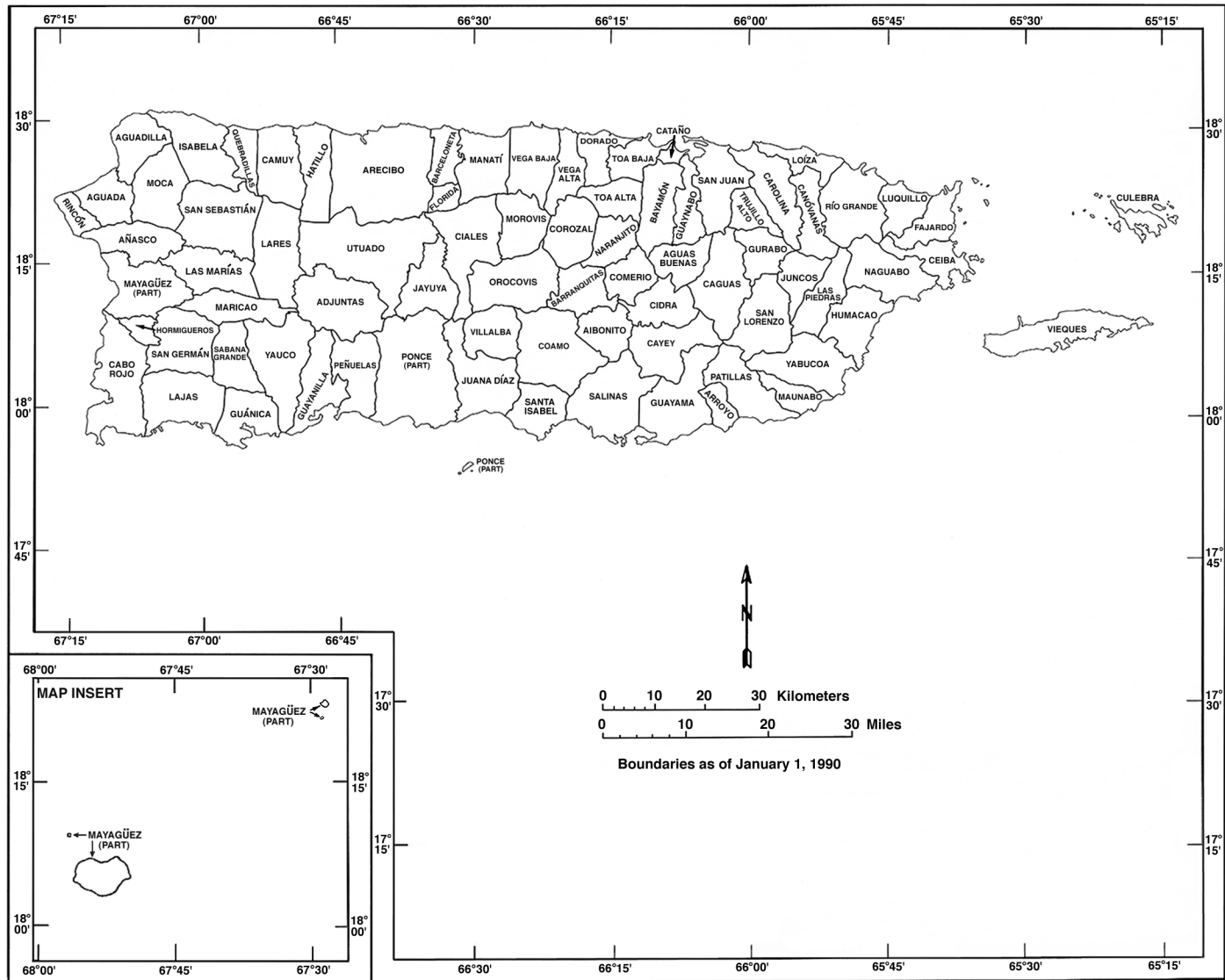
Palau was block-numbered for the first time for the 1990 census. To provide data for locally useful areas, the Census Bureau tried to delineate BGs that approximated the EDs used for the 1973 and 1980 censuses. It worked with Palau's Office of Planning and Statistics (which delineated the CDPs and conducted the census) to review and refine these areas and group them into BNAs. Taking advantage of Palau being block-numbered for the first time, the Census Bureau selected block boundaries for the 1990 census that would permit approximate separate identification of most of the small settlements, thereby enabling data users to assemble block counts for each one.

### **Puerto Rico**

The Commonwealth of Puerto Rico is the easternmost island in the arc of submerged mountains that form the Greater Antilles and that separate the Atlantic Ocean on the north from the Caribbean Sea on the south. It lies about 1,000 miles east of Miami (see Figure 7-1). Puerto Rico includes the main island, where 99.7 percent of the population (1990 census) lives on approximately 97.3 percent of the land, and numerous small islands and cays (see Figure 7-8). The main island is about 100 miles long by 35 miles wide. Most of the other islands are uninhabited except for the largest ones, Culebra and Vieques, which lie between the main island and the U.S. Virgin Islands. The capital, the municipio of San Juan, was home to 12.4 percent of Puerto Rico's inhabitants in 1990.

Puerto Rico, Spanish for *rich port*, was inhabited by Arawak Indians long before Christopher Columbus landed on the island in November 1493 during his second voyage. The Spanish established the first European settlement in 1508, near what is now San Juan. The Spanish maintained control of Puerto Rico until American troops invaded in April 1898 during the Spanish-American War. The Treaty of Paris (December 10, 1898) ceded Puerto Rico—together with Guam and the Philippines—to the United States. A military government ruled until May 1, 1900, when President McKinley appointed the colony's first civilian governor; 47 years later, President Truman signed legislation that enabled Puerto Ricans to elect their own governor. Puerto Ricans have been able to elect their

Figure 7-8. Puerto Rico



own bicameral legislature, currently consisting of a Senate and a House of Representatives, since 1900. Puerto Rico has been represented in the U.S. House of Representatives by an elected *resident commissioner* since 1917 (see parenthetical statement on page 7-14 in the “American Samoa” section). Spanish is the language commonly spoken in Puerto Rico.

In 1950, Public Law 81-600 provided for the organization of a constitutional government by the people of Puerto Rico that would become effective upon approval by the U.S. Congress. This process culminated in commonwealth status on July 25, 1952. On November 14, 1993, Puerto Ricans favored retaining commonwealth status over statehood, 48 to 46 percent; 73 percent of those eligible to vote participated. This was the best showing for statehood in the several elections held to date, and statehood supporters promise to keep raising the issue until it wins. Meanwhile, despite their poor showing in the elections, those seeking a more autonomous Puerto Rico have not given up on achieving complete independence or creating a *freely associated* entity—the relationship that the United States now has with the Federated States of Micronesia and the Marshall Islands. Regardless of local wishes, any change in the status of Puerto Rico will have to obtain the approval of the Congress and the President of the United States.

Under Spanish rule, ten censuses were taken at irregular intervals from 1765 to 1897. The U.S. War Department took a special census of Puerto Rico in 1899, and Puerto Rico has been included in every decennial, economic, and agriculture census of the United States since 1910. Beginning with the 1960 census, the various censuses of Puerto Rico have been conducted by the Census Bureau in close cooperation with the Puerto Rico Planning Board.

In addition to the Commonwealth government, each of the 78 municipios is a functioning governmental unit that has its own elected mayor and municipio assembly. The municipio governments are the only general-purpose local governments in Puerto Rico. The Census Bureau treats the municipios as the statistical equivalents of counties (see Table 7-4). The boundaries of

the municipios were defined legally by the Commonwealth during the late 1940s. Since then, the Commonwealth established two new municipios. In 1971, Florida was carved out of Barcelona and, in 1973, Canóvanas was separated from Loíza. In addition, in 1951, San Juan Municipio annexed Río Piedras Municipio. Only the Commonwealth legislature can create new municipios and alter the boundaries of existing ones. There have been unofficial discussions within the Government of Puerto Rico regarding the desirability of revising municipio and other legal boundaries to avoid the confusion related to those lines that pass through new housing developments and even individual houses, but no action has been taken to change these situations.

The municipios are subdivided into barrios, which the Census Bureau treats as MCDs. One barrio in each municipio (except Florida, Ponce, and San Juan) is identified as the barrio-pueblo, the area that represented the seat of government at the time the Commonwealth formalized the municipio and barrio boundaries in the late 1940s. Until the 1990 census, the barrio-pueblo—also referred to as the *pueblo barrio* or *barrio urbano* in some legal documents—was simply called a *pueblo*; because this word is translated as *town*, the decennial censuses also treated the pueblo as a place until the 1980 census. Some (but not all) barrios and barrios-pueblo in 23 municipios have been further subdivided into subbarrios, which the Census Bureau treats as sub-MCDs; these, too, were formalized in the 1940s. Subbarrios completely cover the area within each barrio that has subbarrios; that is, subbarrios nest within barrios. The barrios and subbarrios do not have their own governments; rather, they are areas from which members of both the Puerto Rico legislature and the municipio assemblies are elected. For this purpose, barrios and subbarrios may comprise single- or multi-member districts, or may be grouped into legislative districts. A municipio government may amend the limits of its barrios and subbarrios legally, provided that it reports the changes to the Puerto Rico Planning Board.

For many decades, the decennial censuses also recognized entities called ciudades, which contained the most urban barrios of Ponce and San Juan,

and any barrio-pueblo with a population of at least 50,000; no entity met the latter criterion. Because of the translation of this word as *city*, it, like the *pueblo*, was treated as a place for decennial censuses prior to the 1980 census. For the 1980 census, the ciudad was treated as a special *super-MCD* entity since it consisted of a number of barrios (MCDs); this type of an MCD was unique for Puerto Rico. After further review for the 1990 census, at the request of the Census Bureau, the Puerto Rico government confirmed that there appeared to be no legal basis for, or function that required, continued recognition of the ciudades for the census, and that the terminology may be obsolete. It therefore agreed that the Census Bureau did not need to recognize these entities. Accordingly, the Census Bureau did not report data for them for the 1990 census.

From the 1910 through the 1960 censuses, the Census Bureau treated the pueblos and ciudades as if they were places. As noted above, the pueblo is a special type of barrio, and the ciudad does not exist as a legal entity. At the time of the 1950 census—shortly after the Commonwealth legally documented the boundaries of the barrios and barrios-pueblo—a pueblo generally reflected the most densely settled part of many municipios, and also served as the historic, commercial, social, and religious center, and the seat of government of the municipio. Since 1950, when Puerto Rico's population was about two million, urban growth has expanded beyond—in some cases far beyond—the 1947 limits of the so-called ciudades and pueblos. The boundaries of these urban barrios, however, have not expanded to take in adjacent new urban development. For this reason, the ciudades and pueblos have been replaced in the *place* structure of Puerto Rico starting with the 1980 census.

In most municipios, it was necessary to combine the built-up area adjoining a ciudad or a pueblo to get a realistic view of the extent of the urban population. For the 1970 census, the Census Bureau tried to reflect this growth by ignoring the legal boundaries of the ciudades and pueblos, as well as those of the internal subbarrios and the adjacent barrios, and calling the entire built-up area a ciudad (if it had at least 50,000 people) or a pueblo; the Puerto Rico Planning Board delineated suitable boundaries

for this purpose. The result, of course, misrepresented the legal geography of Puerto Rico, and therefore did not provide data users with statistics that reflected the true boundaries of the legal entities. This distortion of the legal boundaries had been made for one area—Arecibo—for the 1960 census.

In order to make the decennial census data more useful for statistical analysis, there was a need for a geographic entity that would better represent the urban development centered on the seats of municipio government. To fill this need the Census Bureau asked the Puerto Rico Planning Board to delimit the urban core population of each municipio. The Planning Board suggested that the Census Bureau call these areas *zonas urbanas* (literally translated as *urban zones*). Identification of these separate place entities left the underlying MCD structure intact so that data would be available for both the legal MCDs and the statistical places.

Areally, every *zona urbana* is equal to or larger than the *barrio-pueblo* that forms its core. Because, by the Census Bureau's definition, there are no incorporated places in Puerto Rico, the *zonas urbanas*, together with the *aldeas* (discussed later), serve the statistical function of places, equivalent to CDPs in the United States. The *zona urbana* boundaries are drawn to follow visible features and/or the limits of a municipio or *barrio*. The boundaries of *zonas urbanas* may be revised for each decennial census as the built-up area changes, except that they may *not* extend beyond their municipio. There is no minimum population requirement for an area to qualify as a *zona urbana*.

The term *zona urbana* can be the basis for confusion, because the Puerto Rico Planning Act identifies a second type of *zona urbana*: a quasi-administrative area, delineated by the Planning Board, that is subject to land use controls and is eligible for designation for government grants. Furthermore, the term *zona urbana* is used in some documents to refer to the area that the Census Bureau previously had identified as the *ciudad*. In addition, the similarity of the designations *zona urbana* and *área urbanizada* (urbanized area, or UA) tends to confuse even those familiar with census geography. UAs represent a population concentration of at least 50,000 inhabitants; the



UAs for Puerto Rico use the *zona urbana* as a *central place*, and add to them the adjacent densely settled areas in the *home* municipio as well as those in adjacent municipios. Thus, although UAs must contain at least 50,000 people, there is no population requirement for *zonas urbanas*. Furthermore, the Planning Board delineated the *zonas urbanas* several years in advance of the 1990 census, based on compact settlement, while the Census Bureau delineated the UAs based on specific criteria applied to the time-of-the-census population counts and densities.

There are clusters of population in Puerto Rico that are distinct from the *zonas urbanas*. Population counts for a few villages appear in decennial census reports as early as the 1940 census. The same term was used in the 1950 census, and *village-aldea* appeared in the 1960 and 1970 censuses. For the 1980 census, the term for these CDP equivalents was shortened to only the Spanish *aldea* (literally, village); for the 1990 census, the Puerto Rico government redesignated them with the term *comunidad* (literally, community). An *aldea/comunidad* had to have a census population of at least 1,000 to be reported separately for the censuses, and its boundaries had to follow visible features and/or municipio or barrio boundaries.

Census tracts have been delineated in 56 of the 78 municipios; the other 22 municipios are divided into BNAs. The Census Bureau reported data by block for selected areas of Puerto Rico in the 1960, 1970, 1980, and 1990 censuses; for the 1990 census, data were available by block for the entire Commonwealth. For that census, the Planning Board delineated BGs that contained an optimum of 400 housing units and ranged from 250 to 550 housing units. These were divided during the 1990 census field operations to form enumerator assignments (address register areas), with 140 to 160 housing units. This paralleled the 1980 census requirement that an ED contain an optimum of 140 housing units or 550 people, a size that was designed to expedite the enumeration of the population.

In addition to the legal entities previously discussed, Puerto Rico is divided into election districts. To ensure the ability to tabulate data for these entities, the Census Bureau offered the opportunity for the Puerto Rico government

to identify appropriate features that reflected the election district boundaries; this would guarantee that the Census Bureau would use these features as the boundaries of its 1990 census blocks. Subsequently, the Puerto Rico Planning Board annotated approximate election district codes and boundaries based on the blocks depicted on the 1990 census maps. The Census Bureau offered this program even though Puerto Rico is not covered by Public Law 94-171, which requires that the Census Bureau provide the States with this opportunity. Puerto Rico chose to participate and, as a result, the Census Bureau was able to provide the Commonwealth with data tabulations for 1,606 election districts. This special program was called the Block Boundary Definition Project.

The economic censuses report data for Puerto Rico and each municipio (first-order subdivision). They use the MCDs for sample design, but not for data tabulations. The 1982 economic censuses also reported data by MA, but the 1987 and 1992 economic censuses used MAs only for the census of construction industries and the census of manufactures, while the censuses of retail trade, wholesale trade, and services provided data for nine Commonwealth-defined groupings of municipios called *commercial regions*. In addition, the census of retail trade published data for central business districts (CBDs) and major retail centers (MRCs), as delineated by the Puerto Rico Planning Board, for the 1963 through 1982 censuses. The Census of Agriculture provides data for Puerto Rico, the municipios, and five Commonwealth-defined groupings of municipios called *agriculture regions*; the latter have been recognized since the 1964 census.

### **The Virgin Islands of the United States**

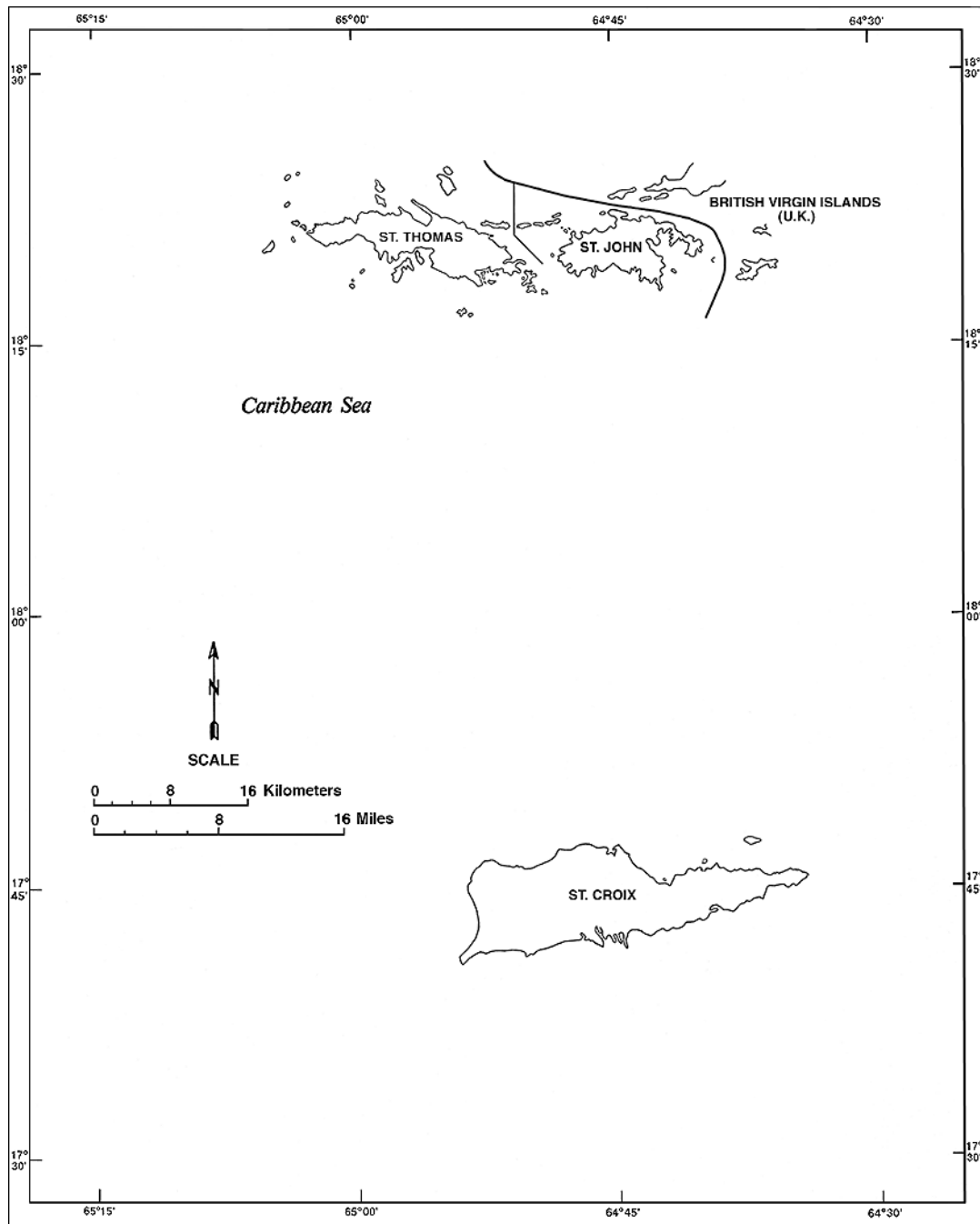
The Virgin Islands of the United States is an organized, unincorporated territory of the United States located immediately east of Puerto Rico (see Figure 7-1). Although more than 50 separate islands and cays constitute this westernmost of the Lesser Antilles, only three have a size and population of any significance: St. Thomas, St. Croix, and St. John (see Table 7-5 and Figure 7-9). Almost all the other islets are both uninhabited and uninhabitable. Most of the population is shared equally by St. Croix

and St. Thomas, although St. Croix is considerably larger in area. The capital is located in Charlotte Amalie on St. Thomas.

The European discovery of the islands occurred when Columbus first sighted Santa Cruz, now known as St. Croix. Exploring further, he found the islands of St. Thomas, St. John, Tortola (part of what is now the British Virgin Islands), and others, and named them collectively Las Virgenes (a name that means the Virgins, supposedly for the 11,000 virgins of St. Ursula). In the 17th century, the islands became part of the colonial struggle waged by France, England, Spain, Holland, and, later, Denmark, with the islands' sugar production the primary reason for controlling them. Denmark chartered the Danish West Indian Company and began colonizing St. Thomas (1671) and then St. John (1684). Denmark purchased St. Croix from France in 1733 and, except for a brief period of English occupation of St. Croix during the Napoleonic Wars, the islands remained under Danish control until 1917. As early as 1865, for strategic military reasons, the United States made overtures to acquire the islands. During World War I, fear that Germany might occupy the islands provided the final impetus for the United States to purchase the islands from Denmark, for \$25 million on March 31, 1917. The islands were under the jurisdiction of the Department of the Navy until February 27, 1931, when an Executive order placed them under the supervision of the Department of the Interior. In 1927, Virgin Islanders were granted U.S. citizenship. Since 1970, they have elected their governor, lieutenant governor, and a 15-member legislature. Since 1973, the Virgin Islands have been represented in the U.S. House of Representatives by a nonvoting delegate (see parenthetical statement on page 7-14 in the "American Samoa" section). English is the language commonly spoken. The Danish government conducted 11 censuses from 1835 through 1911. In 1917, the Census Bureau took a special census of the Virgin Islands, but the islands were not included in the decennial and agriculture censuses until 1930, or in the economic censuses until 1958.

The only functioning governmental unit in the Virgin Islands is the territorial government. On October 11, 1993, Virgin Islanders had the opportunity

Figure 7-9. The Virgin Islands of the United States



to consider changing the territory's relationship with the United States. Eighty percent voted to retain territorial status; however, the referendum was legally meaningless because more than 50 percent of the eligible voters had to participate, but only 27.4 percent did so.

The Census Bureau treats the three main islands as the statistical equivalents of counties (see Table 7-4), but they do not have their own governments. Nearby islands are included with the closest large island; for example, Water Island, offshore from Charlotte Amalie, is included with St. Thomas. For administrative purposes, some government offices separately serve St. Croix and, jointly, St. Thomas/St. John, but these are part of the territorial government. Residents of St. Croix favor some form of local government for their island, but nothing will happen without agreement from St. Thomas/St. John—which was not forthcoming in a 1990 referendum.

Until the 1980 census, the Census Bureau reported sub-island data by *quarters*, which primarily and historically serve as areas for land recordation; the quarters are further divided into *estates*, which the Census Bureau has never recognized in its data presentations. Because these old Danish units have no major legal significance—their boundaries typically are straight lines that follow no visible features and have no relationship to the rugged terrain—and because the Virgin Islands needed a modern geographic unit that was more meaningful for the tabulation of decennial census data, the Virgin Islands government created *census subdistricts*. Legally established by Act No. 4349 on October 1, 1979, the subdistricts are intended to be permanent areas that reflect the Territory's land-use planning districts. The Census Bureau first used the subdistricts as the statistical equivalents of MCDs for the 1980 census.

The Census Bureau recognizes three towns for the decennial census of the Virgin Islands—Charlotte Amalie, Christiansted, and Frederiksted. These places were held as separate MCDs and incorrectly referred to as cities prior to the 1980 census. Because these entities have legal boundaries that are defined by Chapter 5 of the Virgin Islands Code, and serve

specific administrative purposes, the Census Bureau treats them as equivalent to incorporated places; however, they do not have their own governments, and are not incorporated places in the same sense as that term applies to such entities in the United States. The Census Bureau may recognize other settlements as CDPs if they have at least 300 inhabitants; six CDPs qualified for the 1980 and 1990 censuses.

The Virgin Islands were block-numbered for the first time for the 1990 census. At the request of the Virgin Islands' government, the BGs for the 1990 census were required to have 140 to 160 housing units so that they could be designed to approximate the EDs used for the 1980 census. The Virgin Islands Planning Office delineated the BGs and then grouped them into a meaningful set of BNAs for the 1990 census; it also delineated the CDPs for the 1980 census, which were carried forward unchanged for the 1990 census. The census itself actually was conducted under the auspices of the University of the Virgin Islands.

The economic censuses report data for the Virgin Islands, each of the three major islands (first-order subdivisions), and each of the three towns (places). The census of agriculture reports data for the Virgin Islands and St. Croix Island, but combines the islands of St. John and St. Thomas into a single geographic unit for data presentation.

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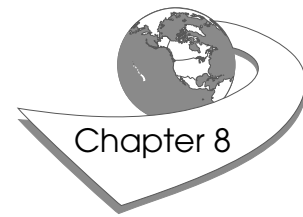
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# County Subdivisions

All counties and statistically equivalent entities consist of one or more geographic units that the Bureau of the Census recognizes as *county subdivisions*. The two major types of county subdivisions are minor civil divisions (MCDs) and census county divisions (CCDs). A State has either MCDs or their statistical equivalents, or CCDs; it cannot contain both.

Minor civil divisions are the primary subcounty governmental or administrative units; they have legal boundaries and names as well as governmental functions or administrative purposes specified by State law. The most familiar types of MCDs are towns and townships, but there are many others (see Table 8-1). In some situations, the Census Bureau must complete the coverage of subcounty units by creating additional entities called *unorganized territories (UTs)* that it treats as being statistically equivalent to MCDs. The Census Bureau has established UTs in certain MCD States to account for the part or parts of a county that are not within any MCD or MCD equivalent. As of 1994, unorganized territories exist in nine States: Arkansas, Iowa, Indiana, Louisiana, Maine, Minnesota, North Carolina, North Dakota, and South Dakota.<sup>1</sup> The Census Bureau recognizes MCDs and MCD equivalents as the county subdivisions of 28 States and the District of Columbia (see Figure 8-1).

Census county divisions are the statistical entities established cooperatively by the Census Bureau and officials of State and local governments in the 21 States where MCDs either do not exist or are unsatisfactory for the collection, presentation, and analysis of census statistics. They are designed to represent community areas focused on trading centers or, in some instances, major land use areas. They have visible, permanent, and easily described boundaries.

In the State of Alaska, which has no counties and no MCDs, the Census Bureau and State officials have established census subareas (CSAs) as the statistical equivalents of MCDs. These are subdivisions of the boroughs



(legal entities) and census areas (statistical entities), both of which serve as the geographic equivalents of counties in Alaska. Although CSAs are similar to CCDs, there are enough differences to warrant treating them as a separate type of county subdivision.

The decennial censuses of population and housing identify and present data for all types of county subdivisions in every State (see Table 8-2). Certain types of MCDs figure in the population estimates programs, the Census of Governments, and, on a selective basis, the economic censuses. This chapter discusses the county subdivisions of the United States; for information on similar geographic entities in Puerto Rico and the Outlying Areas, see Chapter 7.

## Background

The decennial population censuses always have sought to identify county subdivisions as a primary geographic entity. The first census (1790) reported population counts for MCDs (towns, townships, and other units of local government), and this practice continued throughout subsequent censuses. For States in which local governmental units did not exist below the county level, various administrative units or other area designations were used, such as companies, districts, hundreds, *remainder of county*, and *eastern (or western) portion of county*. Although this chapter does not trace the history of such alternate and short-lived entities in detail, the final section of this chapter provides some background information about the different kinds of MCDs used for the 1990 decennial census.

Starting with the 1950 census, there have been four significant developments in the Census Bureau's treatment of county subdivisions: (1) the replacement of MCDs with CCDs in 21 States, (2) the establishment of the UT as a standard geographic entity in 9 States, (3) the subdivision of Alaska into CSAs, and (4) the establishment of the Boundary and Annexation Survey (BAS) program.

Table 8-1. **Type and Number of County Subdivisions in 1990**

Townships	18,154
Census County Divisions <sup>1</sup>	5,581
Incorporated Places <sup>2</sup>	4,533
Towns	3,608
Election Precincts	948
Magisterial Districts	735
Parish Governing Authority Districts	627
Supervisors' Districts	410
Unorganized Territories <sup>1</sup>	282
Election Districts	276
Census Subareas <sup>1</sup>	40
Plantations	36
Assessment Districts	21
American Indian Reservations <sup>3</sup>	7
Grants	9
Purchases	6
Boroughs	5
Gores	4
Locations	4
Pseudo County Subdivision <sup>1</sup>	1
Road District	1
<b>Total County Subdivisions:</b>	<b>35,298</b>

<sup>1</sup> Entities established for statistical reporting purposes only.

<sup>2</sup> This total includes only those incorporated places that are governmentally independent entities. For details, refer to the subsections "Treatment of MCDs and Places in the Data Tables," "Criteria for MCD Equivalents," "Places," and to Tables 8-2, 8-3, and 8-4.

<sup>3</sup> Only in a few instances are American Indian reservations coextensive with an MCD (see Table 8-2).

Figure 8-1. MCD States and CCD States in 1990

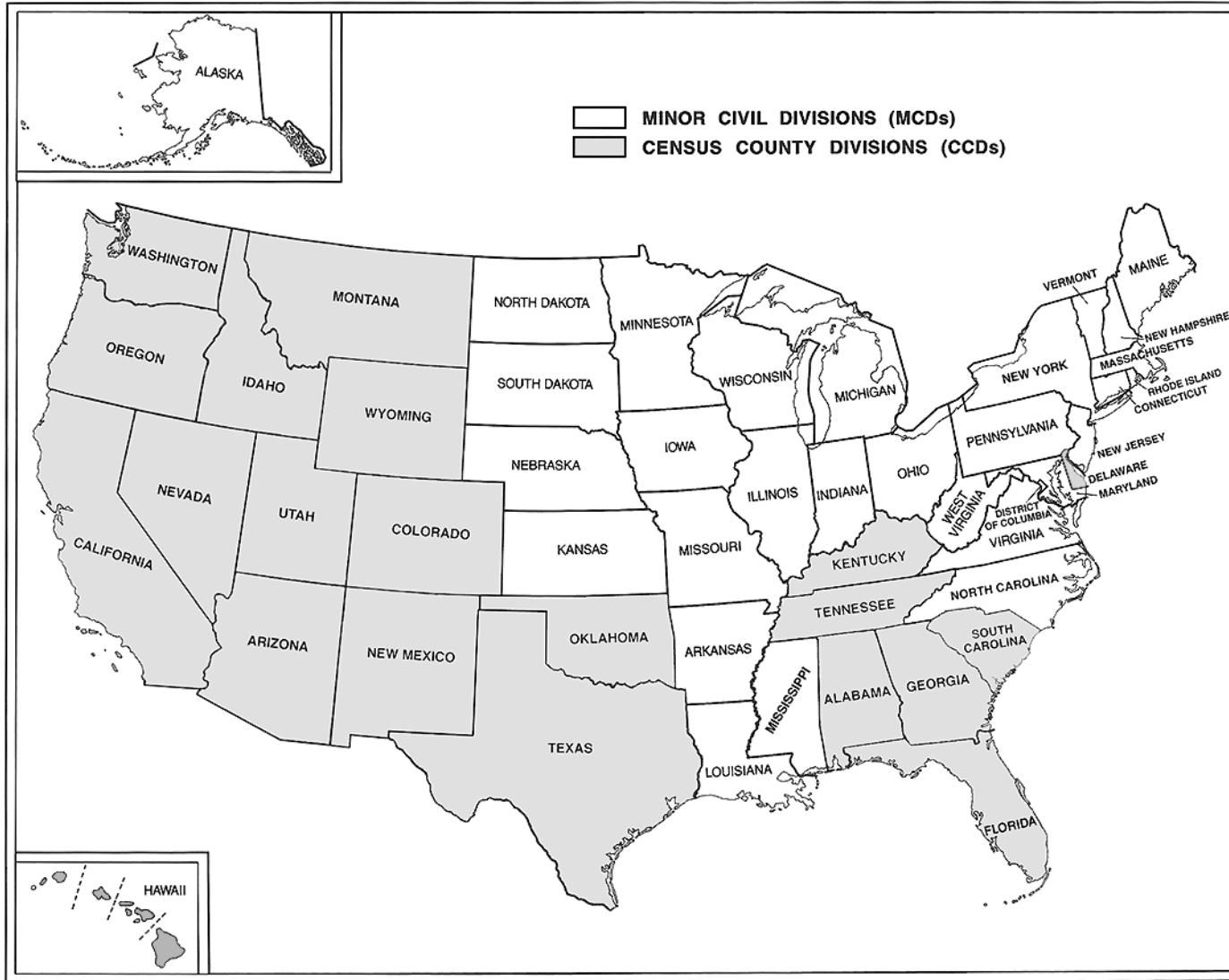


Table 8-2. **Type and Number of County Subdivisions by State in 1990**

Alabama	Census County Division	390
Alaska	Census Subarea	40
Arizona	Census County Division	78
Arkansas	Township	1333
	Unorganized Territory	2
California	Census County Division	386
Colorado	Census County Division	208
Connecticut	Town	169
Delaware	Census County Division	27
District of Columbia	Incorporated Place ( <i>city</i> )	1
Florida	Census County Division	293
Georgia	Census County Division	581
Hawaii	Census County Division	44
Idaho	Census County Division	170
Illinois	Township	1434
	Election Precinct	243
	Incorporated Place ( <i>city</i> )	2
Indiana	Township	1008
Iowa	Township	1602
	Incorporated Place ( <i>city</i> )	53
	Unorganized Territory	1
Kansas	Township	1414
	Incorporated Place ( <i>city</i> )	129
	Unorganized Territory	2
Kentucky	Census County Division	475
Louisiana	Parish Governing Authority District	627
	Incorporated Place ( <i>city</i> )	1
	Unorganized Territory	1
Maine	Town	433
	Plantation	36
	Unorganized Territory	35
	Incorporated Place ( <i>city</i> )	22
	American Indian Reservation	3
	Gore	1

Table 8-2. (cont.)

Maryland	Election District	276
	Assessment District	21
	Incorporated Place ( <i>city</i> )	1
Massachusetts	Town	312
	Incorporated Place ( <i>city</i> )	39
Michigan	Township	1242
	Incorporated Place ( <i>city</i> )	283
Minnesota	Township	1803
	Incorporated Place ( <i>city</i> )	880
	Unorganized Territory	59
Mississippi	Supervisors' District	410
Missouri	Township	1367
	Incorporated Place ( <i>city</i> )	1
Montana	Census County Division	193
Nebraska	Election Precinct	705
	Township	469
	Incorporated Place ( <i>city</i> )	81
Nevada	Census County Division	67
New Hampshire	Town	222
	Incorporated Place ( <i>city</i> )	13
	Grant	8
	Purchase	6
	Township	6
	Location	4
New Jersey	Incorporated Place ( <i>total</i> )	320
	Borough	250
	City	52
	Town	15
	Village	3
	Township	247
New Mexico	Census County Division	131
New York	Town	932
	Incorporated Place ( <i>city</i> )	62
	American Indian Reservation	14
	Borough	5
North Carolina	Township	1037
	Unorganized Territory	3
North Dakota	Township	1352
	Incorporated Place ( <i>city</i> )	373
	Unorganized Territory	81

Table 8-2. (cont.)

Ohio	Township	1318
	Incorporated Place ( <i>total</i> )	235
	City	171
	Village	64
Oklahoma	Census County Division	302
Oregon	Census County Division	211
Pennsylvania	Township	1549
	Incorporated Place ( <i>total</i> )	1034
	Borough	977
	City	56
	Town	1
	Road District	1
Rhode Island	Town	31
	Incorporated Place ( <i>city</i> )	8
South Carolina	Census County Division	294
South Dakota	Township	973
	Incorporated Place ( <i>total</i> )	318
	City	162
	Town	155
	Village	1
	Unorganized Territory	98
Tennessee	Census County Division	462
Texas	Census County Division	863
Utah	Census County Division	90
Vermont	Town	242
	Incorporated Place ( <i>city</i> )	9
	Gore	3
	Grant	1
Virginia	Magisterial District	458
	Incorporated Place ( <i>city</i> )	41
	Pseudo County Subdivision	1
Washington	Census County Division	245
West Virginia	Magisterial District	277
Wisconsin	Town	1267
	Incorporated Place ( <i>total</i> )	627
	Village	417
	City	210
Wyoming	Census County Division	71

### **The Shift from MCDs to CCDs**

Many States in the southern and western parts of the United States had few or no subcounty governmental units that could serve as an adequate geographic framework for census purposes. The MCDs in those States frequently proved difficult to enumerate because their boundaries and names were not well known locally or were subject to frequent change. Also, these MCDs presented problems in the data tabulations because they often divided incorporated places into many component parts. This cluttered the census tables with superfluous lines of data, many with very small populations that were not meaningful to data users or that yielded statistically unreliable data from the questions asked of only a sample of households. In addition, most data users found these MCDs unsatisfactory for purposes of statistical analysis because of frequent name changes and boundary shifts that resulted in a lack of geographic comparability. These changes made it difficult—or impossible—to use these MCDs as a stable spatial unit for historical comparisons.

In order to provide a more useful set of geographic entities for data tabulation and analysis, the Census Bureau worked with State and local officials to establish a statistically equivalent subcounty unit that it called the census county division (CCD). The State of Washington was the first to implement CCDs and did so in time for the 1950 census publications. During the 1950s and 1960s, State officials and the Census Bureau replaced MCDs with CCDs in 19 more States. A twenty-first State, North Dakota, adopted CCDs for the 1970 census; shortly thereafter, it opted to return to MCDs—a decision based on the financial advantages of having MCDs that qualified for Federal Revenue Sharing funds rather than any disenchantment with the advantages of CCDs for statistical purposes. For the 1990 census, CCDs were established in the State of Nevada, making a current total of 21 States with CCDs. The adoption of CCDs has constituted a major change in the subcounty geography for a substantial part of the Nation. For detailed information on the origin and development of CCDs, the reader should consult *Census County Divisions, Past and Future*.<sup>2</sup>

### **Unorganized Territories as Standard Geographic Entities**

Some counties in certain MCD States contain territory, usually somewhat remote and sparsely populated, that is not part of any MCD. For States in which the township and range system of land survey existed, these areas usually were included in some governmentally nonfunctioning survey township. In other States, these expanses of territory often were unnamed, and identified in the census data tables as *unorganized area*, *unsurveyed area*, or *balance of county*.

These geographic areas posed problems in both the collection and the presentation of decennial census data. Enumerators had a hard time locating the boundaries of survey townships; moreover, the survey townships often were very numerous and usually too small in population to provide statistically reliable data from the questions asked on a sample basis. Names such as *Township 69 and Range 21*, or *Fractional Township 70 and Range 18* cluttered the statistical tables and associated maps, and proved confusing to data users. In other situations, the unorganized area consisted of several discontinuous pieces of unnamed territory which posed problems in the decennial census data presentations. In 1970, the Census Bureau simplified its coverage of these areas by establishing a standard geographic entity, the UT, for data presentation purposes. By establishing UTs, the Census Bureau was able to simplify the nomenclature and improve the geographic pattern by using a smaller, more manageable number of subcounty entities.

### **The Census Subareas of Alaska**

In its statistical presentations, the Census Bureau has used a variety of administrative and governmental units to subdivide Alaska. The present set of primary and secondary geographic subdivisions dates from the 1970 census when the Census Bureau and State officials cooperatively established *census divisions* and *census subdivisions* as the county and subcounty equivalent geographic entities. In those parts of Alaska covered by boroughs (large-area governmental units with functions and powers similar to counties in the coterminous 48 States), the census divisions usually were the same as the boroughs, although in a few instances they included adjacent military



reservations. In the remainder of the State, the *unorganized borough* (the legal term for the area outside of any borough), the Census Bureau and State officials delineated census subdivisions to generally follow the boundaries of the State's election districts. The census subdivision level served to identify boroughs and military reservations within census divisions. One of the census divisions derived from the unorganized borough was divided into two portions, each a census subdivision.

The Census Bureau and State officials adjusted the census division and census subdivision boundaries for the 1980 census. The borough-based census divisions were then referred to as *boroughs*, the remaining census divisions were renamed *census areas*, and all the census subdivisions were renamed *census subareas*. Many of the former census divisions were split or merged to conform to the boundaries of the recently established Alaska Native Regional Corporations (ANRCs).<sup>3</sup> In some cases the boroughs and census areas were subdivided into census subareas by using the boundaries of the ANRCs, significant military reservations, and the 1970 census divisions. Most of the 1980 CSAs remained unchanged for 1990, except for those in parts of the State in which new boroughs and new census areas had been established.

### **The Boundary and Annexation Survey**

In 1972, the Census Bureau initiated the Boundary and Annexation Survey (BAS) program. The BAS, repeated periodically, collects information about the legal characteristics, territories annexed or detached, and boundaries of all counties, MCDs, and incorporated places. The BAS program supplanted the previous practice of obtaining local maps showing the legal boundaries, either at the time of the actual enumeration, or shortly before the decennial census date. The BAS, a more systematic, continuing effort, has brought major improvements in the accuracy and timeliness of the Census Bureau's inventory of geographic entities. It is now the standard source for ascertaining the existence and legal status of governmental units such as counties, incorporated places, and MCDs; it also identifies any changes in their names or boundaries. By means of the BAS, the Census Bureau can detect important developments, such as MCD boundary changes, the formation of new

MCDs, the merger or consolidation of MCDs, and the disorganization (dissolution) of MCDs. For further information on the BAS, refer to Chapter 9, “Places.”

## **Establishing and Maintaining County Subdivisions**

The Census Bureau attempts to maintain a set of county subdivisions that are, geographically speaking, relatively stable from one decennial census to another. In the 28 MCD States, the Census Bureau always revises the county subdivisions to reflect boundary or status changes resulting from legal or administrative actions. At the time of each BAS, the Census Bureau considers local recommendations about the boundaries and areas of any UTs that might be required to complete the MCD coverage of a State.

The establishment of CCDs in a State is a cooperative effort between the Census Bureau and State authorities. The first step usually is an expression of interest on the part of State officials and local data users, followed by consultations to determine if there are legal or constitutional requirements for maintaining the existing MCDs. The Census Bureau does not compel a State to replace its MCDs with CCDs; the decision always rests with the appropriate State officials and ultimately with the State governor.

### **Criteria for Minor Civil Divisions**

In the 28 MCD States, the Census Bureau uses the existing legal entities as the standard county subdivision framework. To do this, it selects the type of subcounty unit—or in a few instances, more than one type—that (1) is a legally defined entity, (2) provides complete or nearly complete geographic coverage, and (3) has geographic stability.

**Local governmental and administrative units** Many MCDs function as general-purpose local governments; that is, they provide a wide range of public services to the inhabitants of a specific subcounty area. Almost all of these local governments are active and functioning; however, others may have an inactive status as governmental units, yet still constitute legal entities. In States that have no local governmental units below the county

level, or where incorporated places are the only form of local government, the Census Bureau uses the most important and best known type of administrative subdivision; for example, election precincts or magisterial districts. Table 8-3 provides further detail about the governmental status of county subdivisions in the 28 MCD States.

Table 8-3. **Governmental Status of Minor Civil Divisions in 1990**

Arkansas	The townships are nonfunctioning geographic subdivisions of counties and are not governments.
Connecticut	Of the 169 towns, 149 are actively functioning governmental units. The remaining 20 towns are areally coextensive with a single incorporated place; 19 towns are coextensive with a city and one town is coextensive with a borough. In each of these 20 instances, the town and city governments are consolidated, and the Census Bureau classifies the incorporated place government as the active government.
Illinois	Of the 1,434 townships, all but one are actively functioning governmental units. The exception is Cicero township coextensive with the city of Cicero, which performs the functions of the township as well. The election precincts are nonfunctioning geographic subdivisions of the county used in conducting elections and are not governments.
Indiana	All townships are actively functioning governmental units.
Iowa	Through an agreement between the State of Iowa and the Census Bureau, all townships are classified as nonfunctioning geographic subdivisions of the county and are not governments. Iowa townships can, and some do, perform a limited governmental function, but the township officials for the most part are administrative adjuncts of the county government.
Kansas	Of the 1,602 townships, 1,543 are actively functioning governmental units. The remaining 59 townships are inactive, but have the ability to activate and perform governmental functions.
Louisiana	The parish governing authority districts in Louisiana are nonfunctioning geographic subdivisions of the county used in conducting elections and are not governments.
Maine	All 433 towns and 36 plantations are actively functioning governmental units. The single gore is a nonfunctioning geographic subdivision of the county and not a government. The three American Indian reservations are functioning tribal governments; the MCD reservations are not counted as governments.

Table 8-3. (cont.)

Maryland	The election and assessment districts are nonfunctioning geographic subdivisions of the county used in conducting elections and levying taxes, respectively, and are not governments.
Massachusetts	All towns are actively functioning governmental units.
Michigan	All townships are actively functioning governmental units.
Minnesota	All townships are actively functioning governmental units.
Mississippi	The supervisors' districts are nonfunctioning geographic subdivisions of the county that are districts from which voters elect county supervisors and are not governments.
Missouri	There are 23 counties containing 324 actively functioning townships. In the remaining 91 counties, there are 1,043 townships which are nonfunctioning geographic subdivisions of counties and are not governments.
Nebraska	Of the 469 townships, 453 are actively functioning governmental units. The remaining 16 townships are inactive, but have the ability to activate and perform governmental functions. The election precincts are nonfunctioning geographic subdivisions of the county used in conducting elections and are not governments.
New Hampshire	Of the 222 towns, all but one are actively functioning governmental units. The remaining town, Livermore in Grafton County, is inactive, but it has the ability to activate and perform governmental functions. The grants, locations, and purchases are nonfunctioning geographic subdivisions of the county and are not governments.
New Jersey	All townships are actively functioning governmental units.
New York	Of the 932 towns, all but three are actively functioning governmental units. Each of the remaining three towns is areally coextensive with a single incorporated village (East Rochester in Monroe County, and Mount Kisco and Scarsdale in Westchester County). In each of these instances, the town and village governments are consolidated, and the Census Bureau classifies the incorporated place government as the active government. The three American Indian reservations are functioning tribal governments; the MCD reservations are not counted as governments. The five boroughs are classified as nonfunctioning geographic areas at the MCD level and not as governments.

Table 8-3. (cont.)

North Carolina	The townships are nonfunctioning geographic subdivisions of counties and are not governments.
North Dakota	Of the 1,352 townships, all but one are actively functioning governmental units. The remaining township, Fargo in Cass County, is inactive, but it has the ability to activate and perform governmental functions.
Ohio	Of the 1,318 townships, all but one are actively functioning governmental units. The remaining township, Wayne in Montgomery County, is inactive, but it has the ability to activate and perform governmental functions.
Pennsylvania	Of the 1,549 townships, all but one are actively functioning governmental units. The remaining township, Cold Spring in Lebanon County, is inactive, but it has the ability to activate and perform governmental functions. The single road district, East Fork in Potter County, also is an actively functioning government.
Rhode Island	All towns are actively functioning governmental units.
South Dakota	All townships are actively functioning governmental units.
Vermont	Of the 242 towns, all but five are actively functioning governmental units. The five remaining towns (Glastenbury in Bennington County, Averill, Ferdinand, and Lewis in Essex County, and Somerset in Windham County) are inactive, but they have the ability to activate and perform governmental functions. The gores and grant are nonfunctioning geographic subdivisions of the county and are not governments.
Virginia	The magisterial districts are nonfunctioning geographic subdivisions of the county used in conducting elections or recording land ownership, and are not governments. Arlington County is not divided into magisterial districts; the Census Bureau assigns the area of the county to a single, nongovernmental pseudo-MCD representing the county.
West Virginia	The magisterial districts are nonfunctioning geographic subdivisions of the county from which voters elect county commissioners and members of the school boards.
Wisconsin	Of the 1,267 towns, all but one are actively functioning governmental units. The remaining town, Menominee, is coextensive with Menominee County. The town and county governments are consolidated, and the Census Bureau classifies the county as the active government.

**Complete geographic coverage** The Census Bureau requires that the MCDs encompass as much of the geographic area of a State as possible. Where the MCD coverage is incomplete, the Census Bureau attempts to supplement the MCD coverage with an entity or entities that are MCD equivalents. There are a few States where the Census Bureau must use more than one type of MCD; for example, in Illinois it uses 1,434 townships and 243 election precincts (see Table 8-2). In the portions of MCD States where no MCDs exist, the Census Bureau establishes UTs (see the “Unorganized Territories” section in this chapter).

**Geographic stability** The Census Bureau prefers that the MCDs in a State remain relatively stable from one decennial census to another, with only minor changes in their boundaries and areas. If there are massive or widespread changes, the geographic pattern of subcounty governmental units or administrative subdivisions is disrupted and the historical comparability of the data is impaired. When that happens, the Census Bureau may encourage the appropriate State officials to consider replacing the MCDs with CCDs.

### **Criteria for MCD Equivalents**

The Census Bureau recognizes two types of geographic entities that, for statistical purposes, are equivalent to MCDs—*independent incorporated places* and *UTs*. Although these two classes of entities are not, strictly speaking, MCDs, the Census Bureau treats them as MCDs in order to include all of a State’s population and land area within the county subdivision level for data presentation purposes. In addition, there are anomalous situations in which miscellaneous types of geographic entities are equivalent to MCDs (see the “Miscellaneous Entities” section in this chapter).

**Independent incorporated places** These are incorporated places with governments that function independently from the jurisdiction of the surrounding MCD or MCDs. They do not receive governmental services from any MCD, except when they undertake to contract for such services. Their inhabitants do not pay taxes to any MCD, nor do they vote

in any MCD elections. The independent incorporated places in a State constitute a separate type of county subdivision apart from its MCDs. Of the 28 MCD States, there are 20 with such MCD equivalents. At the time of the 1990 census, only 19 States had independent incorporated places. An additional State, North Carolina, now has independent incorporated places as well. Usually these independent incorporated places are cities; however, in some States they also are boroughs, towns, and villages (see Table 8-2).

Also independent of MCDs are those incorporated places that are independent of any county; the Census Bureau refers to these as *independent cities*. The Census Bureau treats the entire independent city as a single entity that is equivalent to both a county and an MCD. Virginia has 41 independent cities; Maryland and Missouri each have 1 (see Chapter 4, “States, Counties, and Statistically Equivalent Entities,” for details).

**Unorganized territories** Some counties in nine MCD States (Arkansas, Indiana, Iowa, Louisiana, Maine, Minnesota, North Carolina, North Dakota, and South Dakota) contain unorganized areas, areas that never had, or no longer possess, any governmental or administrative organization similar to the other MCDs in that State. Such areas have no legal name, legal status, or legal boundaries (except where bounded by MCD limits or a county line); the county and/or State provides the governmental functions for their residents.

The Census Bureau uses the term *unorganized territory* to identify such areas, and has developed a standard approach to simplify the presentation of data for them in the tabulations from the decennial censuses. The Census Bureau delineates each contiguous unorganized area as at least one UT. Larger areas are divided into more than one UT using physical features as boundaries. Each separate area thus is recognized as a UT, and may be named for a former MCD, a large settlement, or a physical feature—depending on which name best describes the area. In counties with several geographically discontinuous pieces of unorganized area, each piece is given an easily recognizable name usually based on its location within

the county; for example, *Central Hancock unorg.* and *East Hancock unorg.* These measures make it easier for data users to refer to these areas on maps and in the Census Bureau's data presentations.

**Miscellaneous entities** The Census Bureau classifies a few other geographic entities as MCD equivalents. It treats the District of Columbia as an entity statistically equivalent to a State, and as a single county equivalent with the same name. The District of Columbia also is coextensive with the incorporated place of Washington city. The Census Bureau uses a single MCD, also called Washington, to represent the same geographic area recognized as the city, county equivalent, and State equivalent. Arlington County, Virginia, represents a similar situation, where no MCD exists within the county area. The Census Bureau recognizes a *pseudo MCD* to cover the entire county-level area and gives it the same name as the county.

In the TIGER data base, there exists water area within the Atlantic Ocean and Great Lakes that is not assigned to any land MCD. The Census Bureau assigns these waters to an MCD entity identified by a code of *000*, and includes the measurement figures for them as part of the county total. No other data are published for these entities.

### **Criteria for Census County Divisions**

The purpose of CCDs is to provide a set of subcounty units that (1) have community orientation; (2) have visible, stable boundaries; (3) conform to groupings of census tracts or block numbering areas (BNAs); and (4) have a recognizable name.

**Community orientation** Each CCD should be focused on one or more communities or places, and take in the additional surrounding territory that is served by these in some fashion. The definition of community takes into account factors such as production, marketing, consumption, and the integrating factor of local institutions. This criterion is an application of the *functional integration principle* that the Census Bureau uses to create some geographic statistical entities (for details, refer to Chapter 2).



The place on which a CCD is centered usually is an incorporated place or a census designated place (CDP). Ideally, it should never subdivide such entities; when it must, as much of the place as possible should be one CCD. In some cases, the CCD is centered on a major area of significantly different land use or ownership, such as a large military base or American Indian reservation; in other situations, it can represent an area that is physiographically different from the rest of the county. A CCD should always consist of a single geographic piece that is relatively compact in shape.

**Visible, stable boundaries** The criteria for CCD boundary features are the same as those for census blocks, census tracts, and BNAs (for details, see Chapter 10, “Census Tracts and Block Numbering Areas” and Chapter 11, “Census Blocks and Block Groups”). A CCD should have easily locatable boundaries that seldom change. They should be readily discernable in the field and easy to depict on the Census Bureau’s maps. They should follow physical features, such as highways, roads, railroads, rivers, streams, power transmission lines, trails, or mountain ridges. A few kinds of non-physical features are used; for example, county lines always are CCD boundaries. In certain situations it is permissible to use *point-to-point lines* (comparatively short projected lines between two definite points); also permissible are conjoint city limits (a common boundary between two contiguous incorporated places). As a result of these guidelines, the CCD boundaries identify a stable set of geographic entities that allows the data user to make historical comparisons at the county subdivision level.

**Groupings of census tracts and BNAs** The geographic area of a CCD, or the community or place on which it is centered, almost always fits within the existing census tracts or BNAs. A CCD usually consists of one or a combination of contiguous census tracts or BNAs. It seldom subdivides a census tract or BNA. The result is a geographic pattern of county subdivisions wherein the data user can relate the CCDs to their smaller geographic components.

**Easily recognizable names** The CCD name usually is the same as that of the largest population center or place within it. Sometimes the name represents the two largest centers; for example, *Bayard-Santa Rita*. In some situations, the CCD may be named after a prominent physical feature (*Castle Rock, Cripple Creek, Mount Baldy*) or a distinctive region within the county (*Death Valley, Everglades, Lower Keys, Tellico Plains*). In many cases, a CCD name consists of the county or focal place name together with a cardinal direction indicating the portion of the county or area relative to the place covered by the CCD. If a county name (for example, *Union*) identifies a CCD, the directional indicator usually precedes it, as in *Northwest Union*. If a place name is used, the directional indicator follows it; for example, *Smithville North*. In all cases, the objective is to clearly identify the area of the CCD by means of an area name; CCD names always should be meaningful to data users.

### **Revisions to Existing CCDs**

The Census Bureau does not encourage State or local officials to make major updates or revisions to their CCDs. This policy reflects the desire for a set of stable subcounty entities that allows data comparability from census to census. However, updates and revisions may be necessary in some instances; in these cases, the changes are made as part of the geographic work undertaken in preparation for a decennial census. If data users within a county organize a Census Statistical Areas Committee (CSAC) and develop census tracts, the CCDs usually must consist of one or more census tracts or nest within a census tract. Where existing census tracts undergo splits, mergers, or boundary relocations, and where such changes affect a CCD boundary, the CCD boundary must be adjusted to conform to the revised census tract boundaries. As part of the preparations for each decennial census, the Census Bureau provides guidelines to the participants in the census tract delineation program for making such changes (see Chapter 3, “Local Census Statistical Areas Committees and Other Local Assistance”).

## Regional Variations in Types of MCDs

Because of historical, political, legal, and economic factors, the MCDs in different States are not always comparable units in terms of their governmental powers, legal status, and administrative significance. Moreover, terms such as *town*, *township*, or *district*, have different meanings in different parts of the United States.

### The Northeastern States

In the New England and Middle Atlantic States, the primary subdivisions of counties generally are called towns or townships. Most of these towns and townships are actively functioning units of local government and are very well known locally. Although not classified as incorporated places in the decennial census, they are legally incorporated units and have most or all the powers of incorporated places. Because of this strong functional aspect, the Census Bureau usually provides the same data tables for these MCDs as it provides for places, and also tables where MCDs and places are intermixed.

**New England towns** In Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, the towns are different from the incorporated places called towns in most other States. Outside of New England, the term *town* usually refers to a built-up settlement or population cluster intermediate in size and governmental power between a city and a village. By contrast, the New England towns were established initially to provide government to an area rather than a specific concentration of population. Many New England towns are from 20 to 50 square miles in size, and often contain rural territory as well as one or more population concentrations. Therefore, the settlement pattern of many New England towns, except in the vicinities of the larger cities, more closely resembles that of the townships in many other States.

In New England, the towns and cities, not the county, serve as the basic units of local government. Since their establishment in the 17th century, many towns have elected their governing officials and managed their local

affairs. The county was merely a grouping of towns, established primarily for judicial and penal purposes, and had minimal political significance. Connecticut abolished its county governments in 1960; the counties in Connecticut and Rhode Island serve only as administrative subdivisions of those States.

**Relationship of towns to incorporated places in New England** All incorporated places in Maine, Massachusetts, New Hampshire and Rhode Island are cities that are independent of any town. All incorporated places (cities and boroughs) in Connecticut are dependent on the town in which they are located. One borough and all but one of the State's twenty cities are coextensive with a single town, and exercise the governmental powers of both an MCD and an incorporated place in a single elected governmental body. The incorporated places in Vermont are either cities, all of which are independent of MCDs, or villages, all of which are dependent. Unlike Connecticut, none of the dependent villages in Vermont coincide with a town.

**Other types of MCDs and MCD equivalent entities in New England** In addition to towns in Maine, the plantations are actively functioning governmental units. There also are three Federally recognized American Indian reservations in Maine that are independent of any other MCD and that the Census Bureau treats as the statistical equivalent of MCDs. In addition, there are portions of ten Maine counties in which the Census Bureau has established UTs as the statistical equivalent of MCDs. The gores in Maine and Vermont, grants in New Hampshire and Vermont, and locations, survey townships, and purchases in New Hampshire are all nonfunctioning areal units; these kinds of entities occur in less populous areas.

**MCDs in the Middle Atlantic States** The primary MCDs in New York are called towns; in New Jersey and Pennsylvania, they are called townships. These MCDs share some of the legal and geographic attributes of the New England towns in that they all are significant, active, functioning governmental units (except for one inactive township in Pennsylvania). However, there are two major differences: (1) counties in the Middle Atlantic States

have greater governmental and administrative significance than in New England, and (2) the local inhabitants do not always perceive the MCD as constituting a single community. An illustration of the somewhat weaker community identification of MCDs in the Middle Atlantic States is the large number of separately incorporated places (nearly 2,000) and CDPs (about 800) in these three States. Although some of these separate incorporated places have the same name as their parent MCD, the majority bear the names of other communities. For example, of the approximately 1,000 incorporated places in Pennsylvania, only about 200 have a name related to their parent MCD and, in some of these situations, it is the parent MCD that was named after the place.

New York has two other types of census subcounty reporting units. All Federally and State-recognized American Indian reservations outside the boundaries of cities are separate from any town, and the Census Bureau reports data for these lands as MCD equivalents. Also, the Census Bureau treats the five boroughs that constitute New York city as MCD equivalents. Pennsylvania contains one road district—East Fork district in Potter County—that also is an actively functioning government.

#### **Relationship of incorporated places to MCDs in the Middle Atlantic States**

In New Jersey and Pennsylvania, all incorporated places are independent of townships and form primary subdivisions of their counties. These incorporated places are the cities, towns, and boroughs found in both States, along with the villages in New Jersey. The relationship between incorporated places and MCDs in New York is slightly different—all incorporated cities are independent of any MCD, but all incorporated villages are dependent on the towns in which they are located. A major exception is the city of New York, which consists of five nonfunctioning MCD-level boroughs, one borough for each county that makes up the city. Elsewhere in the State, five villages each are coextensive with a single town (see Table 8-4). In three of these villages (East Rochester, Mount Kisco, and Scarsdale), the residents elect a single set of government officials to perform the functions of both the town and the village.

## **The Midwest**

The MCDs of the 12 Midwestern States evolved from the township and range system of survey townships. These survey townships, in turn, provided the geographic basis for organizing units of local government, which were called *civil townships*. Many civil townships consist of a single survey township. The MCDs of 11 Midwestern States use the term townships; Wisconsin uses the term town. Starting with the 1990 census, the Census Bureau also recognizes, as a separate category, charter townships in Michigan.

These MCDs, for the most part, perform less of a governmental role and are less well known locally than their counterparts in the Northeast and the Middle Atlantic States. There are exceptions—the charter townships of Michigan, the urban townships of Minnesota, and the towns of Wisconsin—all of which have the legal capacity to provide all the governmental services associated with incorporated places. In most of the other Midwestern States, the primary governmental function of township governments is the building and/or maintenance of the local roads and bridges; however, some townships, particularly in Illinois, Kansas, and Ohio, may provide fire protection, refuse disposal, libraries, cemeteries, hospitals, zoning regulation, and other types of services. In Missouri, only 23 counties have townships that are local governmental units; the 91 other counties have townships that cannot raise taxes for general-purpose government and thus are classified as nonfunctioning areal units. In Iowa, the governmental functions of the townships are so minimal that they are not recognized as general-purpose governments for the Census Bureau's Census of Governments.

**MCD equivalents** In most of Nebraska, and in 17 counties in southern and central Illinois, the survey townships never developed local governments. In these areas, the election precincts, generally based on survey townships, serve as MCDs. There also are significant areas of Minnesota, North Dakota, and South Dakota, as well as one area in Iowa and one in Kansas, that have no MCDs. In these areas, the Census Bureau has established UTs to provide statewide coverage at the county subdivision level.

**Dependent and independent incorporated places** The Midwest has many incorporated places, and their relationship to MCDs varies from one State to another. In North Dakota, South Dakota, and Wisconsin, all incorporated places are independent of MCDs, as are 842 of the 854 incorporated places in Minnesota. All places are dependent on MCDs in Illinois, Indiana, and Missouri, except for Chicago, which consists of two MCD equivalents, and St. Louis, which is an independent city. In the remaining States, some places are dependent, others are independent. In Iowa, 52 of the 953 incorporated places are independent of MCDs, in Kansas 123 of 627, in Michigan 272 of 534, in Nebraska 79 of 535, and in Ohio 218 of 941.

**Coextensive incorporated places and MCDs** In Illinois, Iowa, and Ohio, many of the larger incorporated places are legally coextensive with a single township. There are 19 such coextensive city-township combinations in Illinois, and in all but one case, the township has a separate government that is distinct from the one for the place. Based on an agreement between the Census Bureau and the States of Iowa and Ohio, the Census Bureau does not include the township in decennial census data tabulations when an incorporated place and a township coincide. This makes it easier to find the place in census listings and simplifies the gathering of MCD information through the BAS, since State and local governments tend not to recognize the existence of many of these nonfunctional townships. Nebraska has ten election precincts that are coextensive with a single incorporated place, and Illinois has five. Missouri has four nonfunctional townships coextensive with a single incorporated place.

### **MCDs in Seven Southern States**

In Arkansas, Louisiana, Maryland, Mississippi, North Carolina, Virginia, and West Virginia, the Census Bureau considers other types of entities as MCD county subdivisions. These MCDs are administrative or geographic entities and do not function as local governments. In these States, the only functioning governments below the county level are incorporated places; outside of the incorporated places, the county or State government provides services to the residents of these MCDs.

The townships in Arkansas and North Carolina have no functions except that some serve as districts for the election of county officials or as areas for recording property information. The MCDs in Virginia and West Virginia, called magisterial districts, are areas for the election of representatives (supervisors in Virginia, commissioners in West Virginia) to the county government. The supervisor's districts in Mississippi serve a similar purpose. The MCDs of Louisiana and most of Maryland are units used for conducting elections within the county. In Louisiana these are parish governing authority districts; in Maryland they are election districts, except for Anne Arundel County in which the MCDs are called assessment districts and used for taxation purposes. In all the above situations, the legal description is shortened to *district* in the Census Bureau's data tabulations.

**MCD equivalents** Two counties in Arkansas and two in North Carolina have territory that is not within any township. There the Census Bureau established UTs. The same situation applied to one parish in Louisiana where a portion of territory was not part of any parish governing authority district.

**Relationships of incorporated places to MCDs** Virtually all incorporated places in Arkansas, Louisiana, Maryland, Mississippi, North Carolina, Virginia, and West Virginia are dependent on their MCDs. The exceptions are the 41 independent cities of Virginia and the independent city of Baltimore, Maryland; for Census Bureau data reporting purposes, these entities are statistically equivalent to counties, and each is equivalent to an MCD as well. Also, New Orleans city, which is coextensive with Orleans Parish, is not subdivided into districts and thus is considered a place independent of any district. Arkansas has one incorporated place that is coextensive with a single township; West Virginia has three incorporated places, each of which is coextensive with a single magisterial district (see Table 8-4 for more detail). Several places in North Carolina have become independent of the surrounding townships since the 1990 census.



## Identification of County Subdivisions in the 1990 Census

### Treatment of MCDs in the BAS

The Census Bureau updates its inventory of MCDs based on results of the BAS, its periodic survey of all counties, along with specified MCDs and incorporated places. In each year from 1981 through 1987, county officials (and, occasionally, State or regional officials) provided information to the Census Bureau about correct names, legal (or governmental) descriptions, and legal boundaries of MCDs. In 1988 and 1990, the BAS obtained this information directly from the officials of MCDs that had actively functioning governments. Where the MCDs were administrative subdivisions rather than functioning local governments, the BAS asked that county officials provide this information.

The BAS mailout to local governments includes maps showing the latest boundaries in the Census Bureau's digital geographic data base, the Topologically Integrated Geographic Encoding and Referencing (TIGER) data base. The Census Bureau uses the information that the local officials provide to update its files for the decennial census; these BAS responses also are used to prepare for the population estimates program, the Census of Governments, and other surveys and programs.

**Name and legal status** The name of an MCD is its unique legal identifier; the legal (or governmental) area description, also called legal status, of an MCD is a generic category dictated by State law regarding subcounty units. It is the specific term that describes the type of MCD, such as town, township, magisterial district, and election precinct. On a nationwide basis, these terms are descriptive and not functional. (*Town* in one State may mean something different in another State.) In census data tables, the name of the MCD usually precedes its legal description, as in *Smith township*. Exceptions may occur, as in *Township 6, Maguffin*, where *Township* is the legal description of the MCD and the number *6* and *Maguffin* constitute portions of the name. The BAS includes a form showing the Census Bureau's most current information on the name and legal description for

each entity. By filling out the BAS questionnaire, the respondent provides the latest information on the legal name and description of the MCD.

**Boundaries** The MCD boundaries used in the 1990 census were those legally in effect on January 1, 1990. The Census Bureau asks each BAS respondent if there were any boundary changes, and if so, to draw them on the maps provided. It also asks the MCD or county official to sign a statement certifying that the boundaries depicted on the map are shown correctly.

### **Update of Unorganized Territories**

During the 1980s, some MCDs disorganized; that is, they lost their legal status as organized units of local government and reverted to the status of unorganized area. By contrast, some other areas that had been UTs in 1980 became organized units of local government. Because of these disorganizations and organizations, the Census Bureau had to update its geographic inventory. New UTs were identified, some existing UTs were combined or split, and there were boundary revisions to ensure that UT boundaries continued to follow visible features.

### **Revision of CCDs**

For the most part, the revisions made to CCDs in preparation for the 1990 census were minor. There were, however, some significant changes as a result of the establishment of census tracts and BNAs. The Census Bureau encouraged the local CSACs and the State coordinators to use the 1980 CCD boundaries as part of the new census tract or BNA framework wherever possible. In some instances, new 1990 census tracts or BNAs were delineated without regard to previously existing CCD boundaries. The Census Bureau then revised or totally redelineated CCD boundaries for the 1990 census to coincide with the new census tract/BNA boundaries.

### **Geographic Identification Codes**

The Census Bureau uses a system of geographic identification codes—geocodes—to identify every geographic entity for which it reports data.

Geocodes are basic components of the TIGER data base and the geographic reference files that the Census Bureau develops and maintains to process the results of its censuses and sample surveys. Together with the TIGER data base, these files form the basis for the tabulation and dissemination of the collected data in their proper geographic entity. Geocodes obviate the need to relate data to geographic entities by name only; instead, the Census Bureau's processing operations associate data with the geocodes that are surrogates for the names of geographic entities.

In addition to the Census Bureau's MCD/CCD code (discussed later in this section), there are other geocodes that are part of the Federal Information Processing Standards (FIPS) system, developed by the National Institute of Standards and Technology (NIST) and now maintained by the U.S. Geological Survey. (The Census Bureau's MCD/CCD code scheme is not part of the FIPS code scheme.) The FIPS 55 system identifies named entities in the United States, Puerto Rico, the Virgin Islands of the United States, and the Pacific Outlying Areas. The scheme features a two-digit numeric State code and a five-digit numeric *locality code* that uniquely identify each named entity. The system further distinguishes between types of named entities by means of a two-character *class code*, consisting of a leading alphabetic character and a number. There are 11 different class codes applicable to county subdivisions; in combination with the State code and locality code, they provide additional information about each county subdivision.

The FIPS 55 locality codes identify governmentally functioning MCDs within a numeric range from 00001 to 89999. The codes in this range also represent incorporated places, CDPs, and Alaska Native and American Indian areas, together with other entities not included in the tabulations of the decennial census, such as named localities, military installations, and National Parks. All these entity names are combined and listed in a single alphabetic sequence. The FIPS code range, 90000 to 98999, is reserved for CCDs and nonfunctioning MCDs where they cover whole States, whole counties, or their statistically equivalent entities. The FIPS 55 locality codes together with the FIPS 55 class codes provide a unique identifier for the

MCDs, UTs, and CCDs within each State. The FIPS 55 class codes most commonly used to identify county subdivisions are the following:

- T1 (governmentally active MCD not coextensive with an incorporated place)
- Z1 (governmentally inactive or nonfunctioning MCD)
- Z3 (unorganized territory)
- Z5 (CCD or CSA)

For its censuses from 1960 to 1990, the Census Bureau established a series of *MCD/CCD codes* to identify and alphabetize all county subdivisions within each county. These are three-digit numeric identifiers, usually gapped at intervals of five (such as *005, 010, 015*) that serve to organize the county subdivision names alphabetically. To identify any county subdivision, it is necessary to use not only its MCD/CCD code, but also the State code and the county code. Because the MCD code is unique only within county (for instance, the code 005 generally is repeated in every county), it is necessary to use State and county codes as well to uniquely identify MCDs/CCDs on a nationwide basis. The Census Bureau published both census and FIPS codes for all entities appearing in its 1990 data products. For the year 2000, however, the FIPS codes—State, county, locality, and Alaska Native/American Indian area—will be the only geocodes used in census data products.

### **Treatment of MCDs and Places in the Data Tables**

The Census Bureau treats incorporated places as either dependent on, or independent of, the MCDs in which they are located. (All CDPs are considered dependent on the county subdivision in which they are located, and all places are dependent on CCDs.) In the hierarchical data tables, dependent places are indented under the name of the MCD/CCD in which they are located, and the count for each dependent place is included in that MCD/CCD total. In some MCD States, all incorporated places are independent; in others, all incorporated places are dependent. Still other MCD States contain both independent and dependent places. Figures 8-2 and 8-3 illustrate how the Census Bureau treats a dependent and an independent incorporated place in its data presentations. Table 8-4 identifies the legal relationship of each State's incorporated places, whether they are dependent on, or independent of, their county subdivisions.

### **Status as of the 1990 Census**

The 1990 decennial census reported data for 35,298 county subdivisions, a net increase of 103 from 1980. The single most dramatic change—140 new county subdivisions in Louisiana—resulted from the replacement of the 487 police jury wards with 627 parish governing authority districts. Elsewhere, Arkansas lost 43 townships because of consolidations, West Virginia lost 33 magisterial districts as a result of redistricting, and South Dakota lost 31 townships because of disorganizations. The 57 townships in Nevada were replaced by 67 CCDs. Apart from the new CCDs in Nevada, there were few changes in the number of CCDs. Three States (Kentucky, Montana, and New Mexico) gained a single new CCD, and one CCD in Utah was consolidated with an existing CCD.

Other sizeable changes in the number of county subdivisions (29 new entities) occurred in the category of independent incorporated places. The increase resulted from new incorporations, annexations into additional counties by existing places (thus creating new MCD equivalents), and a few dependent places becoming independent. There also was a decrease of 13 plantations in Maine, most of which became towns. The disorganization of some MCDs, coupled with the identification of additional areas as being outside of nonfunctioning MCDs, resulted in a net increase of nine unorganized territories.

### **Relationships to Other Geographic Entities**

Figures 2-1 and 2-2 in Chapter 2 illustrate, in generalized fashion, the position of county subdivisions in the Census Bureau's geographic hierarchy. This section discusses the geographic relationships in the 50 States; for information on Puerto Rico and the Outlying Areas, refer to Chapter 7.

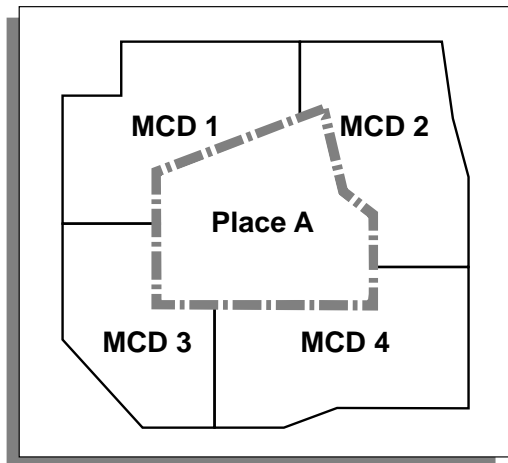
### **Counties and County Equivalents**

County subdivisions nest within counties and statistically equivalent entities and constitute complete coverage of all their area and population. Where an incorporated place that is independent of any MCD exists in

two counties, the Census Bureau considers each part of the place as a separate county subdivision, even though the place itself is a single governmental unit. The same situation occurs with American Indian reservations in New York State; where reservations cross county lines, the Census Bureau considers the part in each county a separate MCD.

Figure 8-2. **County With an Incorporated Place Governmentally Independent of Any MCD**

**Example 1:** *Geographic Areas Depicted on a Census Bureau Map*



**Example 2:** *Same Geographic Areas in Tabular Form*

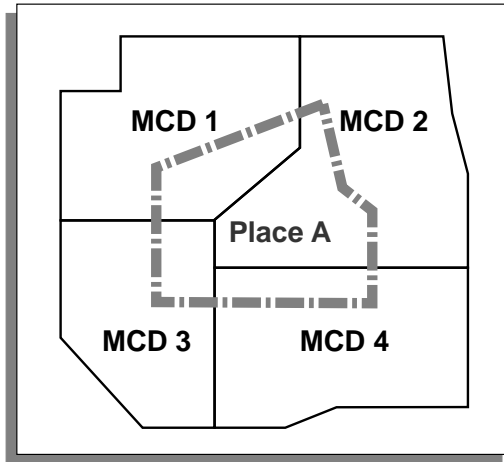
Area	Population
County	6,000
MCD 1	500
Place A	4,000
MCD 2	500
MCD 3	500
MCD 4	500

Example 1 illustrates the case of a county that contains an independent place. That is, the incorporated place *is not* governmentally subordinate to the surrounding MCDs; rather, it is independent of these MCDs. In this situation, the MCDs *stop* at the limits of the incorporated place, and the tabular presentation lists five pieces of geography as county subdivisions—four MCDs and one incorporated place.

The data for the MCDs *exclude* the data for the incorporated place they border, as shown in Example 2. Furthermore, any change in the boundaries of the incorporated place will change both the territory of, and the data for, the adjacent MCDs. The Census Bureau treats the incorporated place both as a pseudo MCD and as a place in its data tabulations.

Figure 8-3. **County With an Incorporated Place Governmentally Dependent on Its MCD**

**Example 1:** Geographic Areas Depicted on a Census Bureau Map



**Example 2:** Same Geographic Areas in Tabular Form

Area	Population
County	6,000
MCD 1	1,500
Place A (part)	1,000
MCD 2	1,500
Place A (part)	1,000
MCD 3	1,500
Place A (part)	1,000
MCD 4	1,500
Place A (part)	1,000

Example 1 illustrates the case of a county that contains a dependent place. That is, the incorporated place is governmentally subordinate to, or dependent upon, the MCDs in which it is located. In this situation, the MCD boundaries subdivide the incorporated place, the place includes territory in more than a single MCD, and the data for each MCD include the data for every incorporated place and every part of an incorporated place it contains.

The tabular presentation lists the data for the entirety of each of the four MCDs, as shown in Example 2. The MCDs include the appropriate portion of the data for the contained incorporated place as a subtotal of the MCD total. With this type of governmental structure, changes in the boundaries of the incorporated place do not change the boundaries of, or the data for, the MCDs.

Table 8-4. **Relationship of Incorporated Places to County Subdivisions in 1990**

Alabama	<b>Dependent</b>
Alaska	<b>Dependent</b> ; four cities—Anchorage, Juneau, Sitka, and Skagway—are <b>coextensive</b> with a single census subarea.
Arizona	<b>Dependent</b>
Arkansas	<b>Dependent</b> ; one town (Tollette) is <b>coextensive</b> with a single township.
California	<b>Dependent</b> ; one city (San Francisco) is <b>coextensive</b> with a single census county division (CCD) and county.
Colorado	<b>Dependent</b> ; one city (Denver) is <b>coextensive</b> with a CCD and county.
Connecticut	<b>Dependent</b> ; one borough (Naugatuck) and all but one city (Groton) are <b>coextensive</b> with a single town. Milford is a consolidated city containing the separate incorporated place of Woodmont borough.
Delaware	<b>Dependent</b>
District of Columbia	<b>Independent</b> ; the city of Washington is treated as a single <b>coextensive</b> minor civil division (MCD).
Florida	<b>Dependent</b> ; the consolidated city of Jacksonville is <b>coextensive</b> with a single CCD and county.
Georgia	<b>Dependent</b> ; the consolidated city of Columbus is <b>coextensive</b> with a single CCD and county.
Hawaii	No incorporated places; by agreement with State officials, the Census Bureau recognizes areas of concentrated settlement as census designated places (CDPs) for the decennial censuses of population/housing.
Idaho	<b>Dependent</b>
Illinois	<b>Dependent</b> , except for the city of Chicago, which is <b>independent</b> of any township, creating two MCDs (one in each county in which Chicago is located); 19 cities—Alton, Belleville, Berwyn, Bloomington, Champaign, Cicero, East St. Louis, Evanston, Freeport, Galesburg, Granite City, Macomb, Oak Park, Peoria, Quincy, River Forest, Urbana, Warsaw, and Zion—are <b>coextensive</b> with a single township; 3 cities (Cairo, Golconda, and Petersburg) and 2 villages (Hecker and Valmeyer) are <b>coextensive</b> with a single election precinct.
Indiana	<b>Dependent</b>
Iowa	There are 901 <b>dependent</b> cities; 52 cities are <b>independent</b> of any township, creating 53 MCDs; most incorporated places shown as <b>independent</b> of any township are legally <b>coextensive</b> with a township that is nonfunctioning and generally not recognized by local officials; as agreed to by the State government, these townships are not identified in decennial census publications.



Table 8-4. (cont.)

Kansas	There are 504 <b>dependent</b> cities; 123 cities are <b>independent</b> of any township, creating 129 MCDs.
Kentucky	<b>Dependent</b>
Louisiana	<b>Dependent</b> except for the city of New Orleans which is <b>independent</b> of any MCD.
Maine	<b>Independent</b> of any MCD; 22 cities creating 22 MCDs.
Maryland	<b>Dependent</b> except Baltimore city, which is <b>independent</b> of any county and MCD.
Massachusetts	<b>Independent</b> of any town; 39 cities creating 39 MCDs.
Michigan	There are 262 <b>dependent</b> villages; 272 cities are <b>independent</b> of any township, creating 283 MCDs.
Minnesota	There are 12 <b>dependent</b> cities—Aurora, Beardsley, Calumet, Grand Rapids, Johnson, Kinney, La Prairie, Marble, Nashwauk, Ortonville, Riverton, and Taconite; 842 cities are <b>independent</b> of any township or unorganized territory, creating 880 MCDs.
Mississippi	<b>Dependent</b>
Missouri	<b>Dependent</b> except St. Louis city, which is <b>independent</b> of any county and MCD; four cities—Arnold, Edina, Kimberling City, and Lamar—are <b>coextensive</b> with a single township.
Montana	<b>Dependent</b>
Nebraska	All 392 villages and 64 cities are <b>dependent</b> ; 79 cities are <b>independent</b> of any election precinct or township, creating 81 MCDs.
Nevada	<b>Dependent</b> ; one incorporated place (Carson City) is <b>coextensive</b> with a single CCD and county.
New Hampshire	<b>Independent</b> of any MCD; 13 cities creating 13 MCDs.
New Jersey	<b>Independent</b> ; there are 250 boroughs, 52 cities, 15 towns, and 3 villages creating the same numbers of MCDs.
New Mexico	<b>Dependent</b>
New York	There are 557 <b>dependent</b> villages; 61 cities are <b>independent</b> of any town (creating 62 MCDs) excluding New York city, which is made up of 5 MCD boroughs (one for each county within the city); 5 villages—East Rochester, Green Island, Harrison, Mount Kisco, and Scarsdale—are <b>coextensive</b> with a single town.
North Carolina	<b>Dependent</b>

Table 8-4. (cont.)

North Dakota	<b>Independent</b> of any township or unorganized territory; 366 cities creating 373 MCDs.
Ohio	There are 86 cities and 637 villages that are <b>dependent</b> ; 156 cities and 62 villages are <b>independent</b> of any township creating 171 and 64 MCDs, respectively; 4 incorporated places have a mixed relationship (Columbus city is <b>independent</b> in Franklin County, but <b>dependent</b> in Fairfield County; Fostoria city is <b>independent</b> in Seneca and Wood Counties, but <b>dependent</b> in Hancock County; Hunting Valley village is <b>independent</b> in Cuyahoga County, but <b>dependent</b> in Geauga County; Sharonville city is <b>independent</b> in Hamilton County, but <b>dependent</b> in Butler County. Most incorporated places shown as <b>independent</b> of any township are legally <b>coextensive</b> with a township that is nonfunctioning and generally not recognized by local officials; as agreed to by the State government, these townships are not identified in decennial census publications.
Oklahoma	<b>Dependent</b>
Oregon	<b>Dependent</b>
Pennsylvania	<b>Independent</b> of any township or road district; 966 boroughs creating 977 MCDs; 55 cities creating 56 MCDs; one town creating one MCD.
Rhode Island	<b>Independent</b> of any town; eight cities creating eight MCDs.
South Carolina	<b>Dependent</b>
South Dakota	<b>Independent</b> of any township or unorganized territory; 154 cities and one town creating 162 and one MCD, respectively.
Tennessee	<b>Dependent</b>
Texas	<b>Dependent</b>
Utah	<b>Dependent</b>
Vermont	There are 42 <b>dependent</b> villages; 9 cities are <b>independent</b> of any gore, grant, or town creating 9 MCDs.
Virginia	There are 188 <b>dependent</b> towns; 41 cities are <b>independent</b> of any county and magisterial district.
Washington	<b>Dependent</b>
West Virginia	<b>Dependent</b> ; one town (Glenville) and two cities (Moundsville and Williamson) are <b>coextensive</b> with a single magisterial district.
Wisconsin	<b>Independent</b> ; there are 188 cities and 395 villages creating 210 and 417 MCDs, respectively.
Wyoming	<b>Dependent</b>

## **Places**

A place whose territory also is considered to be within the territory of one or more surrounding MCDs is called dependent. The Census Bureau considers all CDPs to be dependent places, whether the county subdivisions are MCDs or CCDs. In the 21 CCD States, the Census Bureau considers all incorporated places to be dependent; the Census Bureau also considers the incorporated places of Alaska to be dependent on the CSAs. Incorporated places in the remaining States, the 28 MCD States, can be either independent of, or dependent on, MCDs since the laws of the States vary. Table 8-4 provides detailed information on the relationships between incorporated places and county subdivisions in each State.

An incorporated place that is independent of an MCD is not considered to be part of any surrounding MCD or MCDs; the Census Bureau treats these independent incorporated places as a type of county subdivision. If an independent incorporated place exists in more than one county or statistically equivalent entity, the Census Bureau considers each county *part* to constitute a unique county subdivision.

Some places are geographically coextensive with an MCD; for example, independent incorporated places, and, in some situations, CDPs. In parts of the United States where MCDs are perceived as communities, such as in the Northeast, it is not uncommon for a CDP to be coextensive with an MCD of the same name.

## **American Indian and Alaska Native Areas**

There is no governmental relationship between county subdivisions and American Indian and Alaska Native areas. Further, it is not necessary for American Indian and Alaska Native areas to conform to the hierarchy of States/counties/county subdivisions. There are exceptions—in Maine and New York, some American Indian reservations are equivalent to MCDs. Elsewhere, the Census Bureau established some CCDs and UTs to be coextensive with, or to follow, the boundaries of American Indian reservations.

### **Census Tracts and Block Numbering Areas**

Several geographic relationships apply throughout the 21 CCD States. The most common pattern is a CCD composed of one or more whole census tracts/BNAs; however, there are many instances where a census tract/BNA consists of two or more CCDs, or more rarely, of one CCD and part of another. In a very few cases, there is no geographic relationship between the two sets of areas.

The MCDs of the counties in the nine northeastern States are both stable geographic entities and well-known units of local government. As a result, they often figure as the geographic basis for census tracts/BNAs. An MCD generally consists of one or more census tracts/BNAs, and the boundaries of census tracts/BNAs usually do not cross the boundaries of any MCD or MCD equivalent.

By contrast, in the midwestern and southern States, the MCD boundaries usually do not coincide with groups of census tracts/BNAs, except where both sets of boundaries follow a physical feature. However, there are some instances where census tract boundaries follow nonvisible MCD lines, because the census tract criteria at one time permitted this situation.

### **Block Groups and Census Blocks**

The 1990 criteria for delineating block groups within census tracts and BNAs allowed block group boundaries to follow nonvisible MCD boundaries only in the northeastern States. When a CCD boundary was not a census tract/BNA boundary, it was preferred as a block group boundary. Where an MCD boundary, or occasionally a CCD boundary, split a physical block, the Census Bureau assigned an alphabetic suffix to identify separately each tabulation block created by the location of the county subdivision boundary.

### **Metropolitan Areas, Urbanized Areas, and Urban Places**

The Federal Office of Management and Budget (OMB) establishes the standards for, and then defines, metropolitan areas (MAs) either as

freestanding metropolitan statistical areas (MSAs) or as consolidated metropolitan statistical areas (CMSAs) and their constituent primary metropolitan statistical areas (PMSAs). In the six New England States, the geographic building blocks of MAs are MCDs or statistically equivalent entities, rather than counties as in other States. This practice harmonizes with the situation existing in New England, where the MCDs are the primary units of local government (for details, see Chapter 13, “Metropolitan Areas”).

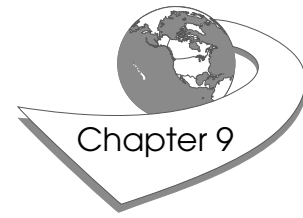
The picture varies with regard to the geographic entities that the Census Bureau uses in its urban and rural classifications. There is no necessary geographic relationship between county subdivisions and urbanized areas (UAs) because the geographic components of UAs are places and census blocks. The same is true of non-UA urban places, which are entities that have 2,500 or more residents, because places often are subdivided by MCD/CCD boundaries.

### **Other Geographic Entities**

The boundaries of other types of geographic entities sometimes conform to county subdivision boundaries. For example, MCD boundaries also may be used to bound Congressional districts. Smaller entities—voting districts, school districts, and ZIP Codes—may sometimes constitute an MCD or portions of their boundaries may coincide with MCD or CCD boundaries.

## *Notes and References*

- <sup>1</sup> At the time of the 1990 census, there were UTs in Kansas, but not in Indiana.
- <sup>2</sup> U.S. Bureau of the Census, *Census County Divisions, Past and Future*, [by Dr. Robert C. Klovel] Technical Paper No. 30, Washington, DC, 1973.
- <sup>3</sup> The Alaska Native Claims Settlement Act (P.L. 92-203) established 13 business and nonprofit corporate entities to carry out the business and nonprofit operations established by and for Native Alaskans under the Act. Twelve have specific boundaries and cover the entire State of Alaska except for the Annette Islands Reserve; the thirteenth covers Alaska Natives not resident in Alaska who do not identify with any of the other 12 corporations. For further information, refer to Chapter 5, "American Indian and Alaska Native Areas."



# Places

The Bureau of the Census defines a place as a concentration of population; a place may or may not have legally prescribed limits, powers, or functions. This concentration of population must have a name, be locally recognized, and not be part of any other place.

A place either is legally incorporated under the laws of its respective State, or a statistical equivalent that the Census Bureau treats as a census designated place (CDP). Each State enacts laws and regulations for establishing incorporated places. The Census Bureau designates criteria of total population size, population density, and geographic configuration for delineating CDPs. Not everyone resides in a place; in 1990, approximately 66 million people (26 percent) in the United States lived outside of any place, either in small settlements, in the open countryside, or in the densely settled fringe of large cities in areas that were built-up, but not identifiable as places.

The greater number of places reported in the decennial censuses (19,289 out of a total of 23,435 in 1990) are incorporated. Most of these incorporated places have active governments; that is, they have either elected or appointed officials, usually raise revenue, and perform general-purpose local government functions. Incorporated places that have *inactive* governments generally do not have officials or provide governmental services, but, like active places, they do have legally established corporate limits, and may choose to reactivate at any time. The Census Bureau includes, in the decennial census, all active incorporated places and inactive incorporated places for which it has certified corporate limits as of January 1 of the census year (the date used to tabulate the census results).

The Census Bureau recognized 4,146 CDPs for the 1990 decennial census. These entities, though containing nearly 30 million people, have no separate governments, although most of their residents receive governmental services from county, minor civil division (MCD), special regional or nearby municipal governments. CDPs usually physically resemble incorporated

places in that they contain a residential nucleus, have a closely spaced street pattern and frequently have commercial or other urban types of land use. The Census Bureau relies on the assistance of local census statistical areas committees (CSACs), various State authorities, and other organizations to identify potential CDPs and update existing ones. This chapter contains separate discussions of incorporated places and census designated places.

## **Incorporated Places**

### **Characteristics of Incorporated Places**

Incorporated places are established under the authorization of the governments in each of the 50 States. Requirements for incorporation vary widely among the States; some States have few specific criteria, while others have established population thresholds and occasionally other conditions (for example, minimum land area, population density, and distance from other existing incorporated places) that must be met for incorporation (see Table 9-1). The Census Bureau recognizes incorporated places in all States except Hawaii; for Hawaii, by agreement with the Office of the Governor, the Census Bureau recognizes all places as CDPs rather than as incorporated places. Puerto Rico and several of the Outlying Areas under United States jurisdiction (Guam, the Northern Mariana Islands, and Palau) also have no incorporated places (for details, see Chapter 7, “Puerto Rico and the Outlying Areas”).

Different States recognize a variety of entities as incorporated places. Usually, the designations city, town, village, and borough are most frequent; however, one or more places in Kentucky, Montana, Nevada, and Tennessee have place-type governments (usually consolidated ones) that do not fit any of these designations. New Jersey is the only State that has all four kinds of incorporated places. Only two other States (Connecticut and Pennsylvania) include boroughs as incorporated places, 11 States have only cities, and the remainder of the States have various combinations of city, town, and village (see Table 9-1).

The terms *town* and *borough* do not always refer to places. In the six New England States, and in New York and Wisconsin, the term *town* refers to an MCD rather than a place. The MCDs in these States, while often functioning



with all the powers of city governments, usually contain considerable rural area; other units of government perform the incorporated place function. In Alaska, the term *borough* refers to territory governed as a county rather than as a place; in New York, the Census Bureau treats the five boroughs that comprise New York city as MCDs.

Table 9-1. **State Requirements for Incorporated Places**

Alabama	<b>City</b>	Minimum population requirement of 2,000.
	<b>Town</b>	Minimum population requirement of 300; territory located in Jefferson County, or within 3 miles of an incorporated area, requires a population $\geq$ 1,000 to incorporate; territory in Jefferson County and within 3 miles of an incorporated area requires $\geq$ 10,000 people to incorporate.
Alaska	<b>City</b>	No minimum population requirement, but approval of Alaska Department of Community Affairs is required.
Arizona	<b>City</b>	Minimum population requirement of 1,500.
	<b>Town</b>	Same requirements as for a city.
Arkansas	<b>City</b>	Minimum population requirement of 500.
	<b>Town</b>	Must have $\geq$ 20 qualified voters to incorporate.
California	<b>City</b>	Minimum of 500 registered voters to incorporate.
	<b>Town</b>	Same requirements as for a city.
Colorado	<b>City</b>	Minimum population requirement of 2,000.
	<b>Town</b>	Petition must be signed by $\geq$ 40 registered voters in counties with $<$ 25,000 people, and $\geq$ 150 registered voters in counties with a population $\geq$ 25,000. Population density must be $\geq$ 50 people per square mile.
Connecticut	<b>City</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
	<b>Borough</b>	Same requirements as for a city.
Delaware	<b>City</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement, except for home-rule cities, which require a minimum of 1,000 inhabitants.
	<b>Town</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
	<b>Village</b>	Same requirements as for a town.
District of Columbia	<b>City</b>	No minimum population requirement; has a single incorporated place covering its entire area.

Table 9-1. (cont.)

Florida	<b>City</b>	In counties with < 50,000 residents, at least 1,500 residents are required for incorporation; in other counties, at least 5,000 residents are required. Population density must be $\geq 1.5$ people per acre, except under extenuating circumstances.
	<b>Town</b>	Same requirements as for a city.
	<b>Village</b>	Same requirements as for a city.
Georgia	<b>City</b>	Total population must $\geq 200$ , and population density must be $\geq 200$ people per square mile.
	<b>Town</b>	Same requirements as for a city.
Hawaii	<b>None</b>	Hawaii has no incorporated places, only CDPs; the Census of Governments counts the combined city and county of Honolulu as a municipality; other censuses recognize the Honolulu judicial district as a separate place within the county.
Idaho	<b>City</b>	A minimum of 125 qualified voters to incorporate.
Illinois	<b>City</b>	Minimum population requirement of 2,500; if located in Cook County, may incorporate with a minimum of 1,200 residents if the area consists of less than 4 square miles and contains all the registered voters of a township not already within the corporate limits of a municipality.
	<b>Town</b>	No minimum population requirement
	<b>Village</b>	If counties with a population $\geq 150,000$ , a minimum of 2,500 residents are required to incorporate; a minimum of 200 residents are required in other counties.
Indiana	<b>City</b>	If a town has a minimum of 2,000 inhabitants, it may hold a referendum on conversion to city status.
	<b>Town</b>	A petition signed by > 50 landowners is needed to incorporate.
Iowa	<b>City</b>	No minimum population requirement, but approval of the State City Development Board is required.
Kansas	<b>City</b>	A population $\geq 300$ , or territory containing $\geq 300$ platted lots, each served by water and sewer lines owned by a non-profit corporation, and a petition signed by at least 50 registered voters are required for incorporation; there are no minimum population requirements if the territory has been designated a national landmark by the U.S. Congress.
Kentucky	<b>City</b>	Minimum population requirement of 300.

Table 9-1. (cont.)

Louisiana	<b>City</b>	Minimum population requirement of 5,000.
	<b>Town</b>	Minimum population requirement of 1,000.
	<b>Village</b>	Minimum population requirement of 300.
Maine	<b>City</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
Maryland	<b>City</b>	Minimum population requirement of 300.
	<b>Town</b>	Same requirements as for a city.
	<b>Village</b>	Same requirements as for a city.
Massachusetts	<b>City</b>	Minimum population requirement of 12,000.
Michigan	<b>City</b>	Minimum population requirement of 750, except home-rule cities, which require a minimum population of 2,000 and a population density $\geq 500$ people per square mile.
	<b>Village</b>	Minimum population requirement of 250 and a minimum area of 3/4 square mile, unless situated in the upper peninsula.
Minnesota	<b>City</b>	No minimum population requirement, but approval of the Minnesota Municipal Board is necessary.
Mississippi <sup>1</sup>	<b>City</b>	Minimum population requirement of 2,000.
	<b>Town</b>	Minimum population requirement of 300.
	<b>Village</b>	Under current Mississippi law, new villages may no longer be incorporated. Those that incorporated before this law was enacted needed a population $> 100$ and $< 300$ to maintain their incorporated status (villages that fall below a population of 100 are decertified by the State, reverting to unincorporated status).
Missouri	<b>City</b>	Minimum population requirement of 500.
	<b>Town</b>	No minimum population requirement.
	<b>Village</b>	No minimum population requirement; a village, once incorporated, may choose to become a city if it has a population $\geq 200$ .
Montana	<b>City</b>	Minimum population requirement of 1,000.
	<b>Town</b>	Minimum population requirement of 300, and a population density $\geq 500$ people per square mile, unless the community was a town site owned and built by the U.S. Government prior to April 3, 1981.
Nebraska	<b>City</b>	Minimum population requirement of 800.
	<b>Village</b>	Minimum population requirement of 100.

Table 9-1. (cont.)

Nevada	<b>City</b>	Minimum requirement of 250 voters; minimum population density requirement of 4 people per acre if the city is within 7 miles of a county seat, or within 7 miles of another city at least equal to the density of the proposed city; otherwise, there are no density requirements. These requirements do not apply to special charter cities.
	<b>Town</b>	Same requirements as for a city.
New Hampshire	<b>City</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
New Jersey	<b>City</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
	<b>Town</b>	Same requirements as for a city.
	<b>Village</b>	Same requirements as for a city.
	<b>Borough</b>	Same requirements as for a city.
New Mexico	<b>City</b>	Minimum population requirement of 150, and the population density must be at least one person per acre, except in Hidalgo and Sierra counties where the density must be 1 person per 4 acres.
	<b>Town</b>	Same requirements as for a city.
	<b>Village</b>	Same requirements as for a city.
New York	<b>City</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
	<b>Village</b>	Minimum population requirement of 500 and must have a population density of $\geq 100$ people per square mile.
North Carolina	<b>City</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
	<b>Town</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
	<b>Village</b>	Incorporation is by special act of the State legislature; there is no minimum population requirement.
North Dakota	<b>City</b>	No minimum population requirement; the total territory of a city may not exceed 4 square miles and the population density must be $\geq 100$ people per square mile.
Ohio	<b>City</b>	Minimum population requirement of 25,000 for new cities; existing cities have a minimum population requirement of 5,000. Cities must be at least 4 square miles in area, have a minimum population density of 1,000 people per square mile, and an assessed property valuation of \$2,500 per capita.
	<b>Village</b>	Minimum population requirement of 1,600, a minimum population density requirement of 800 people per square mile, and an assessed property valuation of at least \$3,500 per capita.

Table 9-1. (cont.)

Oklahoma	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Town</b></div>	<p>Minimum population requirement of 1,000.</p> <p>Petition signed by <math>\geq 25</math> registered voters needed to incorporate.</p>
Oregon	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Town</b></div>	<p>Minimum population requirement of 150.</p> <p>Same requirements as for a city.</p>
Pennsylvania	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>Town</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Borough</b></div>	<p>Minimum population requirement of 10,000.</p> <p>No minimum population requirement.</p> <p>No minimum population requirement.</p>
Rhode Island	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div>	<p>Incorporation is by special act of the State legislature; there is no minimum population requirement.</p>
South Carolina	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>Town</b></div>	<p>No minimum population requirement; a minimum density of 300 people per square mile is required, except for (1) areas bordering on or being within 2 miles of the Atlantic Ocean, and (2) areas on all sea islands bounded on at least one side by the Atlantic; both require a minimum of 150 dwelling units, at least 1 dwelling unit per 3 acres, and 50 resident voters.</p> <p>Same requirements as for a city.</p>
South Dakota	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Town</b></div>	<p>Minimum requirement of 100 people or 30 registered voters; historical and educational municipalities require 1 resident to incorporate.</p> <p>Same requirements as for a city.</p>
Tennessee	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Town</b></div>	<p>Minimum population requirement of 500, except cities under the manager-council form of government, which require a population of <math>\geq 5,000</math> to incorporate.</p> <p>Same requirements as for a city.</p>
Texas <sup>2</sup>	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>Town</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Village</b></div>	<p>Minimum population requirement of 600 if organized under 1875 legislation, or 201 if organized under 1909 legislation.</p> <p>Same requirements as for a city.</p> <p>Minimum population requirement of 201.</p>
Utah	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Town</b></div>	<p>Minimum population requirement of 800.</p> <p>Population requirement <math>\geq 100</math> and <math>\leq 800</math>.</p>
Vermont	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Village</b></div>	<p>Incorporation is by special act of the State legislature; there is no minimum population requirement.</p> <p>Must contain 30 or more houses.</p>
Virginia	<div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px; margin-bottom: 5px;"><b>City</b></div> <div style="border-left: 1px solid black; border-bottom: 1px solid black; padding-left: 5px;"><b>Town</b></div>	<p>Minimum population requirement of 5,000.</p> <p>Minimum population requirement of 1,000.</p>

Table 9-1. (cont.)

Washington	<b>City</b>	Minimum population requirement of 1,500; territory within 5 air miles of a city whose population is >15,000 requires a minimum population of 3,000 to incorporate.
	<b>Town</b>	Minimum population requirement of 300; territory within 5 air miles of a city whose population is >15,000 requires a minimum population of 3,000 to incorporate.
West Virginia	<b>City</b>	Minimum population requirement of 2,001.
	<b>Town</b>	Towns of 1 square mile or less require 100 residents to incorporate; otherwise at least 500 residents are required.
	<b>Village</b>	Same requirements as for towns.
Wisconsin	<b>City</b>	Minimum requirements for <i>isolated cities</i> are a population of 1,000, an area $\geq$ 1 square mile, and a population density of $\geq$ 500 people per square mile; <i>metropolitan cities</i> are those that are situated in a county containing two cities with an aggregate population $\geq$ 25,000; <i>metropolitan cities</i> require a population of $\geq$ 5,000, an area of $\geq$ 3 square miles, and a population density of $\geq$ 750 people per square mile.
	<b>Village</b>	Minimum population requirement for <i>isolated villages</i> is 150; <i>metropolitan villages</i> are those that are situated in a county containing two cities with an aggregate population of $\geq$ 25,000; <i>metropolitan villages</i> require a population of $\geq$ 2,500, an area of $\geq$ 2 square miles, and a density of $\geq$ 500 people per square mile.
Wyoming	<b>City</b>	Minimum population of 500 within an area of 3 square miles or less is required to incorporate.
	<b>Town</b>	Same requirements as for a city.

<sup>1</sup> Cities, towns, and villages may be incorporated, regardless of population, in an area not less than 1 square mile wherein there is in existence or under construction not less than 1 mile of hard surface streets, with a total of not less than 6 streets, and there exists, or is under construction, a public utilities system that includes a waterworks or sewerage system, or both.

<sup>2</sup> Cities, towns, and villages with a population below 2,000 may not have an area over 2 square miles. A municipality whose population is between 2,000 and 4,999 may not have an area greater than 4 square miles, and those whose population is between 5,000 and 9,999 may not have an area in excess of 9 square miles. Home-rule municipalities require a population of at least 5,000.

Note: The information in this table is based on research of State statutes by the Governments Division of the Census Bureau and is current through 1990. Some of this information may be superseded by subsequent legislative acts.

## **Relationships of Incorporated Places to Other Geographic Entities**

Incorporated places have legally prescribed relationships with governmental entities such as States, counties, and MCDs. Incorporated places have geographic relationships with nongovernmental statistical entities such as census tracts, block numbering areas (BNAs), block groups and census blocks, census county divisions (CCDs), and urbanized areas (UAs). The geographic hierarchy shows the interrelationships of these entities to places (see Figures 2-1 and 2-2 in Chapter 2, “Geographic Overview”).

**States and counties** Because incorporated places are chartered by States, no place may extend into more than one State. Thus, cities of the same name that might appear to be one are each distinct geographic entities. Examples include Kansas City, Missouri, and Kansas City, Kansas; Texarkana, Arkansas, and Texarkana, Texas; and Bristol, Virginia, and Bristol, Tennessee.

In most States, multi-county places are common; however in the New England States and the States of California, Montana, Nevada, and New Jersey, incorporated places do not cross county lines. In Virginia, the 41 cities are independent of any county, and the Census Bureau treats them as the statistical equivalents of counties; also, there is one independent city each in Maryland (Baltimore), Missouri (St. Louis), and Nevada (Carson City).

**County subdivisions** Incorporated places have varying relationships with county subdivisions in their respective States. In 21 States, the Census Bureau, in cooperation with State officials and the census statistical areas committees, has designated *census county divisions (CCDs)*. These have no governmental or administrative functions, and incorporated places in these States appear as *dependent* within the CCDs; that is, in statistical tables, the data for the places also are included in the totals for the CCDs, and the place names appear indented under the CCD names. Places may be located in more than one CCD.

In the remaining States, the county subdivisions are MCDs. Some of the MCDs have strong governments (in some States, they perform functions

identical or similar to those of incorporated places). Others have governments performing few if any functions, or no governments whatsoever, as is the case with unorganized territories, the election districts of Maryland, the magisterial districts of Virginia, and similar units. All incorporated places within a State may be independent of any MCD (as in Wisconsin), dependent within an MCD (as in Mississippi), or there may be a mixture of independent and dependent incorporated places (for example, in Vermont, villages are dependent within MCDs, while cities are independent of any MCD). Dependent places frequently are located in more than one MCD.

The places that are independent of any county subdivision stand alone in the Census Bureau's statistical presentations; that is, they appear in the same alphabetical format within counties as the MCDs, and their statistical information is not included in that of another entity except the county. Although they are not shown as part of any MCD, the Census Bureau assigns these places MCD geographic identification codes so that there is complete county subdivision coverage for the entire United States. (For details, see the "Place Codes" section at the end of this chapter.)

There are complex place/MCD relationships in several States. For example, in Ohio, places that are in more than one county may be independent of any MCD in one county, yet be dependent within an MCD in another county. In some States, there are some places that are coextensive with one or more MCDs. When these places annex or detach territory, the MCD boundary automatically changes with the place boundary, adding area from or losing area to, surrounding MCDs. (For further information on the geographic relationships between places, MCDs, and CCDs, refer to Chapter 8, "County Subdivisions," specifically Table 8-4, which describes the relationship of places to county subdivisions in each State.)

**Relationships to other geographic entities** Census Bureau criteria that establish the relationships of incorporated places to the statistical entities generally do not vary among the States. For the 1990 census, places consisted of whole census blocks. When a place boundary split a previously existing census block, the split block number was assigned suffixes, with each



suffixed part representing a new block (see Chapter 11, “Census Blocks and Block Groups”). The boundaries of census tracts, BNAs, and block groups generally do not follow incorporated place boundaries because place boundaries are subject to frequent change, whereas census tracts and BNAs are designed to be essentially stable units for intercensal data comparisons (see Chapter 10, “Census Tracts and Block Numbering Areas”). An exception is the use of incorporated place boundaries as census tract, BNA, and block group boundaries in States of the Northeast; another exception occurs where there are conjoint (shared) boundaries between two incorporated places. Urbanized areas include whole CDPs, and generally include whole incorporated places except in the case of extended cities (see the “Extended Cities” section in this chapter).

### **Places and the Urban and Rural Classifications**

At one time, places were the only geographic units the Census Bureau used for determining the urban and rural populations and areas of the United States. Before 1950, the Census Bureau classified incorporated places having 2,500 or more residents as urban; it classified all smaller incorporated places, together with nonplace territory, as rural. In addition to incorporated places, the Census Bureau designated certain densely settled MCDs as *urban places*. For 1950, the Census Bureau introduced urbanized areas (UAs) to better define large agglomerations of population (see Chapter 12, “The Urban and Rural Classifications”). It also introduced census designated places (CDPs), then known as *unincorporated places*. These two measures provided a better classification of densely developed area outside of incorporated places.

**Large-area incorporated places** Incorporated places vary greatly in population, in physical extent, in the stability of their boundaries, and in their usefulness as a measure of the urban population of an area. The largest incorporated place in the Nation has more than seven million inhabitants, the smallest, fewer than ten. The largest incorporated place, in areal measure, has more than 2,800 square miles; the smallest, a few acres. (Table 9-2 lists the places that encompass more than 100 square miles of land.)

Table 9-2. **Places of More Than 100 Square Miles on January 1, 1990**

<b>Place Name</b>	<b>State</b>	<b>Land Area (sq. mi.)</b>
Sitka	AK	2,881.49
Juneau	AK	2,593.57
Anchorage	AK	1,697.65
Jacksonville ( <i>consolidated city</i> )	FL	773.85
Anaconda-Deer Lodge <sup>1</sup>	MT	736.94
Butte-Silver Bow ( <i>consolidated city</i> )	MT	718.33
Oklahoma City	OK	608.16
Houston	TX	539.88
Nashville ( <i>consolidated city</i> ) <sup>2</sup>	TN	502.26
Los Angeles	CA	469.34
Skagway	AK	454.68
Phoenix	AZ	419.91
Suffolk	VA	400.08
Indianapolis ( <i>consolidated city</i> )	IN	366.81
Dallas	TX	342.41
Chesapeake	VA	340.68
San Antonio	TX	333.04
San Diego	CA	324.01
Kansas City	MO	311.54
New York	NY	308.95
Lexington-Fayette	KY	284.52
Fort Worth	TX	281.08
Memphis	TN	256.05
Virginia Beach	VA	248.33
El Paso	TX	245.36
Chicago	IL	227.23
Valdez	AK	218.82
Austin	TX	217.78
Columbus ( <i>consolidated city</i> )	GA	216.31
Columbus	OH	190.93
California City	CA	184.60
Scottsdale	AZ	184.37
Tulsa	OK	183.52
Colorado Springs	CO	183.19
Hibbing	MN	181.68
New Orleans	LA	180.65
Norman	OK	177.03
Charlotte	NC	174.26

Table 9-2. (cont.)

<b>Place Name</b>	<b>State</b>	<b>Land Area (sq. mi.)</b>
San Jose	CA	171.26
Huntsville	AL	164.40
Tucson	AZ	156.29
Denver	CO	153.28
Birmingham	AL	148.49
Carson City	NV	143.55
Sierra Vista	AZ	142.37
Detroit	MI	138.72
Philadelphia	PA	135.13
Montgomery	AL	134.98
Corpus Christi	TX	134.97
Aurora	CO	132.53
Albuquerque	NM	132.20
Atlanta	GA	131.78
Lynchburg, Moore County	TN	129.17
Portland	OR	124.66
Chattanooga	TN	118.43
Mobile	AL	118.03
Columbia	SC	117.14
Wichita	KS	115.14
Goodyear	AZ	115.04
Salt Lake City	UT	109.02
Jackson	MS	109.01
Tampa	FL	108.68
Mesa	AZ	108.59
Kansas City	KS	107.79
Babbitt	MN	105.66
Cape Coral	FL	105.12
Unalaska	AK	104.27
Lubbock	TX	104.11
Abilene	TX	103.09
Little Rock	AR	102.86
Omaha	NE	100.65

<sup>1</sup> Official name is Anaconda-Deer Lodge County.

<sup>2</sup> Official name is Nashville-Davidson.

Note: Multiply square miles by 2.59 to convert to square kilometers.

There are incorporated places, particularly in the Northeast that have not had a boundary change this century; there are a few places in Alabama and California that have, in recent years, had boundary changes virtually every month.

There is only a limited relationship between place size and place population, and the relationship seems to vary by region. The most densely settled places generally are the older cities in the Northeast region, cities that underwent early development and tend to have relatively fixed boundaries. In the Northeastern States, the MCDs have strong governments that often have all the powers associated with incorporated places; as a consequence, annexation for the purpose of providing municipal services is unnecessary, and in some States is difficult, if not impossible. In some Midwestern and Southern States, boundary change laws are more permissive, and aggressive or widespread annexations often result in lower population densities for places.

**Extended cities** Recognizing the effects of city/county consolidations and unrestricted annexation practices in some States, the Census Bureau developed the *extended city* concept for the 1970 census. This concept modified the urban and rural classifications by defining, within UAs, certain sparsely settled portions of large-area incorporated places as rural. In 1980, after identifying extended cities in UAs, there still were nine sparsely settled incorporated places outside UAs that contained almost 7,700 square miles of territory, an area larger than the State of New Jersey. This distorted the national percentage of urban area by nearly 10 percent. To correct this situation for 1990, the Census Bureau modified the extended city criteria to include non-UA incorporated places. (For further information on extended cities, both inside and outside of UAs, see Chapter 12.)

### **Changes in the Boundaries and Status of Incorporated Places**

Incorporated place boundaries are subject to change; in some States, many do so frequently. The instruments of change are municipal annexation and detachment, merger or consolidation, and incorporation and disincorporation. Beginning in 1970, the Census Bureau recognized boundaries legally in effect on January 1 of the census year, rather than April 1 (census day)

to tabulate the results of its decennial censuses. This enabled the Census Bureau to avoid last-minute updates and revisions of boundaries and to put its efforts into field enumeration, processing of results, and preparation for data tabulations—all under extremely stringent time constraints.

**Annexations and detachments** Annexation is the legal expansion of corporate limits. It commonly involves the transfer of territory outside the jurisdiction of any municipal-type government into an incorporated place, but it also may involve a transfer of land between two or more incorporated places. In the Northeastern States and parts of the Midwest, annexations by some incorporated places transfer land between governmental entities (from the jurisdiction of MCDs to places). Detachment is the reverse of annexation, whereby an incorporated place relinquishes territory to another jurisdiction. Detachments occur considerably less frequently than do annexations.

Annexation practices vary greatly among the States. In some States, incorporated places merely file ordinances and immediately take over new territory; in others, there are annexation elections involving voters of both the annexing place and the territory proposed for annexation. Still other States establish a period of time over which the municipal government bringing the boundary change action must demonstrate that it can supply or improve upon the governmental services existing in the territory proposed for annexation. In some States, annexation or detachment actions do not become effective until a specified time after enactment. Differing State laws, intergovernmental relationships, political power balances, historic settlement patterns, and customary practices resulted in variations by State in the percentage of incorporated place boundary changes in the 1980 to 1990 period from zero in most of the New England States to over 80 percent in California (see Table 9-3).

**Mergers** Mergers represent the combination of two or more governmental units into one. They usually involve like governments, most often incorporated places, but occasionally represent the combination of an incorporated

Table 9-3. Incorporated Places With Boundary Changes, by State, From 1980 to 1990

	Boundary Activity			Places		Percent Change
	(annexed)	( detached)	(both)	(total)	(changed)	
Alabama	192	4	31	439	227	51.7
Alaska	27	1	0	152	28	18.4
Arizona	57	0	8	86	65	75.6
Arkansas	201	2	2	487	205	42.1
California	278	12	76	456	366	80.3
Colorado	134	0	27	267	161	60.3
Connecticut	1	0	0	31	1	3.2
Delaware	23	0	0	57	23	40.4
District of Columbia	0	0	0	1	0	0.0
Florida	193	2	34	390	229	58.7
Georgia	252	1	21	535	274	51.2
Hawaii	0	0	0	0	0	0.0
Idaho	66	3	15	200	84	42.2
Illinois	524	21	73	1,279	618	48.3
Indiana	221	1	15	566	237	41.9
Iowa	202	11	10	953	223	23.4
Kansas	209	5	26	627	240	38.3
Kentucky	169	4	14	438	187	42.7
Louisiana	142	2	7	301	151	50.2
Maine	0	0	0	22	0	0.0
Maryland	75	3	2	155	80	51.6
Massachusetts	0	0	0	39	0	0.0
Michigan	184	4	22	534	210	39.3
Minnesota	223	30	35	854	288	33.7
Mississippi	92	1	2	295	95	32.2
Missouri	294	7	15	942	316	33.5
Montana	45	4	9	128	58	45.3
Nebraska	122	11	10	535	143	26.7
Nevada	8	0	2	18	10	55.6
New Hampshire	0	0	0	13	0	0.0

Table 9-3. (cont.)

	<b>Boundary Activity</b>			<b>Places</b>		<b>Percent Change</b>
	<i>(annexed)</i>	<i>(detached)</i>	<i>(both)</i>	<i>(total)</i>	<i>(changed)</i>	
New Jersey	8	3	1	320	12	3.8
New Mexico	56	0	1	98	57	58.2
New York	101	2	4	619	107	17.3
North Carolina	284	0	9	511	293	57.3
North Dakota	68	2	6	366	76	20.8
Ohio	309	8	16	941	333	35.4
Oklahoma	200	16	56	592	272	45.9
Oregon	132	3	7	241	142	58.9
Pennsylvania	11	1	5	1,022	17	1.7
Rhode Island	0	0	0	8	0	0.0
South Carolina	134	1	4	270	139	51.5
South Dakota	65	4	4	310	73	23.5
Tennessee	197	3	15	336	215	64.0
Texas	475	17	133	1,171	625	53.4
Utah	102	2	22	228	126	55.3
Vermont	1	1	0	51	2	3.9
Virginia	42	1	6	229	49	21.4
Washington	183	1	3	266	187	70.3
West Virginia	74	1	1	230	76	33.0
Wisconsin	267	3	30	583	300	51.5
Wyoming	54	0	2	97	56	57.7
<i>U.S. Totals</i>	<i>6,697</i>	<i>198</i>	<i>781</i>	<i>19,289</i>	<i>7,676</i>	<i>39.8</i>

Source: P.L. 94-171 Redistricting Data File.

place and an MCD, such as the 1986 merger of Northampton township, Ohio, into Cuyahoga Falls city. Typically, the name of the preexisting largest entity is adopted for the one remaining government, but occasionally, the names of both merging entities are combined to represent the surviving government, or the entity adopts an altogether new name. In an unusual four-place merger that took place in January 1994, the cities of Flat River, Elvins, Esther, and the village of Rivermines, Missouri, joined to form the new place of Park Hills.

**Consolidated cities** Although the term *consolidation* sometimes is used interchangeably with *merger*, the Census Bureau generally uses consolidation to describe the creation of a new type of government resulting from an agreement between a city, its surrounding county, and any other governmental units within that county. The term *consolidation* is used when different levels of government are represented by a single entity; this new type of government has jurisdiction over the entire county or MCD area, unless some preexisting places are specifically excluded, as is the case with Lawrence, Beech Grove, Speedway, and Southport, Indiana, which have no governmental association with Indianapolis, Indiana. The Census Bureau defines a *consolidated city* as one wherein an additional incorporated place or places continue(s) to exist. In 1990, there were six consolidated cities: Butte-Silver Bow, Montana; Columbus, Georgia; Indianapolis, Indiana; Jacksonville, Florida; Milford, Connecticut; and Nashville-Davidson, Tennessee. In 1991, Athens-Clarke County, Georgia, became a consolidated city. All of these consolidated cities represent city-county consolidations except Milford, Connecticut, which is the consolidation of a city and an MCD.

For the 1990 census, the Census Bureau reported the population of the smaller incorporated places that continue to exist within the consolidation as separate from the principal city, which is described as *remainder* in the data tables. The Census Bureau treats each entity with the remainder designation as a separate place; the consolidated government is not treated as a place, but as a separate consolidated city entity in the data presentation.



In the 1980 census, the Census Bureau also excluded the other separate incorporated places that were part of the consolidated city from the population count of the principal city (but did not use the term *remainder* in its title); in 1970, it included them in the principal city's population count, but erroneously did not report data for the separately incorporated places that continued to exist within the consolidated city.

Relatively few city-county consolidations with dependent places have arisen since 1960, although there are a number of older city-county consolidations with only a single surviving city; for example, New Orleans, Louisiana; Philadelphia, Pennsylvania; San Francisco, California; and New York, New York, where the city consolidated with five counties.

**Attributes of incorporated place boundaries** Corporate limits may have unique boundary features that are irregular in shape. Some States allow incorporated places to annex area that is not contiguous to the existing corporate limits. Some places annex narrow strips of land that often are unpopulated (for example, highway rights-of-way); the Census Bureau calls the latter areas *corporate corridors* and may display them on its map products by using a special mapping symbol.

### **The Boundary and Annexation Survey**

In order to obtain better intercensal records of place incorporations, disincorporations, mergers, annexations, detachments, and changes affecting counties, the Census Bureau began an annual Boundary and Annexation Survey (BAS) in 1972. In most years the Census Bureau mails the BAS to each county (or equivalent governmental entity, such as the parish in Louisiana and the borough in Alaska), plus any incorporated places above a certain population size (usually 5,000 or more). The BAS is mailed to *all* incorporated places (and MCDs) in selected years, including the three-year period immediately before each decennial census. The BAS also provides a record of changes to place names and corporate status (that is, city, town, village, borough), an annual update of the universe of incorporated and active

places, as well as information on boundary changes. The Census Bureau then provides all the BAS information to a representative of the State government—the State certifying official—for confirmation and certification.

The Census Bureau's computerized geographic data base of the entire Nation, the TIGER data base, stores information about features (such as roads, rivers, lakes, railroads, and power lines) and boundaries, along with information about the relationships among them. Since 1988, the Census Bureau has produced, from its TIGER data base, digital maps for the BAS. All information obtained through the BAS is then entered into the TIGER data base so that all subsequent TIGER System products reflect these changes.

## **Census Designated Places**

Census designated places (CDPs) are communities that lack separate governments but otherwise resemble incorporated places. They are settled population centers with a definite residential core, a relatively high population density, and a degree of local identity. Often a CDP includes commercial, industrial, or other urban types of land use. Before each decennial census, CDPs are delineated by State and local agencies, and by tribal officials according to Census Bureau criteria. The resulting CDP delineations are then reviewed and approved by the Census Bureau. The Census Bureau has used slightly different definitional criteria for CDPs, depending on their geographic location; such specialized criteria reflect the uniquely different living conditions or settlement patterns found in certain areas and the relative importance of settlement size. Examples are the CDPs inside UAs and outside of UAs, and the CDPs in Alaska, Hawaii, Puerto Rico, the Outlying Areas, and on American Indian reservations (for details, see the section in this chapter entitled "Criteria for Delineation of CDPs in the 1990 Census"). Although only about one-fifth as numerous as incorporated places, CDPs are important geographic units; they permit the tabulation of population counts for many localities that otherwise would have no identity within the Census Bureau's framework of geographic areas. In 1990, over 29 million people in the United States resided in CDPs (see Table 9-4).

Table 9-4. **CDPs and Incorporated Places in the U.S., 1950 Through 1990**

		<b>Number</b>	<b>Population</b>	<b>Percent Population</b>
1950	CDPs	1,430	3,565,496	2.3
	Incorporated Places	17,118	96,062,627	63.7
1960	CDPs	1,576	6,583,649	3.7
	Incorporated Places	18,088	115,910,865	64.6
1970	CDPs	2,102	12,816,101	6.3
	Incorporated Places	18,666	131,931,660	64.9
1980	CDPs	3,432	24,176,786	11.1
	Incorporated Places	19,097	140,273,938	61.9
1990	CDPs	4,146	29,595,737	11.9
	Incorporated Places	19,289	152,942,266	61.5

*Note: Table 9-4 above reflects the unincorporated place/CDP criteria applied at the time of each decennial census. In 1940, there were 3,594 "unincorporated communities," but no total population was compiled or published. The 1950 information refers to the coterminous 48 States. From 1960 to 1990, CDP totals include Alaska and Hawaii; incorporated place totals do not include Hawaii since the Census Bureau treats all places there as CDPs.*

### **Origin and Evolution of CDPs**

At the time of the early decennial censuses, there were sharper distinctions than now exist between city and country, or place and nonplace populations. The United States was largely agrarian; modern-day utilities and transportation systems did not exist. Thus, the communities that did exist tended to be compact, densely settled, easily identifiable, and of relatively great economic and cultural significance. Nonetheless, early census-taking procedures tended to be casual—there was no systematic effort to report the population by place—and many incorporated communities were not identified specifically. Despite an increased awareness of the need for a more precise accounting of the distribution of the population, a systematic, separate, and detailed reporting of the incorporated

place population did not begin until the 1880 census. That census also marked the first systematic identification and reporting of unincorporated communities, which appeared in separate tables for each State.

Some unincorporated places first were reported in statistical tables in the 1850 census, usually appearing under the appropriate MCDs. After the clarification and expansion of this reporting in 1880, the 1890 decennial census intermingled incorporated and unincorporated places without distinguishing them. The next four decennial censuses did not include unincorporated communities.

For the 1940 decennial census, the Census Bureau compiled a separate report of unofficial, unincorporated communities of 500 or more people. The Census Bureau identified many of the communities in advance with mapping assistance from the U.S. Public Roads Administration, but also relied on census enumerators to identify and approximate the boundaries of additional communities. Many of the unincorporated communities included in the special 1940 report were not communities in the sense of being cohesive, locally recognized settlements; rather, they often were merely residential subdivisions or clusters of housing units.

The Census Bureau officially recognized unincorporated places in the decennial census of 1950, identifying all potential areas in advance of the count, including them on census maps, and adding them to its geographic coding framework. It established a population minimum of 1,000 and used the symbol (U) to identify them in the decennial census reports of 1950, 1960, and 1970. This designation changed to CDP in the 1980 census.

Many of the residential subdivisions included in the 1940 *Unincorporated Communities* report were included in the new *urban fringe* delineations in the 1950 census without separate identification. Unincorporated places were not identified within UAs until the 1960 census, when the Census Bureau established a 10,000 person population minimum. The Census Bureau has modified the population threshold for identifying unincorporated places within UAs with each subsequent decennial census to the

present time; however, the 1,000 population minimum outside of UAs has been constant, with the exception of Alaska, Hawaii, Puerto Rico, and places within American Indian reservations (see Table 9-5). Beginning with the 1970 census, the Census Bureau recognized as unincorporated places, the concentrated residential populations on and around military installations.

Table 9-5. **Criteria for Qualification of CDPs From 1940 Through 1990**

1940	No official recognition of CDPs as places; <i>unincorporated communities</i> of 500 or more inhabitants were tabulated when separate figures could be compiled.
1950	Outside of UAs, unincorporated places of 1,000 or more inhabitants qualified as CDPs.  Inside UAs, only incorporated places were recognized.
1960	Outside of UAs, 1,000 or more inhabitants were required to qualify a place as a CDP.  Inside UAs, unincorporated places of 10,000 or more inhabitants were recognized as CDPs. No unincorporated places in New England UAs could be included in the UA.
1970	Outside of UAs, 1,000 or more inhabitants were required to qualify a place as a CDP.  Inside UAs, unincorporated places (excluding New England UAs) of 5,000 or more inhabitants were recognized as CDPs.
1980	Outside of UAs, 1,000 or more inhabitants were required to qualify a place as a CDP.  Inside UAs, CDPs were recognized if they had 5,000 or more inhabitants (in larger UAs), or 1,000 or more inhabitants (in smaller UAs). This was the first year the Census Bureau recognized CDPs inside New England UAs.
1990	Outside of UAs, 1,000 or more inhabitants (250 or more on American Indian reservations) were required to qualify a place as a CDP.  Inside UAs, CDPs were recognized if they had 2,500 or more inhabitants (a few if they had 1,000 to 2,499 inhabitants).

*Note: Since before 1950, the minimum unincorporated place/CDP size for Alaska (outside of UAs) has been 25 or more inhabitants; for Hawaii (both inside and outside of UAs) it has been 300 or more.*

For the 1980 census, the Census Bureau changed the name *unincorporated place* to *census designated place* in order to emphasize that these communities are described and delineated by the Census Bureau (albeit with State and local input), and do not represent an unabridged list of communities that lack legal definition. Also, with the advent of the General Revenue Sharing Program in the 1970s, the term *unincorporated place* had caused some confusion locally. This was particularly true in Northeastern and some Midwestern States where many of the MCDs were incorporated, and where their officials were displeased by the Census Bureau's classification of any portions of their governments as *unincorporated*.

The 1980 census included a *whole-town CDP* category, whereby MCDs in New England, the Middle Atlantic States, Michigan, and Wisconsin were treated as places (for urban/rural qualification and whole-count purposes) if 95 percent or more of their population and 80 percent or more of their land area qualified for inclusion in a UA. The Census Bureau long has grappled with the proper treatment of these strong governmental entities, particularly in the classification of their populations as urban or rural. These MCDs also were treated as places in the 1940, 1960, and some earlier censuses. The Census Bureau dropped the whole-town CDP category for the 1990 census; CDPs defined within these largely built-up MCDs follow regular CDP criteria. That is, the entire MCD may be coextensive with a CDP, or the MCD may contain one or more CDPs. In its 1990 data presentations, the Census Bureau has included the MCDs in 12 States (the 6 New England States plus Michigan, Minnesota, New Jersey, New York, Pennsylvania, and Wisconsin) in some of the data products that present tabulations for places of 2,500 or more. The MCDs in these States serve as general purpose local governments, and they possess legal or governmental powers similar to those of incorporated places. As a result, data users interested in both kinds of entities can refer to them more easily (see Table 9-6).

Table 9-6. **Criteria for Qualification of MCDs as Urban Places From 1940 Through 1990**

1940	Towns in Massachusetts, New Hampshire, and Rhode Island containing 2,500 or more inhabitants and having densely settled area(s) comprising 50 percent or more of the population qualified as <i>urban under special rule</i> . In other States, MCDs of 10,000 or more inhabitants and with a density of at least 1,000 people per square mile also qualified as <i>urban under special rule</i> .
1950	None
1960	<i>Urban towns</i> in New England, and <i>urban townships</i> in New Jersey and Pennsylvania qualified as urban places if they had no incorporated places, and <i>either</i> (1) 25,000 or more inhabitants or (2) 2,500 to 24,999 inhabitants and a density of at least 1,500 people per square mile.
1970	None
1980	Towns in New England, New York, and Wisconsin, and townships in New Jersey and Pennsylvania qualified as urban places (also called whole-town CDPs) if they had no incorporated places, 1,000 or more inhabitants, and if both 90 percent of the population <i>and</i> 80 percent of the land area met the minimum density requirement for inclusion in a UA.
1990	None

### **Criteria for Delineation of CDPs in the 1990 Census**

The Census Bureau has developed a program whereby local census statistical areas committees, tribal officials, and State-designated agencies identify and delineate boundaries for potential CDPs according to criteria developed by the Census Bureau.

**General characteristics** In general, a CDP should be a densely settled and named community or population center that does not have legally defined municipal boundaries or corporate powers. It may not include any portion of an incorporated place. A named subdivision or building complex should not be considered a CDP unless it represents a planned community that offers a range of community facilities and services.

Unlike most incorporated places, CDP boundaries are delineated to follow visible features (streets, roads, rivers, railroads, and the like) except where the boundary of the potential CDP is coincident with the boundary of an adjoining legally recognized entity, such as an incorporated place or MCD. Because of this requirement, sparsely settled area sometimes is included in a CDP, or conversely, a small fringe of built-up area is not included in the CDP. The latter is particularly true in relatively small CDPs where outlying roads or features that may be used as boundaries are spaced widely.

Ideally, CDPs contain a dense, city-type street pattern and have an overall population density of at least 1,000 people per square mile. However, the Census Bureau recognizes that some CDPs may not meet the density criterion because the selection of available boundary features may result in the CDP including some sparsely settled territory. Another exception to the density criteria may occur on American Indian reservations, where communities often have a dispersed settlement pattern. Several minimum population sizes apply to CDPs recognized in the 1990 census, but there is no maximum limit to the number of people a CDP may contain.

**CDPs inside UAs** The minimum population size for most CDPs located within UAs is 2,500. However, because preliminary 1990 population counts were used to qualify CDPs, some CDPs inside UAs have less than 2,500 people. (For details, see Chapter 12, “The Urban and Rural Classifications.”) This 2,500 population size threshold does not apply to Hawaii, Puerto Rico, or the Outlying Areas.

**CDPs outside of UAs** The minimum population size for most CDPs located outside of UAs is 1,000 people; for CDPs on American Indian reservations, it is 250 people. These sizes do not apply to Alaska, Hawaii, Puerto Rico, or the Outlying Areas.

**CDPs in Alaska** Alaska is by far the most sparsely settled of the States, and has very few communities with more than 1,000 residents. To account for the significance of, and allow for tabulation of, data to identify the smaller communities in Alaska, the minimum population for CDPs outside of UAs



is 25 rather than 1,000. Many CDPs correspond to the boundaries established for Alaska Native village statistical areas (ANVSAs), which represent the geographic jurisdiction of an Alaska Native village (see Chapter 5, “American Indian and Alaska Native Areas”). The population size required in UAs is the same as in the remainder of the United States, but there were no such CDPs in 1990.

**CDPs in Hawaii** The Census Bureau has always noted that the population settlements in Hawaii were unincorporated. The published data before 1980, however, showed the unincorporated communities as cities, towns, or villages, and treated the places as incorporated. Beginning in 1980, all places in Hawaii were shown as CDPs. The consolidated City and County of Honolulu dates from 1907, but the Census Bureau, in agreement with local authorities (after 1960, with the Office of the Governor) treats the built-up portion of the city as a CDP (more or less coextensive with the old Honolulu judicial district) and identifies other CDPs within Honolulu County.

The minimum population for a CDP in Hawaii is 300, regardless of whether it is inside or outside of a UA. Soon after becoming a State, the Hawaii legislature enacted State Bill 1122 (Act 25 of 1963) for the purpose of establishing statistical boundaries for its cities and towns. Those entities lack the governmental powers that define incorporated places in the other 49 States, but Hawaii wanted the Census Bureau to recognize entities it defined as the equivalent of *mainland* incorporated places for statistical purposes. The Census Bureau corresponded with the Office of the Governor before the enactment of the legislation, and agreed to the 300 population cutoff.

**CDPs in Puerto Rico** In Puerto Rico, which has no incorporated places, the Census Bureau defines two kinds of CDPs—*zonas urbanas* (urban zones) and *comunidades* (villages). *Zonas urbanas*, roughly equivalent to county seats in the United States, are the seats of government for the *municipios*, which are the statistical equivalents of U.S. counties. *Comunidades*, which were known as *aldeas* in the 1980 and earlier censuses, require a minimum

of 1,000 people for recognition as CDPs; there is no minimum population requirement for *zonas urbanas*.

**CDPs in the Outlying Areas** The population minimum for CDPs is 300 in the Outlying Areas of Guam, the Virgin Islands of the United States, Palau, and the Northern Mariana Islands; there are no CDPs in American Samoa because incorporated villages cover the entire territory and all of the population. (For details, see Chapter 7, “Puerto Rico and the Outlying Areas.”)

**CDPs on American Indian reservations** Before the 1980 census, the Census Bureau had offered tribal officials the opportunity to delineate CDPs on Indian reservations. To be recognized in the data tabulations, such CDPs had to conform to the national minimum population size of 1,000. Also for 1980, tribal leaders were given the opportunity to identify small geographic areas within reservation boundaries as *subreservation areas*. Data users found that subreservation areas often were useful for identifying small settlements of several hundred people. For 1990, the Census Bureau discontinued the subreservation area program, but gave tribal officials the opportunity to delineate clusters of population as CDPs. To help this process, it lowered the minimum population size for CDPs on American Indian reservations from 1,000 to 250. (For further information, see Chapter 5, “American Indian and Alaska Native Areas.”)

### **Qualification and/or Deletion of Census Designated Places**

The Census Bureau recognizes CDPs using population counts from the decennial census. The Census Bureau establishes potential CDPs before the census; these potential CDPs reflect the proposed CDPs and CDP boundaries submitted by program participants. The Census Bureau then tabulates the population of the census blocks comprising these potential CDPs. If a potential CDP meets the required minimum population size, it qualifies as a CDP and the Census Bureau includes it in its data tabulations and publications. For the 1990 census, the Census Bureau used postcensus local review counts to identify qualifying CDPs so it could include them in early decennial census data products, including the Public Law 94-171 data

products. A small percentage of CDPs show a final population below the minimum size threshold because their qualification was based on the preliminary (post-census local review), rather than final counts.

The Census Bureau does not grandfather existing CDPs. CDP program participants must identify the boundaries for their proposed CDPs each time the Census Bureau implements the program. Data users may notice differences in the universe and areal extent of CDPs from one decennial census to the next for several reasons. First, all or part of the territory in a previously recognized CDP may have become part of a new or existing incorporated place. Second, the census statistical areas committees, State agencies, or tribal officials that function as program participants may have chosen not to submit a previously recognized CDP, or may have submitted previously unrecognized CDPs that qualify as new CDPs. Third, the previously delineated CDP may no longer meet one of the current criteria for qualification because of a change in criteria, or because it no longer has the required minimum population size. Finally, a previously recognized community may have been combined, renamed, or fragmented by delineation of new CDPs in such a way that the remnants of the former entity are no longer identifiable as a community.

### **Geographic Distribution of CDPs**

State and local laws, customs, and practices greatly affect the recognition and distribution of CDPs nationwide. Several States in the Midwest region have very few CDPs because almost all population concentrations have incorporated as places. Maryland, Virginia, California, Florida, New York, and Georgia are examples of States in which a number of very large suburban population centers have developed with no legal corporate status. Strong county governments in those States provide the urban-type services that only incorporated place governments provide in many other States. In 1990, Iowa had the fewest CDPs (two), followed by Idaho (three), and Kansas and Nebraska (four each). California, Florida, and New York have the largest number of CDPs (420, 365, and 350, respectively). Table 9-7 shows the number of, and population totals for, CDPs and incorporated places in each State.

Table 9-7. Number and Population of Places, by State, in 1990

	<b>Incorporated Places</b>		<b>Census Designated Places</b>	
	<i>(number)</i>	<i>(population)</i>	<i>(number)</i>	<i>(population)</i>
Alabama	439	2,432,988	34	165,971
Alaska	152	408,338	165	67,696
Arizona	86	2,841,026	93	271,997
Arkansas	487	1,439,864	14	49,877
California	456	23,611,378	420	3,307,677
Colorado	267	2,382,136	42	345,269
Connecticut	31	1,341,489	86	679,314
Delaware	57	193,689	15	78,000
District of Columbia	1	606,900	0	0
Florida	390	6,404,550	365	3,235,065
Georgia	535	2,582,207	64	665,738
Hawaii	0	0	125	1,044,884
Idaho	200	622,296	3	9,230
Illinois	1,279	9,627,226	29	119,071
Indiana	566	3,529,940	24	92,167
Iowa	953	2,123,410	2	4,901
Kansas	627	1,963,658	4	18,167
Kentucky	438	1,754,314	33	240,003
Louisiana	301	2,179,952	90	704,523
Maine	22	357,890	84	257,160
Maryland	155	1,412,144	174	2,428,519
Massachusetts	39	2,794,054	192	1,536,981
Michigan	534	5,453,808	86	847,662
Minnesota	854	3,440,199	9	8,325
Mississippi	295	1,295,616	29	80,466
Missouri	942	3,362,721	19	209,938
Montana	128	443,674	34	64,697
Nebraska	535	1,179,171	4	21,619
Nevada	18	654,796	38	416,809
New Hampshire	13	388,467	47	168,971
New Jersey	320	3,871,495	179	2,085,540
New Mexico	98	972,462	76	202,361
New York	619	11,536,658	350	3,026,714
North Carolina	511	3,025,500	100	353,123
North Dakota	366	449,708	10	24,018

Table 9-7. (cont.)

	<b>Incorporated Places</b>		<b>Census Designated Places</b>	
	<i>(number)</i>	<i>(population)</i>	<i>(number)</i>	<i>(population)</i>
Ohio	941	7,226,989	111	547,290
Oklahoma	592	2,387,807	6	23,349
Oregon	241	1,760,087	43	307,687
Pennsylvania	1,022	5,856,373	275	1,367,408
Rhode Island	8	534,980	19	192,589
South Carolina	270	1,275,966	72	367,375
South Dakota	310	459,994	24	31,907
Tennessee	336	2,844,151	37	145,086
Texas	1,171	12,978,796	105	551,388
Utah	228	1,319,496	27	282,436
Vermont	51	155,429	18	58,409
Virginia	229	2,630,169	116	1,394,799
Washington	266	2,433,546	160	1,285,674
West Virginia	230	671,046	47	108,060
Wisconsin	583	3,406,644	35	75,282
Wyoming	97	317,069	12	24,545
<i>United States</i>	<i>19,289</i>	<i>152,942,266</i>	<i>4,146</i>	<i>29,595,737</i>

Source: CPH-2 series (U.S. Summary and State reports).

## Place Codes

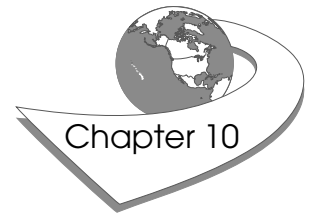
Geographic identification codes (geocodes) are unique identifying numbers that the Census Bureau assigns to all tabulation entities for computer processing. The Census Bureau assigns another set of codes only to functioning governmental units for processing its Census of Governments. The United States Geological Survey (USGS) administers the Federal Information Processing Standard (FIPS) 55 code system for locational entities, which include places, MCDs, American Indian reservations, and communities that are not recognized by the Census Bureau as either incorporated places or CDPs. This discussion deals only with codes for places recognized by the Census Bureau.

There are three types of codes for places. The first, the census place code, is a four-digit identifier that reflects the alphabetical order of all census places (including CDPs) within a State. The Census Bureau initially assigned these codes in increments of five to permit subsequent insertion of newly incorporated places or new CDPs. The Census Bureau revises these codes if it becomes necessary to maintain the alphabetic sequence for new places. The second, the governmental unit (GU) code, is used mainly in the Census of Governments and related surveys. This code is a three-digit identifier that is unique only within county; therefore, it must be used in conjunction with the remainder of the State, county, and MCD components of the code. The result is a nine-digit identifier. As the name implies, there are no GU codes for CDPs.

The USGS assigns the third type of code, the FIPS 55 code, which is a five-digit code assigned within a State considering the alphabetical sequence of names for all places, MCDs, and other named communities and locational entities such as well-known landmarks. There is a special set of class codes to distinguish between incorporated places, CDPs, MCDs, and the other classes of named entities. FIPS codes 90000-98999 are used for CCDs and some nonfunctioning MCDs; the USGS assigns the other numbers based on the alphabetic sequence of the locational entities within the individual States. FIPS codes are being adopted as a national standard for Federal agency data presentation, and will be used exclusively, in lieu of the census MCD and place codes, before the 2000 census.

The Census Bureau also assigns additional descriptive codes associated with places. Place size codes identify the population range (for example, a population of 500 to 999) within which each entity is located. Place description codes identify central cities of metropolitan areas and central places of UAs. In 1993, the Census Bureau produced the TIGER/GICS™ (Topologically Integrated Geographic Encoding and Referencing/Geographic Identification Code Scheme), a machine-readable file that contains the names of all places along with their census and FIPS 55 (but not GU) identification codes, and descriptive codes including those that identify place size, place description, and location within a metropolitan area. Each record also

contains information about the land and water area of the place, and an *internal point* of latitude and longitude displayed in decimal degrees rather than minutes and seconds. In addition, the 1980 GICS publication showed whether census blocks existed for the individual areas; this was not necessary for the 1990 census product because by 1990, the Census Bureau had extended census block coverage to the entire Nation.



# Census Tracts and Block Numbering Areas

Census tracts are small, relatively permanent geographic entities within counties (or the statistical equivalents of counties) delineated by a committee of local data users. Generally, census tracts have between 2,500 and 8,000 residents and boundaries that follow visible features. When first established, census tracts are to be as homogeneous as possible with respect to population characteristics, economic status, and living conditions.

Block numbering areas (BNAs) are geographic entities similar to census tracts, and delineated in counties (or the statistical equivalents of counties) without census tracts. For the 1990 census, the difference between census tracts and BNAs generally was the type of organization doing the delineation. Local census statistical areas committees (CSACs), often working at the county level, delineated or reviewed census tracts. State agencies and American Indian tribal authorities, sometimes with extensive assistance from the Bureau of the Census, delineated BNAs.

The Census Bureau uses census tracts and BNAs to collect, organize, tabulate, and present the results of its decennial censuses. Both census tracts and BNAs are an important part of the Census Bureau's geographic hierarchy (see Figures 2-1 and 2-3 in Chapter 2). For the 1990 decennial census, the Census Bureau recognized 50,690 census tracts in the United States and Puerto Rico, and 11,586 BNAs in the United States, Puerto Rico, and the Outlying Areas under U.S. jurisdiction. Six States (California, Connecticut, Delaware, Hawaii, New Jersey, and Rhode Island) and the District of Columbia are covered completely by census tracts.

## Background

The first recorded instances of the delineation of small geographic entities based on population, topography, and housing characteristics were the sanitary districts of a special vital statistics study associated with the 1890 census. The Census Office, predecessor of the Census Bureau, worked with local officials in a number of cities to delineate a network of small geographic areas.



These sanitary districts then were used to analyze and compare the effect of population, topography, and housing on the mortality rate of the inhabitants. The delineation of these sanitary districts was an important step in the evolution of geographic statistical entities. This may have been the first instance of Federal and local cooperation in designing a set of small geographic units based on population and housing characteristics.

### **Census Tracts**

In 1906 Dr. Walter Laidlaw, Director of the Population Research Bureau of the New York Federation of Churches, published an article putting forth the idea of delineating and using small geographic areas as a method of studying neighborhoods in New York city.<sup>1</sup> Dr. Laidlaw had been studying neighborhoods by using the 1900 census data for assembly districts (subdivisions of New York city's boroughs) together with information from other sources. In 1905, the State of New York changed the boundaries of the assembly districts, thereby altering the geographic framework and impairing the usefulness of all his information.

In search of a solution, Dr. Laidlaw proposed a scheme that did away with both ward and assembly districts as data tabulation units. Instead of these, he suggested the delineation of permanent small areas that would retain their boundaries from census to census. His plan was to subdivide each square mile of New York city into quarter sections of about 160 acres. In 1909, he persuaded the Census Office to adopt the concept, and they collected the 1910 census data in a manner that allowed for these tabulations by small area. Interested data users then could purchase the data summaries and arrange for their tabulation and publication. The Census Office also delineated similar *districts*, later called *census tracts*, in seven other cities: Baltimore, Boston, Cleveland, Chicago, Philadelphia, Pittsburgh, and St. Louis.<sup>2</sup>

The Census Bureau collected data by census tract for these eight cities in 1910 and 1920; however, only New York city made immediate use of the data. In the mid-1920s, Chicago and Cleveland purchased and published their census tract data. By the end of the decade, 18 cities (the same 8,

and 10 new ones) were reviewing or delineating census tracts for the 1930 census.

This increased interest in census tracts was due largely to the promotional efforts of Howard Whipple Green, a statistical consultant working in Cleveland, Ohio. Having experienced data problems similar to those faced by Dr. Laidlaw, he found that census tracts were a solution. In 1931, the American Statistical Association appointed Mr. Green chairman of its newly formed Committee on Census Enumeration Areas. Along with this appointment came the unofficial assignment to promote the delineation of census tracts in large cities throughout the country. Over the next 25 years, he worked hard at this task, contacting interested people in other cities, encouraging the formation of local committees, and publicizing uses for census tract data in a newsletter.<sup>3</sup>

In his dealing with the local committees, Mr. Green often found it convenient to identify one individual in each city as a point of contact. He called these individuals *key persons*. The committees themselves became known as *census tract committees*. These were the forerunners of the present-day census statistical areas committees (see Chapter 3, “Local Census Statistical Areas Committees and Other Local Assistance”). For the 1940 census, the Census Bureau adopted the census tract as an official geographic entity to be included in data tables of the standard publications of the decennial census. This relieved the census tract committees of the need to purchase the data tabulations and to fund their publication. In 1955, upon Mr. Green’s retirement, the Census Bureau assumed the functions of promoting and coordinating the delineation of census tracts.

### **Block Numbering Areas**

Both census tracts and BNAs provide the geographic framework for delineating block groups, assigning census block numbers, and tabulating and presenting the resultant data. In 1940, the Census Bureau began publishing census block data for all cities with 50,000 or more inhabitants. In cities that had census tracts, it assigned the block numbers by census tract; in

cities without census tracts, it devised *block areas* to control the numbering. These block areas, renamed *block numbering areas (BNAs)* in 1960, consisted of one or more enumeration districts, and sometimes city wards. Their boundaries were major streets, railroads, and other physical features. In 1970, the Census Bureau established its current procedure of numbering BNAs within a county (or statistically equivalent entity) beginning with the number 9501. In 1970 and 1980, there was an increase in the number of jurisdictions and areas receiving data by census block under the BNA program (see Chapter 11, “Census Blocks and Block Groups”). Beginning with the preparations for the 1980 census, the Census Bureau changed the BNA delineation criteria to make BNAs more comparable in size and shape to census tracts.

## **Census Tract and BNA Criteria**

Over time, the Census Bureau and the census statistical areas committees have developed a set of standards to guide the establishment and revision of census tracts. Although not expressly mandated by any legislation, these practices have evolved through custom and usage, and are now an integral part of the principles, policies, guidelines, and criteria that the Census Bureau uses to create and maintain census tracts. These rules promote census tract consistency nationwide, and also serve to meet local needs for small-area data.

### **Eligibility**

The eligibility criteria for the census tract program has evolved over time in response to user demand and the growth in metropolitan areas (MAs). Initially, only metropolitan counties (or statistically equivalent entities) and nonmetropolitan jurisdictions that met specified conditions could participate in the census tract program. Generally, local committees decided to delineate census tracts in nonmetropolitan counties because (1) the counties were likely to gain metropolitan status as a result of an upcoming census, (2) they had a population of at least 100,000, or (3) they contained a city having at least 40,000 people. In addition, committees could establish census tracts in nonmetropolitan counties adjacent to metropolitan areas

if the counties were part of the planning or jurisdictional region of an existing census statistical areas committee.

For the 1990 decennial census, the Census Bureau assigned block numbers to all parts of the United States and the Outlying Areas. It opened the census tract program to include all counties (and statistical equivalents) with sufficient local interest to form a census statistical areas committee. All other counties (or equivalents) were part of the BNA program. (For details, see the section in this chapter entitled “Census Tracts and BNAs for the 1990 Census.”)

### **Basic Attributes of Census Tracts and BNAs**

Even though local participation in the census tract program evolved over time in response to user demand and the growth in MAs, the underlying rationale for delineating census tracts has remained constant. They define a set of small geographic areas for the enumeration, tabulation, and publication of census data.

For the 1990 census, the Census Bureau changed the concept of the BNA dramatically. By redefining the BNA from a geographic area delineated solely as the framework for assigning census block numbers (1940 through 1980), to an entity sharing the same basic attributes as the census tract (1990), the Census Bureau has established a nationwide set of comparable small geographic areas.

The census tract and BNA criteria recognized by the Census Bureau identify boundary, size, and demographic requirements, and establish conventions for numeric identification and stability.

**Boundary requirements** The need for appropriate boundaries is a long-standing concern of census geography. Census tract and BNA boundaries generally follow permanent, visible features, such as streets, roads, highways, rivers, canals, railroads, and high-tension power lines. Pipelines and ridge lines may be acceptable when no other choice is available.

The most important attribute of census tract/BNA boundaries is that they be visible, that is, readily identifiable in the field.

The Census Bureau often is urged to accept the use of governmental unit boundaries as census tract and BNA boundaries. Census tract/BNA boundaries always follow the boundaries of States and counties (or their statistical equivalents). Census tract and BNA boundaries follow other governmental unit boundaries only in selected instances. Many early census tract plans covered only large cities; as a result, the city limits were census tract boundaries. This posed no problem at a time when governmental unit boundaries remained unchanged for long periods of time, and thus, their location was well known. Later, as annexations became more frequent and incorporated places expanded into surrounding areas, the governmental unit boundaries in many States became more irregular and subject to change, and fewer people knew their precise location. This lack of stability meant that the governmental unit boundaries became less suitable as census tract boundaries.

For the 1970 census, the Census Bureau began providing data for that portion of each census tract inside a governmental unit, and for the census tract as a whole. Until then, the only way to obtain census tract data within a governmental unit was by recognizing the governmental unit boundaries as census tract boundaries. Currently, the Census Bureau makes the full range of census data available for all governmental units and for census tracts/BNAs, thereby negating the need for census tract/BNA boundaries to follow governmental unit boundaries.

**Demographic requirements** When first delineating census tracts, the Census Bureau requests that the average population of all census tracts in a county (or statistically equivalent entity) be about 4,000 people (approximately 1,500 housing units), with individual census tracts ranging from 2,500 to 8,000 inhabitants (1,000 to 3,000 housing units). For the 1990 census, the Census Bureau requested that the average number of housing units in each BNA be around 1,500 (approximately 4,000 people), ranging from 600 to 3,000 housing units (1,500 to 8,000 inhabitants).

The Census Bureau also requests that at the time each census tract/BNA is established, it contain (if possible) a population whose housing and socio-economic characteristics are similar. Because the characteristics of neighborhoods and other small areas change with time, census tracts/BNAs may become less homogeneous in succeeding censuses.

**Numeric identification** To facilitate data processing and publication, the Census Bureau identifies census tracts and BNAs by number rather than name. Each census tract has a basic census tract number composed of no more than four digits, and may have an optional two-digit decimal suffix. (Leading zeroes appear in electronic media products, but do not appear on the Census Bureau's maps or in the printed reports.) All BNAs have a four-digit basic number and may have an optional two-digit decimal suffix. The Census Bureau uses the numbers 1 to 9499.99 to identify census tracts, and 9501 to 9989.99 to identify BNAs.

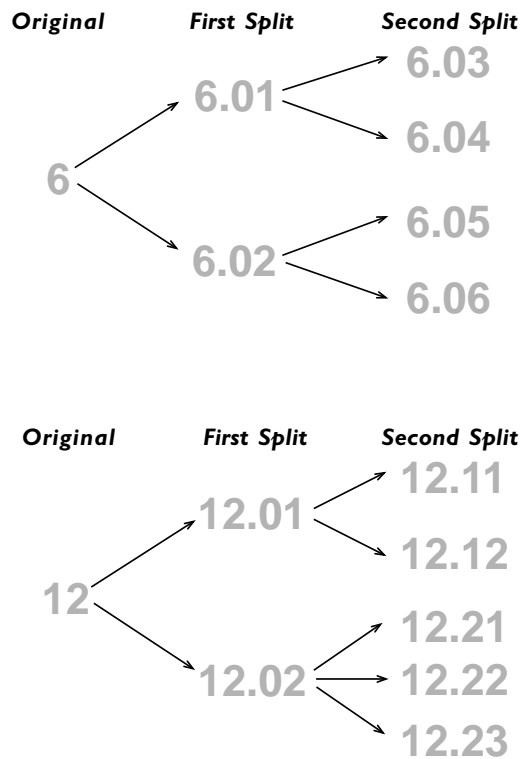
Sometimes the Census Bureau recommends a range or series of census tract/BNA numbers to the census statistical areas committee or agency participating in the BNA program to avoid duplication with adjoining counties. For example, if two counties in the same MA both contain census tracts numbered 101 through 110, the Census Bureau might recommend that one county renumber their census tracts 1101 through 1110, and the other renumber theirs 2101 through 2110.

A permanent numbering system is desirable since it helps data users make intercensal comparisons of information by census tract. Census tract updates often involve the subdivision of an existing census tract (or census tracts) into two or more new units. When new census tracts (splits) occur within an established set of census tracts, the Census Bureau recommends retaining the original four-digit census tract number and adding a two-digit decimal suffix. As a result, Census Tract 101 may be split into Census Tracts 101.01, 101.02, and so forth, depending upon how many new census tracts are created. If a census tract identified by a suffixed number is subsequently split, the census statistical areas committee usually drops the existing suffix and utilizes the next available suffixes.

Figure 10-1 depicts the most common scheme for numbering split census tracts (represented by Census Tract 6) and an alternative numbering scheme that some census statistical areas committees have chosen to use (represented by Census Tract 12). If two census tracts merge, the Census Bureau recommends that the census statistical areas committee retain the number of the more populous census tract.

The Census Bureau provides a unique census tract/BNA identifier (a numeric suffix of .99) to report statistics about people aboard civilian or military ships. These *crews of vessels* census tracts/BNAs refer to the water near the piers, docks, or onshore facilities associated with the ships; they do not represent any land area or any specific area of water.

Figure 10-1. **Recommended Renumbering of Split Census Tracts**



## **Census Tracts and BNAs for the 1990 Census**

### **The 1990 BNA Delineations**

In preparation for the 1990 decennial census, the Census Bureau expanded the delineation of BNAs so that all counties (or statistically equivalent entities) not in the 1990 census tract program would have BNAs. To do this, it developed a program for the governments of States, American Indian tribes, Puerto Rico, and the Outlying Areas to participate in the delineation of BNAs and block groups. This effort paralleled the delineation, or review and update, of census tracts and block groups being undertaken by the census statistical areas committees.

The Census Bureau contacted State/territorial governors and requested that they designate an agency to coordinate the delineation of BNAs for the 1990 census. It offered them two options for participation in the 1990 BNA program. Under the first option, the State/territorial agency delineated the BNAs (in some instances, with assistance from interested county or local agencies). Under the second option, the Census Bureau delineated the BNAs and sent the delineations to the designated State/territorial agency for review and concurrence. Although many States chose one option or the other, several combined both approaches. In Florida and Illinois, the State governor declined to participate in the BNA program and the Census Bureau delineated the 1990 BNAs.

For the 1990 census, the Census Bureau recognized some census tracts and BNAs that did not conform completely to established criteria. This was due to a number of factors, including Census Bureau enumeration and tabulation requirements, TIGER System constraints, and special arrangements reflecting the unique needs of data users.

### **Census Tract/BNA Boundary Discrepancies**

Data users first saw geographic products showing the 1990 census tracts and BNAs on the Precensus Local Review Maps. In some instances, they discovered a discrepancy between the location of the census tract or



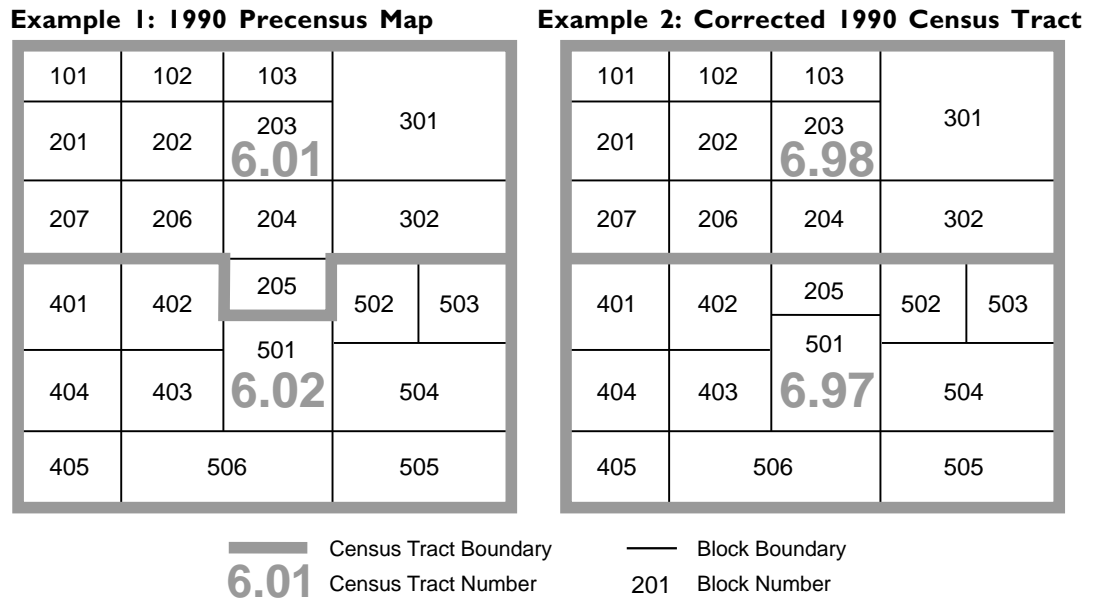
BNA boundary that the Census Bureau had previously agreed to recognize, and the location shown on the precensus maps. If the census statistical areas committee or the BNA participant notified the Census Bureau of a census tract or BNA boundary discrepancy and requested a correction, the Census Bureau corrected the discrepancy.

Resolving census tract/BNA boundary discrepancies was complicated further by an additional commitment made to data users. Following the 1980 census, many data users complained about two types of geographic inconsistencies that made using the 1980 census data difficult for a majority of data users—duplicate block numbers in a census tract/BNA and block groups consisting of more than one contiguous cluster of blocks (discontiguous block groups). The Census Bureau agreed to correct this for the 1990 census.

When resolving census tract/BNA boundary discrepancies, the Census Bureau expanded the area of a census tract/BNA wherever possible. After expanding the census tract/BNA, Census Bureau staff flagged the census tract/BNA gaining area and the census tract/BNA losing area. This was accomplished by retaining the basic census tract/BNA number of the changed census tracts/BNAs and adding a special two-digit suffix. When assigning the special suffixes, Census Bureau staff began with .98 and assigned subsequent numbers in descending sequence, .97, .96, .95, and so forth (see Figure 10-2).

As a result of the promise not to create discontiguous block groups or duplicate 1990 census block numbers, the Census Bureau did not expand the area of a census tract/BNA if such a revision caused the expanding census tract/BNA to include a census block that was discontiguous with other blocks sharing the same block group identifier, or if resolving the census tract/BNA boundary discrepancy created duplicate 1990 census block numbers. Under these circumstances, the Census Bureau created a separate census tract/BNA composed of the census block(s) in question. The Census Bureau assigned a new census tract/BNA number to the newly created census tract/BNA by retaining the basic number of the

Figure 10-2. Expanding a Census Tract or BNA for Boundary Resolution



When resolving census tract/BNA boundary discrepancies, the Census Bureau expanded the area of a census tract/BNA wherever possible. In Example 1 above, Block 205 was included in Census Tract 6.01 even though the approved census tract plan had included it in Census Tract 6.02. Because Census Tract 6.02 does not contain a Block Group 2, expanding Census Tract 6.02 does not create a discontinuous block group or duplicate any 1990 census block number in that census tract; thus, Block 205 simply becomes part of Census Tract 6.02.

After expanding a census tract/BNA, the Census Bureau flagged the affected census tracts/BNAs by adding special two-digit suffixes (beginning with .98 and then descending) to the basic census tract/BNA numbers. In Example 2, Census Tract 6.01 has been renumbered as 6.98 and Census Tract 6.02 as 6.97.

In Examples 1 and 2, it was possible to expand Census Tract 6.02 to include the affected census block (205). If expanding the census tract would have created discontinuous block groups or duplicate block numbers, the Census Bureau would have created a new, separate census tract/BNA as shown in Figure 10-3.

census tract/BNA losing area and appending the special suffix. The census tract/BNA losing area also was renumbered by assigning the special suffix (see Figure 10-3).



Figure 10-3. **Creating a New Census Tract or BNA for Boundary Resolution**

**Example 1: 1990 Precensus Map**

601	602	603	801	
701	702	703	802	
601	10.01 704		702	703
	602	10.02 701	704	
604	603		704	
605	706		705	

**Example 2: Corrected 1990 Census Map**

601	602	603	801	
701	702	703	802	
601	10.97 704		702	703
	602	10.02 701	704	
604	603		704	
605	706		705	

 Census Tract Boundary       Block Boundary  
**6.01** Census Tract Number      201 Block Number

The Census Bureau would not expand the area of a census tract/BNA when resolving a census tract/BNA boundary discrepancy if such a revision caused the census tract/BNA to include a census block that was discontinuous with other blocks in the same block group or created duplicate 1990 census block numbers. In Example 1, Block 704 was included in Census Tract 10.01, even though the approved census tract plan had included it in Census Tract 10.02. Because Census Tract 10.02 already contains a Block 704, the Census Bureau could not expand Census Tract 10.02 to include a second Block 704.

In resolving this type of census tract/BNA boundary discrepancy, the Census Bureau created a separate new census tract/BNA comprised of the block(s) in question. In Example 2, it created the new Census Tract 10.97, comprised of Block 704 from Census Tract 10.01. Additionally, the Census Bureau renumbered Census Tract 10.01 as 10.98 (because 10.01 is the census tract that lost area). Census Tract 10.02 was not renumbered because nothing in it changed.

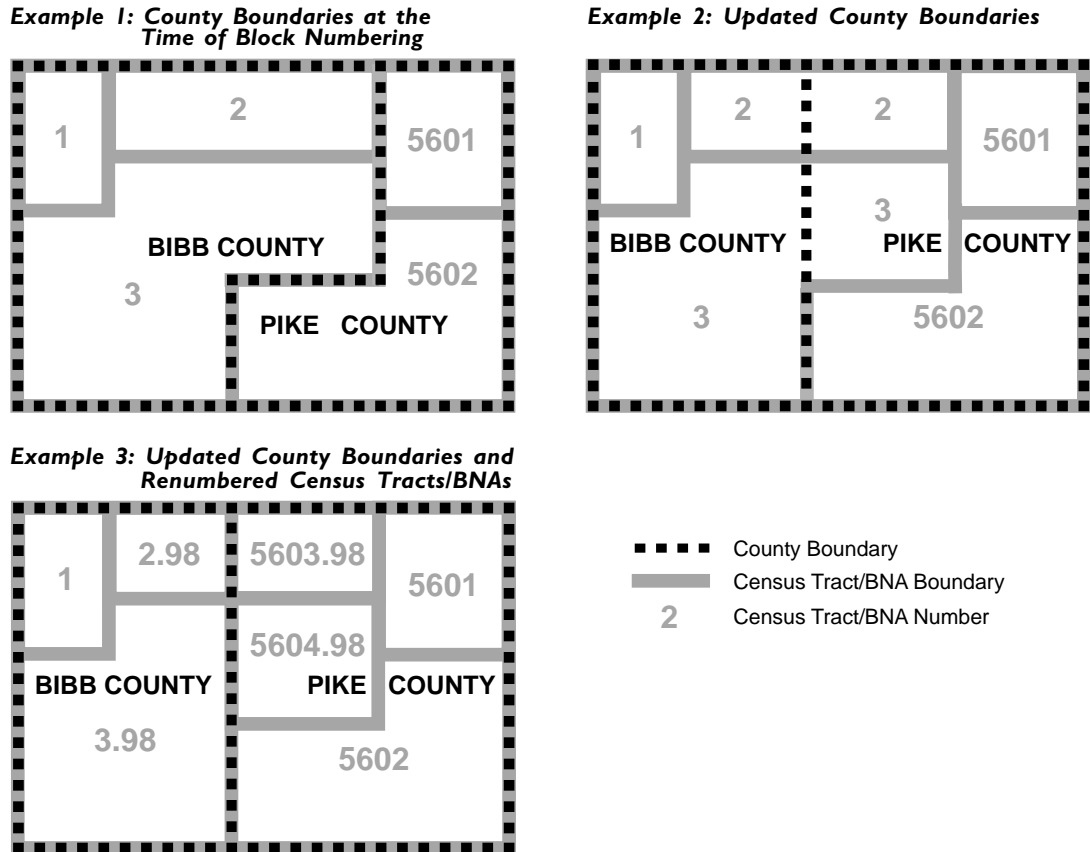
### **Census Tracts/BNAs and Governmental Unit Boundaries**

The Census Bureau discourages the use of governmental unit boundaries as census tract/BNA boundaries because of the need to freeze the census tract/BNA boundaries at the time of census block numbering, which occurs several years before a decennial census. Once the census tract/BNA boundaries are frozen, any changes to the governmental unit boundaries, whether as a result of annexations, detachments, or mapping corrections, result in the census tract/BNA boundaries continuing to follow the former (incorrect) location of the governmental unit boundary. The result can be the loss of the intended *nesting* relationship between census tracts/BNAs and the governmental unit.

### **County Boundary Updates**

Holding the boundaries of counties (or statistically equivalent entities) as census tract/BNA boundaries is a fundamental requirement of the census tract/BNA programs. Census tracts and BNAs are subdivisions of counties, and they nest within counties. Because the Census Bureau needed to have the census tracts/BNAs delineated before numbering the 1990 census blocks, it had to approve the census tract/BNA plans several years beforehand. Knowing that it would be necessary to update some county or State boundaries after the establishment of census tracts/BNAs and the assignment of 1990 census block numbers (but before data tabulation), the Census Bureau designed a method to accommodate the latest (January 1, 1990) State and county boundary changes. Changes in the 1990 census tract/BNA boundaries ordinarily would require renumbering some census blocks, yet the Census Bureau had to design a method of updating State or county boundaries without changing any census block numbers. As a result, the Census Bureau recognized as census tract/BNA boundaries both the superseded and the corrected State or county boundaries. The result was the formation of (usually) small census tracts/BNAs, often containing little or no population or housing units, that represented the territory affected by the State or county boundary update (see Figure 10-4).

Figure 10-4. Effect of County Boundary Changes on Census Tracts and BNAs



Any changes to a county or State boundary that occur after census block numbering result in one county losing part of a census tract/BNA and another county gaining part of a census tract/BNA. Example 1 above shows the boundaries of Bibb County and Pike County, and the boundaries of their respective census tracts/BNAs at the time the Census Bureau assigned the census block numbers. When the Census Bureau updated the county boundaries, Bibb County lost area to Pike County; Pike County gained parts of Census Tracts 2 and 3 as shown in Example 2.

After updating the county boundary, the Census Bureau renumbered the affected census tracts/BNAs by adding the special suffix to the census tracts that lost area. As shown in Example 3, the Census Bureau renumbered Census Tracts 2 and 3 in Bibb County, creating Census Tracts 2.98 and 3.98. The Census Bureau then assigned new census tract/BNA numbers in the county gaining territory, using numbers that fit within the numbering scheme of that county. In Example 3, Pike County gained Census Tracts 5603.98 and 5604.98.

To identify all census tracts/BNAs affected by a county boundary update, the Census Bureau added a special suffix in the range of .70 to .98 (starting with .98 and assigned in descending sequence) to the basic census tract/BNA number of each census tract/BNA that lost territory. The Census Bureau also assigned a new census tract/BNA number to the portion of the census tract/BNA in the county that gained territory. These new census tract/BNA numbers fit within the numbering scheme of each county, but were identifiable by the special suffix. The addition of these special suffixes fulfilled data user requests for a flag to identify any areas changed after the Census Bureau produced the products used in the early 1990 census operations. Because many census tracts/BNAs with this special suffix have very small areas with little or no population or housing, some users have chosen to aggregate one or more such census tracts/BNAs with an adjacent census tract/BNA for data analysis.

### **Default Census Tract/BNA Numbers**

One of the changes brought about by the TIGER System was the need to include all area (land and water) within a census tract/BNA. Rather than extending the census tract/BNA boundaries into the Great Lakes or out to the three-mile limit in coastal waters, the Census Bureau decided to close off the census tract/BNA boundaries along the shoreline or just offshore. The Census Bureau then assigned a default census tract/BNA number 0000 to the coastal and Great Lakes waters not assigned to any other census tract/BNA.

### **Relationships to Other Geographic Entities**

In the decennial census geographic hierarchy, census tracts/BNAs are subdivisions of, and nest within, counties (and their statistical equivalents). The block groups, the next lower level in the decennial census geographic hierarchy, are subdivisions of census tracts/BNAs and always nest within a specific census tract/BNA. The Census Bureau assigns census block numbers within block groups to identify the smallest geographic areas for which it collects and tabulates census data. It does this by using the block

group number as the first digit of the block number. Thus census blocks are subdivisions of, and nest within, a specific block group.

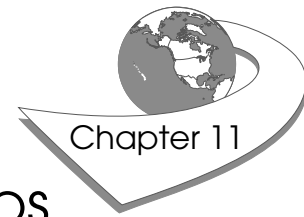
The relationship of census tract/BNAs to county subdivisions (census county divisions and minor civil divisions) and places (incorporated places and census designated places) varies. Many States have incorporated places such as cities, boroughs, and villages, and minor civil divisions (MCDs) such as towns and townships. The boundaries of some of these governmental units are not well known locally or shift frequently as a result of annexations. In these States, the Census Bureau discourages the use of these governmental unit boundaries as census tract/BNA boundaries; data users will find that the layout of the governmental units seldom corresponds to the census tract/BNA framework. In the New England States, where governmental unit boundaries change infrequently and are well known locally, data users generally will find a nesting relationship between census tracts/BNAs and governmental units. Wherever possible, the Census Bureau has continued the practice of encouraging congruency between census county divisions (CCDs) and census tracts/BNAs, and does so by revising the CCD boundaries when a census tract/BNA needs to change.

The areas and boundaries of other census geographic entities bear no geographic relationship to census tracts/BNAs because there are different reasons for their establishment. Their boundaries, therefore, may or may not conform to those of the census tracts/BNAs. Such entities include census designated places (CDPs), voting districts, school districts, American Indian reservation and subreservation areas, Alaska Native villages, and congressional districts. Many data users inquire about the geographic relationship between census tracts/BNAs and ZIP Code areas (geographic entities that approximate the assignment of ZIP Codes by the U.S. Postal Service)—census tracts/BNAs rarely correspond to ZIP Code areas.

## *Notes and References*

- <sup>1</sup> Laidlaw, Walter, "Federation Districts and a Suggestion for a Convenient and Scientific City Map System," The Federation of Churches and Christian Organizations in New York City, *Federation*, Vol. IV, No. 4, 1906.
- <sup>2</sup> Swift, Arthur L., Jr., "Doctor Laidlaw's Vision, the Early Years: 1906-1926," American Statistical Association, *Golden Anniversary of Census Tracts. 1956*, Washington, DC: n.p., 1956.
- <sup>3</sup> Green, Howard Whipple, "A Period of Great Growth and Development: 1926-1946," American Statistical Association, *Golden Anniversary of Census Tracts. 1956*, Washington, DC: n.p., 1956 [reprinted in the Census Bureau's *Proceedings of the National Geographic Areas Conference, Putting It Together for 1990*, Washington, DC: U.S. Government Printing Office, 1984].





# Census Blocks and Block Groups

Census blocks, the smallest geographic area for which the Bureau of the Census collects and tabulates decennial census data, are formed by streets, roads, railroads, streams and other bodies of water, other visible physical and cultural features, and the legal boundaries shown on Census Bureau maps. Census data for these areas serve as a valuable source for small-area geographic studies. The Census Bureau has responded to public demand for more geographic coverage of census block data by expanding the Census Block Statistics Program each decade since block data first were published in 1940. For the 1990 decennial census, the Census Bureau tabulated data by census block for the entire Nation, as well as Puerto Rico and the Outlying Areas (American Samoa, Guam, the Northern Mariana Islands, Palau, and the Virgin Islands of the United States). In 1990, the Census Bureau tabulated data for 7,020,924 census blocks.

Block groups (BGs) are the next level above census blocks in the geographic hierarchy (see Figure 2-1 in Chapter 2). A BG is a combination of census blocks that is a subdivision of a census tract or block numbering area (BNA). (A county or its statistically equivalent entity contains either census tracts or BNAs; it can not contain both.) A BG consists of all census blocks whose numbers begin with the same digit in a given census tract or BNA; for example, BG 3 includes all census blocks numbered in the 300s. The BG is the smallest geographic entity for which the decennial census tabulates and publishes sample data. It has now largely replaced the earlier enumeration district (ED) as a small-area geographic unit for purposes of data presentation.

For the 1990 decennial census, local census statistical areas committees were given the opportunity to delineate BGs in counties with census tracts. State officials were invited to delineate BGs in the remaining counties. The Census Bureau delineated BGs for counties in which local and State officials chose not to participate in the BG program. The total number of BGs delineated for the 1990 decennial census was 229,466.

## History of Small Areas in U.S. Censuses

Throughout most of the 1800s, the smallest data unit for which the Census Bureau collected information was the area assigned to an individual enumerator, and the smallest area for which it reported data corresponded to geographic entities such as wards, communities, and townships. Histories of the early U.S. censuses contain very little precise information about how these entities were subdivided for enumeration. Many of the assignments were verbal descriptions based on legally defined entities, community names, and major physical features. Some enumerators developed their own geographic solutions by drafting sketch maps and by writing descriptions of their enumeration area boundaries.

### Development of Enumeration Districts From 1870 Through 1980

Over time, the instructions for enumerators became more specific; they revealed an increasing concern for the boundaries, size, and identification of geographic subdivisions. For the 1870 census, the Census Office (predecessor of the Census Bureau) lowered the maximum size of the subdistricts used for enumeration from 50,000 to 6,000 people. For the 1880 census, this number was reduced to 4,000, resulting in approximately 28,000 *districts of enumeration* (later called *enumeration districts*, or *EDs*). This census also was the first in which the Census Office provided maps of EDs for use in taking the census.

For 1910, the Census Bureau began to delineate EDs to follow the boundaries of legally or administratively defined entities such as villages, cities, wards, and minor civil divisions (MCDs). This approach permitted the convenient aggregation of EDs into larger geographic entities for tabulation and publication. It also underlined the need for maps to show the boundaries of counties, incorporated places, and MCDs in their correct location. The Census Bureau began to improve the ED maps, and for the 1930 census, included ED boundaries and numbers on all maps used in the field canvass.

The ED, with minor revisions and improvements, continued to be the smallest geographic unit for which census data were available until census

blocks were introduced for larger places in the 1940 census; even then, because blocks were numbered only in limited areas, EDs continued to be used as a collection and reporting unit in decennial censuses through the 1980 census.

### **Census Blocks as Collection, Tabulation, and Publication Units**

Like the ED, the census block originally served the operational needs of the Census Bureau. As early as the 1920 census, the Census Bureau was instructing its enumerators in cities and built-up areas to do their work block by block:

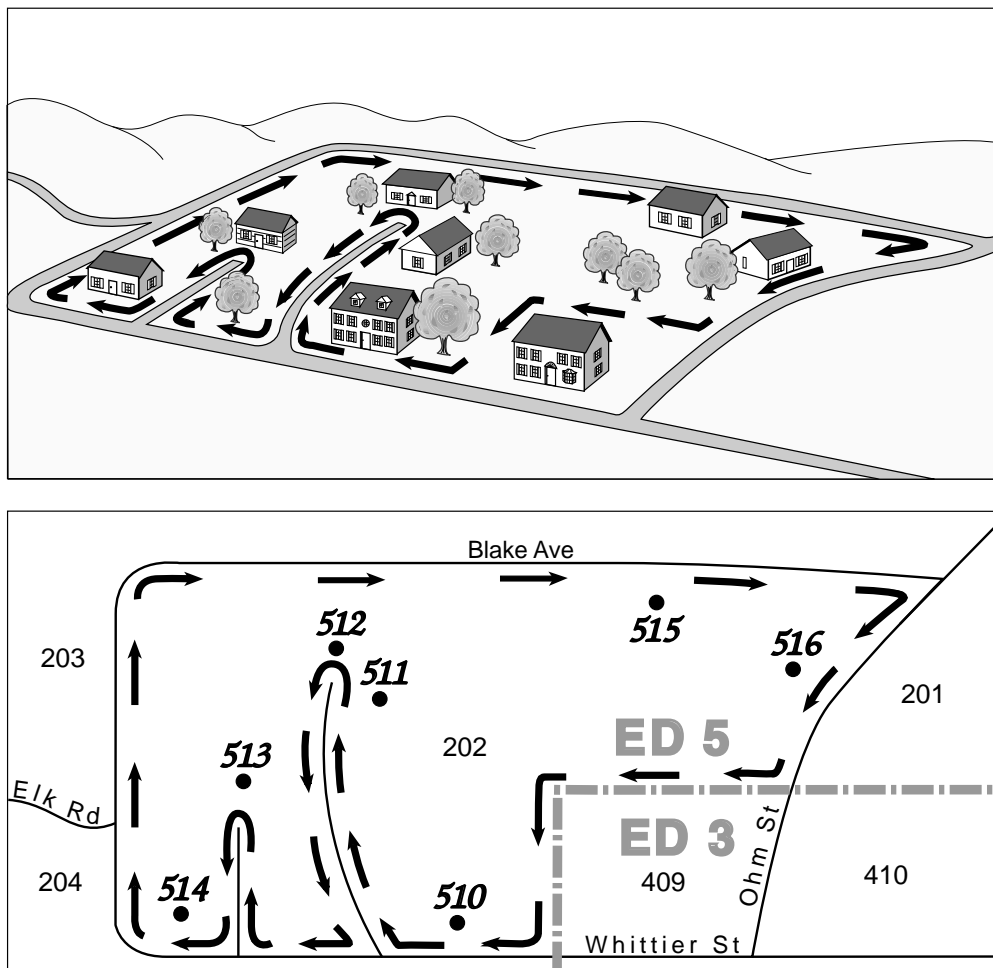
“. . . canvass one block or square at a time . . . Do not go back and forth across the street . . . Be sure you have gone around and through the entire block before you leave it.”

The Census Bureau found that following a block-by-block sequence was an efficient way to compile data summaries at the ED level, and it gradually extended this enumeration method to rural areas as well as urban. Canvassing individual blocks in a geographic sequence remains the Census Bureau’s standard method of listing and verifying addresses or conducting a traditional door-to-door enumeration (see Figure 11-1).

Demographers, statisticians, and other data users had wanted to obtain census data by block long before the Census Bureau was able to undertake such detailed geographic subdivision. For instance, in 1909, the Tenement House Department of New York city had wanted the Census Bureau to identify more than 49,000 city blocks as part of the data dissemination for the 1910 census. Expression of such needs undoubtedly influenced the Census Bureau’s eventual decision to compile and present information at the block level.

The Census Bureau first published census block data in 1940 as part of the newly created Census of Housing. These block statistics provided a detailed inventory of housing conditions within major cities during an era of Federal financial support for public works projects. City governments needed detailed housing information for purposes such as efficiently upgrading the

Figure 11-1. Field Enumeration of a Census Block Prior to 1990



For censuses earlier than 1990, an enumerator was asked to systematically cover that portion of Block 202 within ED 5. This did not include the entire area of Block 202 because a portion, including a housing unit, was within ED 3. The latter requirement often confused enumerators and caused the Census Bureau, in some cases, to miss housing units.

This problem was corrected in the 1990 census when the Census Bureau decided to have enumerators canvass the physical entirety of each block. Proceeding in a clockwise direction, the enumerator identified the location of all housing units to his/her right, and located and indexed these on the enumerator map. The enumerator recorded the street or postal address for each housing unit in the address register within the correct block number. All roads had to be canvassed so that hidden housing units were not missed.

level of urban services, modifying building codes, establishing and implementing zoning ordinances, and preparing plans for capital improvements. In the 1940 and 1950 censuses, for cities that had census blocks, each individual block was identified on the ED map, and enumerators were instructed to write the block number on the census questionnaire as they canvassed each housing unit. Census blocks were numbered beginning with *one* in each census tract, city ward, or *block area* that carried a one-letter identifier. (The *block area* was a summary unit used in place of census tracts in block numbered cities that did not have census tracts; it could not extend beyond the city limits.)

Data published for census blocks in 1940 were limited to selected housing statistics collected for 191 cities that had a population of 50,000 or more at the time of the 1930 census. The same criterion applied in 1950 (using the 1940 census counts), after which the Census Bureau published census block data for 209 places. There were separate published reports for each, including a map to accompany the data. In the 1960 census, the Census Bureau published the total population for each block, and reported block statistics for 295 cities with a 1950 population of 50,000 or more. The Census Bureau also expanded the program to include an additional 172 places, in which data users paid the Census Bureau to collect and publish census block data. In total, the Census Bureau published data for over 736,000 census blocks in the 1960 census.

### **Census Blocks and Block Groups for the 1970 Census**

**Census block coverage and the mail census** In 1970, for the first time, a large portion of the U.S. population was enumerated by mail rather than by the conventional door-to-door enumeration. As part of the mail census, the Census Bureau introduced many improvements in the base maps it used for the Nation's major urban centers (the Metropolitan Map Series), and in its methodologies for the collection, tabulation, and dissemination of small-area data. These changes had a direct positive effect on the delineation of census blocks and BGs, allowing the Census Bureau to expand census block coverage to include the expected extent of all 1970 urbanized areas.

**First use of block groups** In the block numbered areas, the Census Bureau devised the block group (BG) as a data tabulation and publication unit equivalent to the ED in non-block numbered areas. Originally referred to as *quarter tracts*, BGs were subdivisions of a census tract or block numbering area (BNA).

Each BG consisted of a cluster of contiguous census blocks identified by the same first digit of their three-digit block number. For instance, Block Group 1 consisted of Blocks 101 to 199, Block Group 2 of Blocks 201 to 299, and so forth. Each census tract/BNA could contain as many as nine BGs (Block Groups 1 to 9; there was no Block Group 0). The number of BGs in a census tract/BNA usually depended on the number of census blocks existing within the census tract/BNA.

Another advantage of the BG over the ED for data tabulation was the simplicity of its cartographic presentations. Urban area maps were freer from clutter because it was no longer necessary to depict ED numbers and boundaries.

**Areas with census blocks for 1970** Approximately 1,618,000 census blocks were numbered in and adjacent to UAs, and in areas that contracted for census block data in the 1970 census. The number of contract block areas grew to 966. For example, the State of New York, anticipating its needs for Congressional and State legislative redistricting, contracted to receive block data for all cities and towns (MCDs) with a 1960 population of 2,500 or more.

The Census Bureau published census block data in reports according to standard metropolitan statistical area (SMSA). For each State, it included all census blocks outside of SMSAs in a single *Balance of State* report. It also included data to the block level for these areas on the Third Count Summary Tape.

### **Expansion of Census Block and Block Group Coverage for 1980**

For 1980, the census block program expanded once again to include, in addition to urbanized areas, all incorporated places of 10,000 or greater population. Selection of these places was based either on the 1970 population count, an official Census Bureau estimate published in 1973, 1975, or 1976, or a special census conducted before December 31, 1977. Also, States and local agencies continued to contract with the Census Bureau for census block data for additional areas. For the 1980 census, five States (Georgia, Mississippi, New York, Rhode Island, and Virginia) contracted with the Census Bureau to provide census block statistics for their entire area and population. The Census Bureau published selected data for over 2.5 million census blocks (an increase of 900,000 over 1970) and 154,456 BGs. Census block coverage included approximately 78 percent of the Nation's population and 7 percent of its land area. In cases where the extension involved only limited additional territory, the Census Bureau extended the census block coverage from the potential urbanized area to include the entire area of the county in which the potential urbanized area was located.

In its 1980 data products, the Census Bureau again published statistics for tabulated blocks by SMSA. It also produced a *Selected Areas* report for each State to cover all census blocks outside of metropolitan areas. For the first time, the maps were published separately from the reports. The Census Bureau's Summary Tape File (STF) 1B included data for census blocks and BGs. Both the published reports and the STF 1B included a special table that listed census blocks with no population and housing.

### **Census Block and Block Group Delineation for the 1990 Census TIGER, the Census Bureau's National Spatial Data Base**

Following the 1980 census, the Census Bureau made a major commitment to develop a geographic data base that would provide better data tabulations and presentations for the entire Nation, Puerto Rico, and the Outlying Areas. Historically, the delivery of geographic materials and services at the Census Bureau involved a series of complex and functionally separate

operations that produced maps, created address reference files, and established various geographic code files for use in documenting geographic relationships at the time of each census and survey. Because all these types of geographic products were produced in separate clerical operations, there were errors, omissions, and inconsistencies that caused problems for field operations, other data collection and processing operations, and data users. This was particularly true in regard to the inventory of census blocks. At times, the clerical procedures used to assign numbers to census blocks and to revise other tabulation entities were out of phase with revisions to the census maps. There were instances where duplicate census block numbers were assigned within a single BG, or where census block numbers accidentally were removed from the maps. There was a need for a stable structure of census collection geography at the census block level. The development of the Topologically Integrated Geographic Encoding and Referencing (TIGER) System, an automated geographic data base, permitted the Census Bureau to delineate census blocks on a nationwide basis for the 1990 census.

### **Delineating Census Blocks and Block Groups in TIGER**

The delineation of census blocks and BGs could not begin until the TIGER data base contained an updated system of physical features and geographic boundaries. The Census Bureau created the TIGER data base using raster-scanned images of the U. S. Geological Survey's (USGS) 1:100,000-scale topographic maps. In the built-up metropolitan cores, the previous GBF/DIME-Files were reformatted and inserted into the new data base. The Census Bureau then updated this digital map base using current map sources, and added new features, street names, and address ranges. The digitized images from the 1:100,000-scale maps were vectorized, merged, and reformatted into whole county partitions. The Census Bureau inserted 1980 geographic boundaries, such as county, place, MCD, American Indian areas, census tracts, and BGs into the data base from two sources. For areas covered by GBF/DIME-Files, the Census Bureau transferred geographic entity boundary information from those files. For areas beyond GBF/DIME-File coverage, the Census Bureau inserted higher-level 1980 geographic information by digitizing the boundaries of 1980 BGs where BGs were the collection unit,



and EDs for all other areas. This provided complete geographic coverage for all 1980 census geography, and served as a basis for structuring the 1990 geographic entities.

All features in the TIGER data base were classified according to feature type and characteristic. For example, single- and double-line drainage as shown on USGS topographic maps were differentiated, and roads were classified by type. Census block number information from the 1980 census was preserved only for GBF/DIME-File areas.

### **State and Local Participation in the Delineation Process**

Within counties with census tracts, the Census Bureau invited local census statistical areas committees to participate in delineating the 1990 BGs at the same time they delineated their 1990 census tracts. Agencies were permitted to delineate as many as nine BGs within each BNA or census tract. The guidelines specified an ideal size for a BG of 400 housing units, with a minimum of 250, and a maximum of 550 housing units. The guidelines further required that BG boundaries follow clearly visible features, such as roads, rivers, and railroads.

In the summer of 1985, the Census Bureau offered State governments, as well as the governments of Puerto Rico and the Virgin Islands of the United States, the opportunity to delineate, for use in the 1990 census, BNAs and BGs in counties or statistically equivalent entities that did not have census tracts. Where local and State agencies chose not to participate, the Census Bureau completed the delineation of BNAs and BGs. The program resulted in the delineation of 224,691 collection BGs in the United States, and a total of 228,202 BGs in all areas under U.S. jurisdiction. The average number of BGs per census tract was 3.7 for counties with census tracts, and 3.9 per BNA for counties with BNAs.

### **Identifying and Numbering Census Blocks**

Although most people intuitively think of census blocks as being rectangular or square, of about the same size, and occurring at regular intervals, as in many cities of the United States, census block configurations actually

are quite different. Patterns, sizes, and shapes of census blocks vary within and between areas. Factors that influence the overall configuration of census blocks include topography, the size and spacing of water features, the land survey system, and the extent, age, type, and density of urban and rural development.

The Census Bureau entirely automated the assignment of census block numbers for the 1990 census. The magnitude and complexity of the undertaking generally precluded major State or local involvement in the delineation of census block boundaries. Also, it was important to be consistent when adhering to census block number assignment guidelines. As part of the Census Bureau's Redistricting Data Program (see Chapter 14, "Voting Districts," for further information), the Census Bureau did allow State agencies to specify features that would be held as 1990 census block boundaries (*must-hold* features).

As part of the Census Block Definition Program, the Census Bureau also allowed the officials of American Indian reservations to identify *must-hold* features. Based on the stated goals of maximizing the number of census blocks within each BG, the Census Bureau developed a computer routine that analyzed the network of TIGER data base features that formed polygon areas within each 1990 BG and assigned a number to each. This eliminated the earlier problems of duplicate numbers, areas with no number assigned, and areas with multiple numbers assigned.

The program for assigning census block numbers gave major consideration to the type of feature, as well as the shape and minimum size of a potential census block:

- The minimum size of a census block was 30,000 square feet (0.69 acre) for polygons bounded entirely by roads, or 40,000 square feet (0.92 acres) for other polygons. There was no maximum size for a census block.
- Exceptions to the minimum polygon sizes were made where the polygon was entirely bounded by must-hold features that needed to be maintained as census block boundaries.

- Polygon shapes were measured to eliminate extremely narrow *slivers* as potential census blocks. This was done by comparing the ratio of the perimeter of the polygon to the area of the polygon, with the ratio of the perimeter of a circle to its area; in addition, the polygon had to have an estimated width of at least 70 feet.
- Features were ranked according to their importance as census block boundaries based on (1) the type of boundary, (2) the feature with which it coincided, (3) the existence of special land use areas (such as military reservations), and (4) the presence of governmental boundaries, in particular, State boundaries. Boundaries were assigned a ranking preference according to these four factors (See Table 11-1).
- In GBF/DIME-File areas, the existing 1980 census block designations were preserved where the census block boundary features had not changed between the 1980 and 1990 censuses.
- At least one side of a potential census block had to be a road feature.
- Extensions from dead-end roads/streets were used to split oversized polygons into separate blocks; such extensions were made wherever road features protruded into a large polygon and ended within 300 feet of non-road features, such as shorelines and railroads.

In addition, the Census Bureau developed automated processing routines to selectively recognize various geographic attributes of the polygons within which it would assign census block numbers.

### **Assigning Census Block Numbers**

A major limiting factor in the delineation of census collection blocks was the range of three-digit numbers available within each BG, n00 through n99 (where n was the BG number). The Census Bureau reserved block numbers n00 and n98 for possible special uses, and it used the n99 block for water areas). Each BG therefore could include no more than 97 census blocks. Within BGs with more than 97 polygons, the program grouped sliver or small-block polygons with adjoining larger polygons for purposes of assigning block numbers and reducing the number of census

Table 11-1. **Hierarchy of Census Feature Classes for Use as Block Boundaries**

**Qualifying features ranked from highest to lowest priority:**

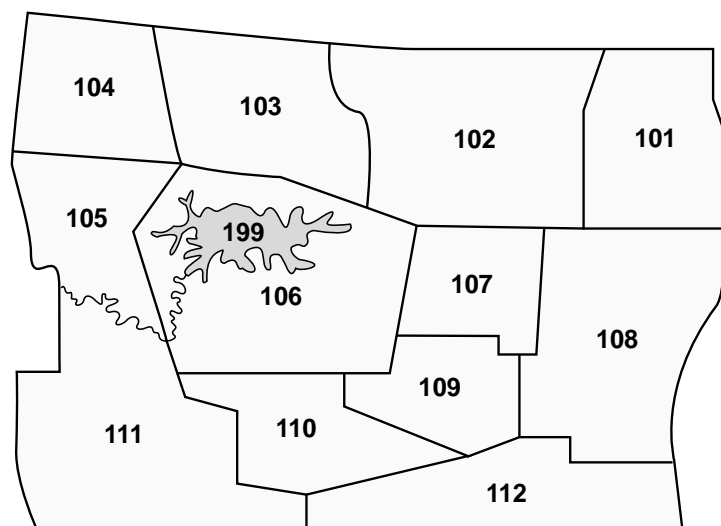
- (1) Must-hold census block boundary (see “Identifying and Numbering Census Blocks” section)
- (2) Water area (*double-line drainage*)
- (3) Named, addressable divided roads (*by road class*)
- (4) Named, addressable undivided roads (*by road class*)
- (5) Unnamed addressable divided roads (*by road class*)
- (6) Unnamed addressable undivided roads (*by road class*)
- (7) Other addressable features
- (8) Feature extensions (*manually inserted*)
- (9) 1980 statistical/governmental unit boundary (*by category*)
- (10) Main rail line feature
- (11) Railyard
- (12) Rail spur and other rail feature
- (13) Named perennial stream (*single-line drainage*)
- (14) Power transmission line
- (15) Pipeline
- (16) Unnamed perennial stream (*single-line drainage*)
- (17) Named perennial or unclassified canal, ditch, or aqueduct
- (18) Unnamed perennial or unclassified canal, ditch, or aqueduct
- (19) Named intermittent stream or wash (*single-line drainage*)
- (20) Named braided stream (*single-line drainage*)
- (21) Unnamed braided stream (*single-line drainage*)
- (22) Named intermittent canal, ditch, or aqueduct
- (23) Topographic feature (*such as bluffs, cliffs*)
- (24) Fence line
- (25) Point-to-point line
- (26) Feature extension, other than manually inserted extension
- (27) Other special transport feature
- (28) Physical feature not listed

*Note: Examples of features that did not qualify as block boundaries are rail features in tunnel; property line; airport, airfield, or terminal feature; cemetery boundary; golf course boundary; unnamed, intermittent stream or wash; unnamed intermittent canal, ditch, or aqueduct; water boundaries and special water features; and all nonvisible boundary features and statistical boundary features (unless tagged must-hold).*

blocks. Among the important considerations in grouping such small block polygons were the size of adjoining potential census block polygons as well as the type of bounding features. The program attempted to identify, with separate numbers, potential census block polygons that fell within the size range of typical residential blocks.

The program generally produced a serpentine pattern of block numbers beginning in the upper right of each BG (see Figure 11-2). The program was able to skip those polygons that retained their 1980 census block number; this measure ensured intercensal and numeric geographic comparability for those census blocks that had retained the same boundaries. The program assigned all water body polygons within a BG to a single block number ending in 99 (for instance, water in BG 1 was assigned to Census Block 199, water in BG 2 was assigned to Census Block 299) regardless of whether those water polygons were contiguous. The automated delineation resulted in a national total of 6,461,804 collection blocks (6,517,390 including Puerto Rico and the Outlying Areas). Of this total, approximately two million census collection blocks contained zero population based on the results of the 1990 census.

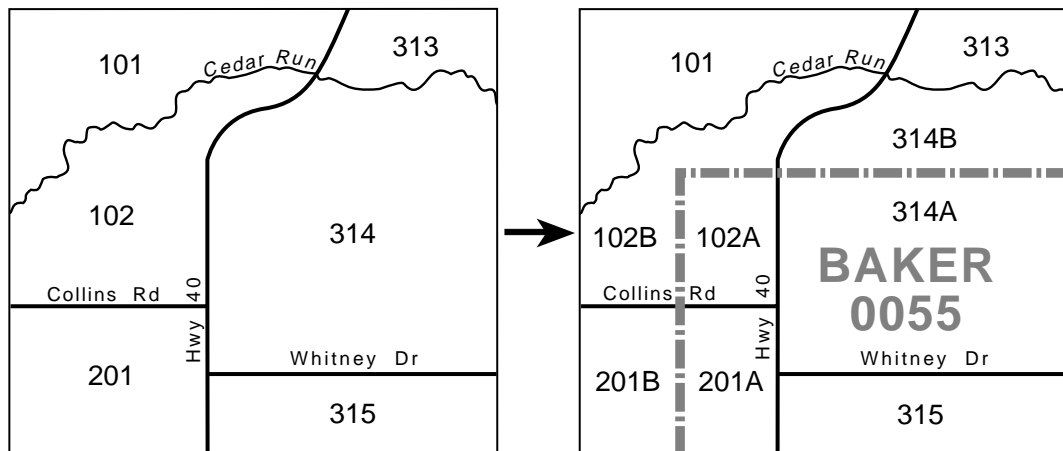
Figure 11-2. **Serpentine Pattern of Census Block Numbering**



### Collection Blocks and Tabulation Blocks

In most instances, the census collection block is identical to the tabulation block. The difference arises where the boundary of a higher-level geographic entity, such as an incorporated place or an MCD, splits a collection block. In such instances, the Census Bureau adds an alphabetic suffix to the collection block number, thereby uniquely identifying each piece of tabulation geography located within the census collection block. This methodology permits the Census Bureau to accommodate changes to the boundaries of legally recognized entities as they occur and still maintain a stable inventory of collection blocks. It also corrects a source of great confusion that occurred during earlier block number presentations in which all portions of the collection block had the same block number and the data user had to search all other geographic entity codes to determine why data were presented for what appeared to be only a portion of the block.

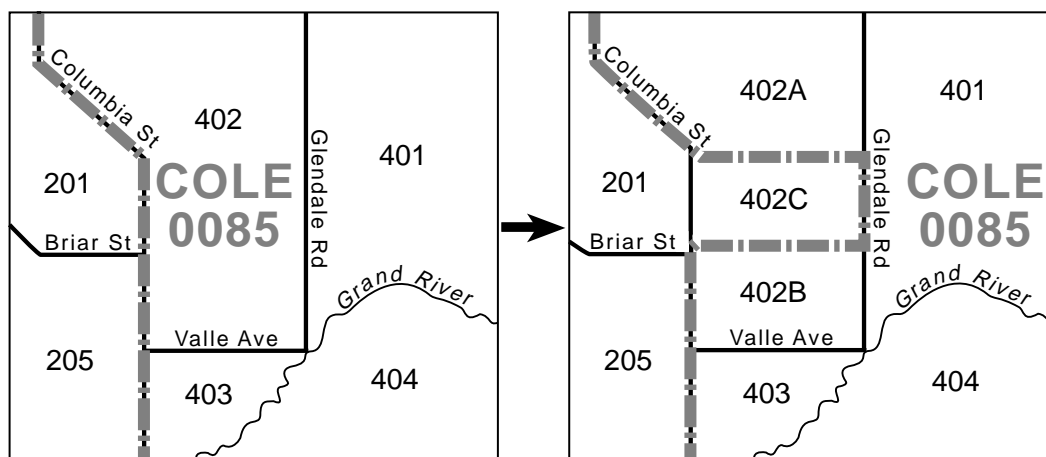
Figure 11-3. **Collection Blocks Split by a Geographic Entity Boundary**



After assigning alphabetic suffixes to all portions of the collection blocks intersected by another tabulation boundary, the Census Bureau refers to them as census tabulation blocks. (Not all tabulation blocks carry suffixes; in fact, most tabulation block numbers are identical to the collection block numbers.) Only where a collection block is split by a geographic boundary is a suffix added to the collection block number. In the example shown in

Figure 11-3, Census Block 315 is contained wholly within the place of Baker and does not carry a suffix, whereas the blocks numbered 102, 201, and 314 contain suffixes because they are split by the boundary of Baker. It is customary to use the suffix A for the area of the collection block contained within a place, and the suffix B for the area of the collection block in the balance of the county. The result is that each distinct piece of ground is block numbered uniquely. Where two pieces of a single collection block are within the same place, but are discontinuous and separated by area not in the place, the Census Bureau assigns three suffixes, (as shown in Figure 11-4), one for each part in the place (suffixes A and B), and a third for the balance of the block (suffix C).

Figure 11-4. **Collection Block Split With Multiple Suffixes for an Entity**



The Census Bureau tabulated data for a total of 6,961,150 census tabulation blocks in the United States (7,020,924 including Puerto Rico and the Outlying Areas). The United States had 234,078 water blocks, 864,423 census blocks with suffixes, and 2,023,109 tabulation blocks with zero population. The percentage of tabulation blocks with zero population varied considerably from one State and region to another—from a low of 14.1 percent within the State of Rhode Island to a high of 64.7 percent within the State of Wyoming. The median State was the State of Washington with 31.1 percent.

The Census Bureau's Count Question Resolution (CQR) Program accommodates changes to geographic boundaries reported after the release of the 1990 census data tabulations. Such changes usually are the result of corporate annexation/detachment activity or of updates to published 1990 geographic boundaries. Often these changes have been reported to the Census Bureau by local governments and other data users with a request for review and possible update. (Other post-1990 block changes may result from the needs of the economic censuses and related programs.) The Census Bureau makes postcensal block updates by adding additional suffixes to the census tabulation block number. Figure 11-5 shows a corporate boundary change that splits Block 102A into 102AA and 102AB. This use of a second suffix position in the block number shows that the change resulted from a post-1990 resolution of a count question.

Figure 11-5. **Tabulation Block Split as a Result of Count Question Resolution**



## Relationships to Other Geographic Entities

The relationship of census blocks to other geographic entities depends on several factors. The major factors are the type of geographic entity, the stability of the particular geographic boundary, the coincidence of physical features with the boundary, and enumeration considerations. As explained in the section in this chapter entitled "Collection Blocks and Tabulation Blocks" (and shown in Figures 11-3, 11-4, and 11-5), geographic boundaries that cross census collection blocks result in a suffixing of the census



collection block number; census blocks that nest entirely within collection blocks are not suffixed. A census block is always unique to, and can never cross the boundaries of, either a census tract or a BNA. All standard geographic tabulation entities are made up of whole tabulation blocks.

### **States and Counties**

State and county boundaries form the framework within which the Census Bureau numbers census tracts and BNAs; thus, census blocks never cross these boundaries. In the rare instances where a State or county boundary change is reported after census tract/BNA numbers are entered, the Census Bureau assigns suffixes to the census block numbers for data tabulation.

### **County Subdivisions**

County subdivisions include census county divisions (CCDs) and minor civil divisions (MCDs). CCD boundaries usually do not split census blocks. This is because they generally follow physical features that normally are held as census tract/BNA boundaries. On the other hand, many MCD boundaries do not follow physical features; thus, they frequently split census collection blocks, except in certain States (Connecticut, Maine, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin) where they are more stable and often held as census tract/BNA boundaries.

### **Places**

As with MCDs, many incorporated place boundaries do not follow physical features; as a result, they usually split census collection blocks. (An exception often is made when the boundary of an incorporated place is conjoint with the boundary of another incorporated place; in these cases, the Census Bureau allows the place boundary to also be a census tract/BNA boundary.) In some States (Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont), most incorporated place boundaries also coincide with MCD lines. These lines are stable in these States, and are held as census block boundaries. Census designated place (CDP) boundaries usually are defined to follow physical features. Therefore, many of their boundaries also are census collection block boundaries. Since

CDP boundaries were inserted into the TIGER data base after census blocks were delineated, some CDP boundaries were not held as collection block boundaries and had to be suffixed. In Alaska, CDP boundaries were inserted and held as census collection blocks because of the difficulty in enumerating this State.

### **American Indian and Alaska Native Areas**

The boundaries of American Indian reservation and subreservation areas were held as census collection block boundaries where feasible for enumeration (a road into the area was a requirement for boundaries to be held), as were the boundaries of Alaska Native village statistical areas. This was done because of the difficulty in enumerating such areas.

### **Other Standard Geographic Tabulation Entities**

The boundaries of urbanized areas (UAs) always follow the boundaries of tabulation census blocks. This is the only type of geographic entity boundary that UAs must follow, although most places are either entirely within, or entirely outside of, the UA boundary.

The Census Bureau requested that the State officials delineating Congressional districts for the 103rd Congress follow the boundaries of census tabulation blocks; most of them complied with this request. In the few instances where a Congressional district boundary subdivided a census block, the Census Bureau depicted the district boundary in its correct location and assigned the entire population of the census block to one district or the other in accordance with the State's instructions.

### **Nonstandard Geographic Tabulation Entities**

The Census Bureau offers the opportunity for other Federal agencies, State agencies, and other data users to delineate nonstandard or *special geographic tabulation entities* on a fee basis. Such entities include school districts, traffic analysis zones, and other kinds of neighborhood- or community-based entities. The Census Bureau produces data for such special areas by aggregating the component census tabulation blocks.

In instances where special area boundaries subdivide a census tabulation block, the Census Bureau allocates the data according to procedures agreed upon with the purchaser. For instance, the allocation may be on the basis of the land area of the subdivided part(s) or may require a detailed examination of 1990 census records.

## **Census Block Configurations**

### **Census Block Patterns in Larger Urban Areas**

The core area of most urban agglomerations consists of a grid system of relatively small blocks, disrupted here and there by water features; topographic relief; special land uses such as parks, industrial areas, and commercial areas; transport features such as airports and railyards; and institutions such as hospitals, schools, and detention facilities. The surrounding older suburbs tend to repeat this pattern; however, development since the 1960s often involved larger residential blocks with curvilinear street patterns and cul-de-sacs. This new pattern of urban development reflects the application of urban planning concepts and a concern for residential amenities. The road patterns in rural areas follow both a branching and a grid pattern, depending on local factors as well as the rural settlement patterns in particular regions of the Nation. Rural patterns greatly reflect the topography and land survey system that was in place at the time of settlement.

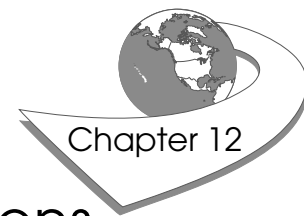
### **Regional Factors**

Regional variations in census block patterns are related to the age of the settlement pattern and the relative density of the population. In the urban cores of most older cities, census blocks are small because development preceded the introduction of urban transportation technologies (such as interurban railways, streetcars, and the automobile) and the decentralization of industries and jobs. Surrounding these urban cores in the eastern and southern regions of the Nation, one typically finds dense, irregular street patterns and an extensive system of connecting roads due principally to the metes and bounds survey system.

The presence of coastal and inland water features often influence the settlement pattern. In areas influenced by French settlement, such as within the

State of Louisiana, the census block pattern preserves the riparian pattern of elongated strips of land, each having access to a major water feature. Rural areas in the central part of the country usually continue the grid-type road pattern of the urban core areas, primarily because of the introduction of the township and range survey system, but also due to the general lack of topographic relief.

Suburban and rural census block configurations in the West vary from grid to irregular patterns depending on the local topography and the survey system at the time of settlement. The rural census blocks in the West tend to be larger because of the relatively low population densities as well as the lack of a dense system of roads and water features. There were a few individual census blocks delineated during the 1990 census in the West that were over 250 square miles in area.



# 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> Incorporated place population of 50,000 or more (1940 census count)</p> <p><b>Method of boundary delineation</b> Population estimates, precensus surveys, aerial photography</p> <p><b>Density requirement</b> 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> Exclaves of discontinuous nonplace territory within 1 1/2 miles and connected by road</p> <p><b>Number of UAs</b> 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> Census results, small enumeration districts (EDs)</p> <p><b>Density requirement</b> At least 1,000 people per square mile</p> <p><b>Place population in urban fringe</b> 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> 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> 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).

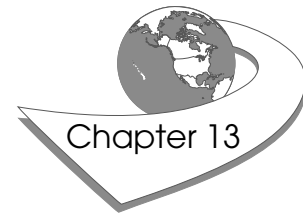
The Census Bureau also offers a machine-readable TIGER UA Limit™ file on magnetic tape. This national file contains a digital representation of the geographic coordinates for all linear features in the TIGER data base

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.



# Metropolitan Areas

## Classification of Metropolitan Areas

The general concept of a metropolitan area (MA)<sup>1</sup> 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. The Federal Office of Management and Budget (OMB)<sup>2</sup> designates and defines MAs following a set of official standards. (The MA standards for the 1990s were published in the *Federal Register* on March 30, 1990—Vol. 55, No. 62, pp. 12154-12160.) The MA classification is provided for use by Federal agencies in the production, analysis, and publication of data.

An interagency committee—the Federal Executive Committee on Metropolitan Areas (FECMA)—advises the OMB on the development of the MA standards with the aim of producing definitions that will be as consistent as possible for all MAs nationwide. Also, the Bureau of the Census plays a key technical role by providing virtually all data used in the MA definition process, mostly from the decennial census.

Included among MAs are metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, New England county metropolitan areas (NECMAs) are an alternative set of areas defined for the six New England States.

### Metropolitan Statistical Areas

An MSA consists of one or more counties that contain a city of 50,000 or more inhabitants, *or* contain a Census Bureau-defined urbanized area (UA) and have a total population of at least 100,000 (75,000 in New England). Counties containing the principal concentration of population—the largest city and surrounding densely settled area—are components of the MSA. Additional counties qualify to be included by meeting a specified level of commuting to the counties containing the population concentration and by meeting certain other requirements of metropolitan character, such as a specified minimum population density or percentage of the population

that is urban. MSAs in New England are defined in terms of cities and towns, following rules concerning commuting and population density.

### **Consolidated Metropolitan Statistical Areas**

An area that meets the requirements to qualify as an MSA and also has a population of one million or more becomes a CMSA if component parts of the area are recognized as PMSAs.

### **Primary Metropolitan Statistical Areas**

Subareas may be defined within an area that meets the requirements to qualify as an MSA and also has a population of one million or more. The definition of these subareas, called PMSAs, requires meeting specified statistical criteria and having the support of local opinion. A PMSA consists of a large urbanized county or a cluster of counties (cities and towns in New England) that demonstrate strong internal economic and social links in addition to close ties with the central core of the larger area.

Upon the recognition of PMSAs, the entire area of which they are parts becomes a CMSA. All territory within a CMSA is also within some PMSA.

### **New England County Metropolitan Areas**

NECMAs are county-based alternatives to the city- and town-based MSAs and CMSAs in the six New England States. The county composition of a NECMA reflects the geographic extent of the corresponding MSA(s) or CMSA(s). NECMAs are not defined for individual PMSAs.

## **Background**

### **Metropolitan Districts, Forerunners of MAs**

Interest in developing a consistent definition of *metropolitan* dates back more than a century. The metropolitan concept arose from the common observation that the physical extent of a large urban concentration often overflows the official limits of any single city.<sup>3</sup> The existence of suburban territory outside the limits of important cities was noted in statistical

publications well before the Civil War. For example, in 1846, *The New England Gazetteer's* entry on Boston stated the following:

“Owing to the almost insular situation of Boston, and its limited extent, its population appears small. But it must be considered that the neighboring towns of Quincy, Dorchester, Milton, Roxbury, Brookline, Brighton, Watertown, Cambridge, Charlestown, Medford, Malden, and Chelsea, although not included in the city charter, are component parts of the city, and are as much associated with it in all its commercial, manufacturing, literary, and social relations and feelings, as Greenwich, Manhattanville, and Harlem are with the city of New York; or Southwark and the Northern Liberties with Philadelphia.”<sup>4</sup>

The first extensive attempt by the Census Bureau to define areas based on the metropolitan concept was the identification of *industrial districts* for the Census of Manufactures of 1905, which showed such districts for New York, Chicago, Boston, and St. Louis. The Census Bureau gave official recognition to the metropolitan concept for decennial census purposes when it defined *metropolitan districts* for the 1910 census. These metropolitan districts were defined on a nationwide basis for cities having populations of at least 100,000. The Census Bureau defined metropolitan districts again for the 1920 census, applying the same criteria that had been used in 1910. Metropolitan districts again were defined for the 1930 and 1940 censuses, but the criteria were modified for these censuses so that metropolitan districts for cities with minimum populations of 50,000 would be recognized. There were 96 metropolitan districts for the 1930 census, and 140 metropolitan districts for the 1940 census.

Throughout the period 1910 through 1940, the Census Bureau defined metropolitan districts in terms of minor civil divisions (MCDs)—county subdivisions such as townships or election districts—and determined their boundaries primarily based on population density.<sup>5</sup> The use of MCDs proved suitable for census data presentation. However, few agencies or organizations outside the Census Bureau compiled data for MCDs. As a result, Federal, State, local, and private statistical groups could not readily prepare data and conduct socioeconomic analyses using the metropolitan district as a statistical base. By World War II, some of these groups developed alternative metropolitan definitions in terms of whole counties that

did not coincide with the Census Bureau's metropolitan districts or the metropolitan definitions devised by other agencies or groups.

### **Development of County-Based MAs From 1950 to the Present**

Limited acceptance of the MCD-based metropolitan districts and the proliferation of alternative approaches led the Federal Bureau of the Budget (later renamed the OMB) to conclude that a new approach was needed; the agency reached this conclusion as part of an evaluation of the needs of data users at the Federal and State level for metropolitan data. There also were concerns about the Census Bureau's urban and rural classifications. As a result, two new statistical measures were adopted. First, the Bureau of the Budget, in cooperation with other Federal agencies, including the Census Bureau, established the standard metropolitan area (SMA) to define the metropolitan extent around large cities. Second, the Census Bureau developed the urbanized area (UA) definition to define the densely settled agglomerations around large cities (see Chapter 12, "The Urban and Rural Classifications"). The SMA provided a means of delimiting a functional zone of economic and social integration around a central place or places. The UA, in contrast, represented a measure of the extent of an urban agglomeration, including the built-up portion of a core place and the densely settled surrounding area. The Census Bureau implemented the programs that provided for defining SMAs and UAs for the 1950 census.

To maximize the range of statistical data that could be made available, the Bureau of the Budget decided to define SMAs in terms of whole counties. An exception was made for New England, where the subcounty units—the cities and towns—have always had local importance and a wide range of statistics available.

Since the new SMAs were to be used by all Federal statistical agencies, and not just for census purposes, the Bureau of the Budget assumed the task of defining them,<sup>6</sup> acting with the advice of a newly formed interagency committee, currently known as the FECMA. The criteria used for defining MAs gradually evolved over the decades. In recent practice, the standards by which MAs are established and defined receive a comprehensive review



by the OMB and the FECMA every ten years, culminating in the publication of revised standards before the decennial census.

Most of the changes in the standards have been minor and have not reflected significant deviations from the concepts underlying the standards used for the 1950 census. Several modifications have been made in the rules for determining how large a city must be to have an MA defined. Until 1958, the standards always required a city of at least 50,000, but subsequent changes have relaxed this rule somewhat, permitting the definition of areas around smaller cities when certain specified conditions were met. Changing national conditions also have resulted in standards changes. For example, counties qualifying for inclusion in SMAs defined for the 1950 census were required to have less than 25 percent of their workforce engaged in agriculture. This requirement was dropped in the 1980 standards because it no longer affected many counties.

The availability of new statistical data has affected the development of the standards. For example, although the 1950 standards specified commuting as the main measure of integration between outlying and central counties, there were no national data available on the subject at that time. Most of the commuting data used to define SMAs in the 1950s were derived from surveys by State and local employment agencies, which were not entirely comparable with one another in their coverage and approach. The inclusion of a question about place of work in the 1960 census made available a national set of data on commuting, thus improving the accuracy and consistency of areas defined as metropolitan. Also, the standards now make greater use of commuting data. Some of the most important changes in the standards were announced before the 1980 census (and implemented in 1983). Chief among these were the provision for qualification of MAs on the basis of the Census Bureau's UAs, and the introduction of PMSAs as components of CMSAs.

The standards for the 1990s went into effect in December 1992 and June 1993, when OMB issued redefinitions of MAs based on commuting and

other data from the 1990 census. Effective June 30, 1993, these revised MA definitions for the Nation included 250 MSAs, 18 CMSAs (consisting of 73 PMSAs), and 12 NECMAs (plus 3 MSAs and 1 CMSA with 3 PMSAs in Puerto Rico).<sup>7</sup>

The current MA standards, which will be in effect through the 2000 census, changed only slightly from those used for the previous decade. The most important changes were an expansion in the role of UAs in the qualification of outlying counties for inclusion in MAs, and certain alterations in the rules for titles. In addition, the current standards introduced the collective term *MA*.

## **Defining and Titling MAs**

### **Defining MAs**

The MA standards specify the step-by-step definition process by which the concept of a densely settled core area plus its suburbs becomes realized as individual MSAs, CMSAs, PMSAs, and NECMAs. Qualification of an MSA requires the presence of a city of 50,000 or more inhabitants, *or* a Census Bureau-defined UA (of at least 50,000 inhabitants) and a total population of at least 100,000 (75,000 in New England). The county or counties including the largest city in the core area of population become *central counties* of the MSA; so does any adjacent county that has at least 50 percent of its population in the UA surrounding the largest city. (In New England, the basic geographic unit for defining MSAs is the city or town rather than the county.)

Additional *outlying counties* are included in the MSA if they meet specified requirements of commuting to the central counties as well as other requirements of metropolitan character. The minimum level of commuting to central counties required to make a county eligible for consideration as an outlying county is 15 percent. In general, the lower the percentage of a county's resident workers commuting to the central counties, the more demanding the other requirements of metropolitan character the county must meet in order to qualify for inclusion. The measures of metropolitan

character specified in the standards include required levels for the county's (1) population density; (2) percentage of population that is classified as urban; (3) percentage growth in population between the previous two decennial censuses; and (4) percentage of, or absolute number of, inhabitants within the UA that qualifies the MSA. Qualification of outlying cities and towns in New England is based on commuting and population density.

An area that meets the requirements for recognition as an MSA and also has a population of one million or more may be recognized as a CMSA if (1) separate component areas can be identified within the entire area by their meeting population and commuting criteria specified in the standards, and (2) local opinion indicates there is support for the component areas. If recognized, the component areas are designated PMSAs (and the entire area becomes a CMSA). If no PMSAs are recognized, the entire area is designated an MSA. (PMSAs, like the CMSAs that contain them, are composed of counties outside New England and cities and towns within New England.)

NECMAs are county-based alternatives to the city- and town-based MAs in New England. The NECMA for an MSA or CMSA includes (1) the county containing the first-named city in that MSA/CMSA (this county in some cases includes the first-named cities of other MSA(s)/CMSA(s) as well), and (2) each additional county having at least half its population in the MSA(s)/CMSA(s). NECMAs are not defined for individual PMSAs.

MSAs, PMSAs, and NECMAs are categorized in one of the following levels based on total population:

Level A	Areas of 1 million or more
Level B	Areas of 250,000 to 999,999
Level C	Areas of 100,000 to 249,999
Level D	Areas of less than 100,000

CMSAs, by definition, have populations of 1 million or more.

### **Central Cities and MA Titles**

The OMB designates the largest city in each MSA or CMSA as a *central city*, and additional cities qualify for this designation if specified requirements are met concerning population size and commuting patterns. The central cities of a NECMA are those cities in the NECMA that qualify as central cities of an MSA or a CMSA.

The title of each MSA consists of the names of up to three of its central cities and the name of each State into which the MSA extends. However, a central city is not included in an MSA title unless it has at least one-third the population of the area's largest city or local opinion supports its inclusion. Typically, titles of PMSAs also are based on central city names, but in certain cases consist of county names. Generally, titles of CMSAs are based on the titles of their component PMSAs, although CMSA titles may include suitable regional designations. NECMA titles are derived from the names of central cities. As is the case for MSAs, a CMSA, PMSA, or NECMA title always includes the names of all States into which the area extends.

### **Intercensal MA Changes**

In the period between decennial censuses, the OMB may define new MSAs and make certain other types of changes specified in the MA standards. Intercensal MA changes result from population counts or estimates from the Census Bureau. During the 1990s, research is under way to produce a new approach for defining areas using data from the 2000 census.

### **Qualification and Designation of New MSAs**

An area can qualify for intercensal designation as an MSA in three ways: (1) a city reaches the 50,000 population threshold according to a Census Bureau special census count or estimate; (2) a nonmetropolitan county (or group of counties) containing a UA from the most recent decennial census reaches the 100,000 population threshold according to a special census count or estimate (or, in New England, the cities and towns qualifying for the potential MSA reach the 75,000 threshold); or (3) the Census Bureau defines a new UA based on a special census, and the potential MSA containing this UA meets the above population requirements. If

the MSA qualifies based on an intercensal population estimate by the Census Bureau, the qualification must be confirmed by the next decennial census or the area is disqualified.

### **Research on Metropolitan Area and Related Concepts**

The OMB and the Census Bureau currently are examining alternative approaches for identifying the geographic entities of the metropolitan/nonmetropolitan settlement system. The Metropolitan Concepts and Statistics Project has as its primary objective the development of a new scheme for classifying metropolitan and nonmetropolitan areas. Work on this project will continue into the late 1990s. The results of the project will be fully reviewed and evaluated before the OMB makes any changes to the current MA standards.<sup>8</sup>

### **Data Products for MAs**

The OMB first applied the MA standards cited in this chapter to define MAs in December 1992 and June 1993, after a large share of the 1990 census products had been released. The MAs reported in nearly all 1990 census products—printed reports, computer tapes, CD-ROM discs—are those that existed as of June 30, 1990. This arrangement stems from the fact that MAs could not be redefined until place-of-work data from the 1990 census sample questionnaire had been processed. An exception to this situation is the 1990 Census of Population and Housing Supplementary Report (CPH-S-1-1) *Metropolitan Areas as Defined by the Office of Management and Budget, June 30, 1993*, which provides both sample and complete-count 1990 census data for the MAs as defined on June 30, 1993. Also, the Census Bureau has produced a wall map of the 1993 MSAs, CMSAs, and PMSAs as of June 30, 1993; it is available from the Government Printing Office (telephone number 202-783-3238, stock number 003-024-08740-5). A list of the MAs defined as of June 30, 1993 is available from the National Technical Information Service (telephone number 703-487-4650, document accession number PB 93-192-664).

The Census Bureau's paper and electronic products for the decennial and economic censuses include a wide variety of data for MAs. These

products provide a convenient compilation of data that typically are also available for counties or other MA components. The Census Bureau reports some data from the economic census or from surveys only for (large) MAs or their central cities. The Census Bureau will incorporate the new metropolitan areas (based on the 1990 standards) into the Current Population Survey sampling framework beginning in 1995.

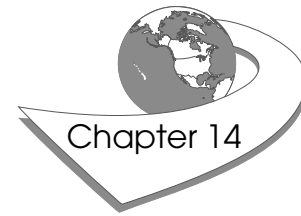
## Notes and References

- <sup>1</sup> The collective term used for Federal metropolitan areas has varied over time, beginning with *standard metropolitan area (SMA)* in 1950, changing to *standard metropolitan statistical area (SMSA)* in 1959, to *metropolitan statistical area (MSA)* in 1983, and to *metropolitan area (MA)* in 1990.
- <sup>2</sup> The OMB, which earlier was called the Bureau of the Budget, has been responsible for official metropolitan areas since they were first defined for the 1950 census, except for the period 1977 to 1981. During those years, the then Office of Federal Statistical Policy and Standards in the Department of Commerce had responsibility for Federal statistical policy, including the definition of MAs.
- <sup>3</sup> For a more detailed history of the metropolitan concept, consult two articles by the Federal Committee on Standard Metropolitan Statistical Areas: “The Metropolitan Statistical Area Classification/Final Standards for Establishing Metropolitan Statistical Areas Following the 1980 Census,” *Statistical Reporter*, December 1979, pp. 33-45, and “Documents Relating to the Metropolitan Statistical Area Classification for the 1980s/Background and Rationale for the Official Standards,” *Statistical Reporter*, August 1980, pp. 335-384.
- <sup>4</sup> John Hayward, *The New England Gazetteer*, 48th edition; Boston: John Hayward, 1846.
- <sup>5</sup> The official definitions and populations of the metropolitan districts may be found in U.S. Bureau of Census, *Thirteenth Census of the United States: 1910*, Vol. I, p. 73 (Washington: Government Printing Office, 1911); *Fourteenth Census of the United States: 1920*, Vol. I, pp. 62-71 (Washington: Government Printing Office, 1921); *Fifteenth Census of the United States: 1930, Metropolitan Districts, Population and Area* (Washington: Government Printing Office, 1932); *Sixteenth Census of the United States: 1940*, Vol. I, p. 11 (Washington: Government Printing Office, 1942). For a summary, see U.S. Bureau of the Census, *The Growth of Metropolitan Districts in the United States: 1900-1940*, [by Warren S. Thompson] (Washington: Government Printing Office, 1947).
- <sup>6</sup> This assignment came with the Budget and Accounting Procedures Act of 1950, which assigned responsibility for statistical policy to the Bureau of the Budget.

<sup>7</sup> OMB Bulletin No. 93-17, and its attachments “Metropolitan Areas 1993, Lists I-IV.”

<sup>8</sup> The Census Bureau’s Population Division is managing the Metropolitan Concepts and Statistics Project and can provide further details about the scope and objectives of this project.





# Voting Districts

*Voting district (VTD)* is a generic term adopted by the Bureau of the Census to include the wide variety of small polling areas, such as election districts, precincts, or wards, that State and local governments create for the purpose of administering elections. Some States also use groupings of these entities to define their State and local legislative districts, as well as the districts they define for election of members to the U.S. House of Representatives. In a nationwide cooperative program for the 1980 census, the Census Bureau gave States the opportunity to request use of these election precinct boundaries as the boundaries of census enumeration districts (EDs) or, in some areas, census blocks. The Census Bureau began using the term *voting districts* as it began planning for the 1990 census. This chapter describes the events that led to the development of the VTD program for the 1980 and 1990 censuses, and briefly explains the operations and procedures the Census Bureau used to implement the program.

## Background

For many decades, the Census Bureau tabulated and published population totals for wards within certain incorporated places and some county subdivisions, such as minor civil divisions (MCDs) or census county divisions (CCDs). These *municipal* wards normally were composed of several adjacent election precincts from which voters elected governmental officials such as aldermen and councilmen. Wards have a long tradition in American census taking—from the reporting of population totals by wards in a 1768 census of Philadelphia through the Census Bureau’s publications of ward data after the 1960 census<sup>1</sup> and the 1970 census.<sup>2</sup> The Census Bureau also used the ward boundaries for census enumeration; a ward boundary often was the outer boundary for a group of EDs. The Census Bureau developed plans to report population data by wards following the 1980 census, but deferred the tabulations because of budgetary constraints. During this time, it became apparent that wards had certain drawbacks for purposes of statistical analysis; as electoral subdivisions, their size and geographic composition varied widely, and since their boundaries shifted frequently, they had limited usefulness for trend analysis. In

addition, other programs offered by the Census Bureau, such as the 1980 Neighborhood Statistics Program and the 1980 Election Precinct Program, offered data for small areas in a variety of formats, thereby filling the need for data that would have been provided at the ward level.

The need to provide data for political representation, as prescribed by the Constitution, remains the primary purpose for conducting the decennial census of population. The U.S. Supreme Court's *one-person/one-vote* decision of 1964, and various subsequent rulings of the courts, have been instrumental in providing census data aggregated for small geographic units. Before the one-person/one-vote ruling, most State authorities favored drawing or revising congressional and State legislative districts to coincide with legally defined units such as counties, MCDs, and incorporated places. These geographic entities often are not demographically or statistically comparable, however. Consequently, the resulting districts often had significant population imbalances. In addition, there were other problems associated with the selection of only governmental unit boundaries for redistricting. Richard L. Morrill described some of these problems in his book, *Political Redistricting and Geographic Theory*:<sup>3</sup>

“In the United States, representatives are elected at several levels of government, but there is no simple hierarchy of districts, only complex and overlapping systems. U.S. senators and presidential electors are elected at large from States, U.S. representatives from congressional districts of about equal size (510,000 in 1980). Within States, senators and representatives are elected to legislatures from a structure of districts totally unrelated to the congressional districts. In some States, like Mississippi, even districts for senate and house are unrelated. Again, the structure of county council or supervisor districts is wholly independent of state legislative or congressional districts. Finally, city council or school districts are likely to overlap confusedly with all the preceding systems and with each other. The only example of nesting or hierarchy of governmental units in the United States are councils of government (COGs) which are not directly elected, but consist of members elected from constituent city, county, or special district agencies.

The *geographic* problem as such was historically not very profound or technical. Since population was not viewed as having to be very equal, there was a tendency to use simple existing boundaries of familiar legal territories, such as city limits, and merely group these in convenient ways. There was also a need to define voter precincts, the finest subdivision of districts. This was not always done on a clear basis

of mutually exclusive territory. Even in the 1970s, precincts in some Mississippi counties were places such as schools or fire stations, at which eligible citizens in the county could register and vote.

The geographic problem has become much more complex and technically difficult, if not profound, in recent years because of court requirements of precise population equality. Similar court requirements relate to treatment of racial minorities and concern with such matters as contiguity of territory and compact shape. The need for population equality has led to questioning the use of precincts as building blocks. Because they rarely coincide with census enumeration areas, adequate population data for them is lacking.”

In planning for the 1980 census, the Census Bureau focused on trying to improve the usefulness of its data for precincts by providing programs designed to allow census enumeration area boundaries to coincide with precincts, thereby making census data for precincts more readily available to data users. To do this, the Census Bureau first had to evaluate the 1970 programs, data, and data products relevant to election precincts, and then develop recommendations based on surveys of interested data users.

## **The Election Precinct Program for the 1980 Census**

### **Evaluating the Redistricting Data Program for 1970**

After the 1970 census, the Census Bureau sent a copy of the Master Enumeration District List (MEDList) and census maps to appropriate officials in each State legislature for their use in redistricting. The MEDList included all 1970 EDs and block groups (BGs) by State, county, MCD or CCD, place, and census tract or block numbering area (BNA); the MEDList also provided the population and housing unit counts for each entity. Many States experienced problems in using the MEDList and maps in relation to their election or legislative areas because the boundaries of the census entities often did not coincide with the State or local voting district boundaries. Recognizing this and other deficiencies, the Census Bureau decided that two major goals for the 1980 census would be to improve, where possible, (1) the boundaries of its small-area geographic entities used for redistricting decisions, and (2) its associated data and data products.

The Census Bureau's efforts to achieve this goal began in 1973 with the establishment of a close working relationship with the National Conference of State Legislatures (NCSL) and its Reapportionment Task Force. The Census Bureau worked with this group to identify the specific weaknesses in the 1970 census data for use in legislative redistricting, and to minimize these weaknesses for 1980. In 1974, the NCSL conducted a mail survey of State legislative officials and legislative staff throughout the Nation to better define the existing problems and elicit recommendations for improvements. The Census Bureau also held discussions with the International City Management Association, the National League of Cities, the U.S. Conference of Mayors, and the National Association of Counties about ways to obtain similar information from members of these organizations. During 1974 and 1975, over 70 communities across the Nation organized a series of public hearings on the upcoming decennial census; as a result of these meetings, the Census Bureau was able to obtain additional suggestions for improving its redistricting data products and associated geographic criteria.

The surveys and discussions resulted in focusing attention on three major recommendations: (1) the early release of data, (2) the geographic compatibility of census tabulation units with voting districts, and (3) the need for block-by-block population counts for incorporated places. For many States, the final census data often arrived too late to be of any use to them. In other States, the timing of data publication may have been acceptable, but the size and boundaries of some of the tabulation units, specifically EDs, were not. Because census tabulation units were not directly compatible with local voting districts, State authorities involved in redistricting could only approximate the population and characteristics of the areas they were delineating. Many users who had been frustrated with the 1970 data and data products felt that data for the smallest possible census geographic unit, the census block, should be available for more areas so that State and local governments could make more acceptable delineations.

### **Developing the Election Precinct Program for 1980**

In the fall of 1975, the Census Bureau agreed to develop and implement a program aimed at improving the geographic and data products from

the 1980 census for use in legislative redistricting. The Director of the Census Bureau invited each State Governor, Secretary of State, and the majority and minority leaders of all State legislatures to meet with the Census Bureau to discuss their needs for 1980 census data and data products.

At the same time, reflecting State and congressional concerns about data for redistricting, the Congress passed H.R. 1753, which was enacted as Public Law (P.L.) 94-171 in late December 1975. This law directed the Secretary of Commerce to issue a set of technical criteria, by April 1, 1976, for States to follow in specifying the geographic entities for which they wished to receive data tabulations. Second, the law also required the States to submit these geographic plans to the Secretary for consideration no later than April 1, 1977. Finally, the law required the Secretary of Commerce to transmit the population counts to the Governor and public bodies having initial responsibility for legislative districting in all States by April 1, 1981—one year after census day. The Secretary of Commerce delegated all responsibilities assigned by the legislation to the Census Bureau. The text of the P.L. 94-171 is shown in Figure 14-1.

Responding to the requirements of P.L. 94-171, on March 31, 1976, the Census Bureau issued cartographic criteria for States to follow in designing geographic plans that it would use as the basis on which to tabulate the 1980 counts. By mid-1976, the Census Bureau had discussed these requirements with legislative officials in each State to solicit their interest in participating in this voluntary program.

The NCSL also drafted model legislation, which each State could adopt or modify to fit its situation, to help ensure that the boundaries of election precincts (or similar areas) in the State followed visible ground features or the limits of legally defined entities for which the Census Bureau normally would tabulate data. The model legislation helped States design election precincts that would conform to the Census Bureau's guidelines for boundaries to be used in preparing data tabulations.

Figure 14-1. **Federal Register Notice for Public Law 94-171**

PUBLIC LAW 94—171—DEC. 23, 1975

89 STAT. 1023

Public Law 94—171  
94th Congress

An Act

Dec. 23 1975

To amend section 141 of title 13, United States Code, to provide for the transmittal to each of the several States of the tabulation of population of that State obtained in each decennial census and desired for the apportionment or districting of the legislative body or bodies of that State, in accordance with, and subject to the approval of the Secretary of Commerce, a plan and form suggested by that officer or public body having responsibility for legislative apportionment or districting of the State being tabulated, and for other purposes.

[H.R.1753]

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That section 141 of title 13, United States Code, is amended by adding at the end thereof the following new subsection:

Population,  
tabulation for  
State legislative  
apportionment.

“(c) The officers or public bodies having initial responsibility for the legislative apportionment or districting of each State may, not later than three years prior to the census date, submit to the Secretary a plan identifying the geographic areas for which specific tabulations of population are desired. Each such plan shall be developed in accordance with criteria established by the Secretary, which he shall furnish to such officers or public bodies not later than April 1 of the fourth year preceding the census date. Such criteria shall include requirements which assure that such plan shall be developed in a nonpartisan manner. Should the Secretary find that a plan submitted by such officers or public bodies does not meet the criteria established by him, he shall consult to the extent necessary with such officers or public bodies in order to achieve the alterations in such plan that he deems necessary to bring it into accord with such criteria. Any issues with respect to such plan remaining unresolved after such consultation shall be resolved by the Secretary, and in all cases he shall have final authority for determining the geographic format of such plan. Tabulations of population for the areas identified in any plan approved by the Secretary shall be completed by him as expeditiously as possible after the census date and reported to the Governor of the State involved and the officers or public bodies having responsibility for legislative apportionment or districting of such State, except that such tabulations of population of each State, requesting a tabulation plan, and basic tabulations of population of each State shall, in any event, be completed, reported and transmitted to each respective State within one year after the census date.”

### **Options for Participation in the 1980 Election Precinct Program**

The goal of the 1980 Election Precinct Program was to provide each State with population counts by April 1, 1981, for their use in revising State legislative districts and Congressional Districts. A State could select a number of methods for receiving the data, but every State, regardless of participation, would receive population counts for the legal and statistical entities in that State by April 1, 1981. The program offered the opportunity for States to get these population counts tabulated by election precinct.

The Census Bureau offered three separate options for participating in the Election Precinct Program: (1) the *plan*, (2) the *alternative approach*, and (3) the *enumeration district plan*. The first of these options, the *plan option* allowed a State to submit election precinct boundaries following criteria established by the Census Bureau. The deadline for submitting boundaries, April 1, 1977, reflected the legal requirements established in H.R. 1753. Eighteen States submitted geographic plans to the Census Bureau by this deadline. After comprehensive review and negotiations with the submitting authorities, the Census Bureau approved election precinct plans for all or part of 15 States.

When it became apparent that only 15 States were either willing or able to freeze their election precinct boundaries by April 1, 1977, the Census Bureau decided to offer two additional options for participation in the Election Precinct Program. The first of these additional options, presented in two versions, was known as the *alternative approach*. This option allowed participating States to develop election precinct plans using a listing of block numbers that reflected the association between these precincts and higher levels of geography within the county—census tracts or block numbering areas (BNAs), places, and county subdivisions. Twenty-nine States participated in this option with the assistance of staff from the Census Bureau.

The second of these additional options, the *enumeration district plan*, offered States the option of proposing enumeration district (ED) boundaries for the 1980 EDs delineated outside of block-numbered areas. Using the guidelines of the Redistricting ED (R-ED) Program, States participating in this option had the opportunity to propose boundaries for EDs that also would serve as boundaries of census tabulation areas. Participating States specified features to be held as ED boundaries, and the Census Bureau honored these requests to the extent possible within the technical guidelines of the program. Officials in seven States submitted ED plans for selected counties in their States.

Because the Census Bureau offered several different ways for a State to receive data and to prepare for the use of these data, it was not uncommon for a State to choose a combination of options for participation in the 1980 Election Precinct Program. Twenty-two States took advantage of a combination of options for election precinct data. Six States, Colorado, Hawaii, Massachusetts, New Mexico, Vermont, and Wyoming, chose not to take part in any aspect of the Election Precinct Program.

The availability of block-level data was critical to States in their redistricting efforts. Partly as a response to the complaint that the tabulation units were too large for many areas in 1970, the Census Bureau expanded the coverage of the Block Statistics Program. For 1980, in addition to the regular census program of having the tabulation and publication of data for all blocks within a 1980 urbanized area (see Chapter 12 for more information on the relationship of urbanized areas to blocks), the Census Bureau extended the program to any incorporated place that had (1) a population of 10,000 or more as of the 1980 census, (2) a subsequent official Census Bureau estimate through 1976, or (3) a special census through 1977.

In addition, the Census Bureau offered the Contract Block Statistics Program, as it had in the past. This gave State and local governments the opportunity to have the Census Bureau collect and publish data—at cost—by block for areas not in the Census Bureau’s regular block program.



In anticipation of the value of block data for redistricting, five States chose to have census block data for their entire State: Georgia, Mississippi, New York, Rhode Island, and Virginia. The expansion of the Block Statistics Program provided some States with the data needed to redistrict so that participation in the three options for the 1980 Election Precinct Program was not necessary.

The operations associated with reviewing and processing the map submissions from the 15 States responding by the April 1977 deadline were complicated by variations in the maps submitted. The maps were unique for each State; the style, format, layout, scale, vintage, map symbology, and accuracy of the maps varied from State to State. As a result, the transfer of the boundaries from these maps to Census Bureau maps, and the subsequent map review, approval, and geocoding processes, were time-consuming, complicated, and error-prone. For example, if a precinct boundary followed a feature that appeared on the State's map but did not appear on the Census Bureau's map, it was necessary to move the precinct boundary to an acceptable feature or combine the precincts sharing the boundary. In addition, the appropriate State official had to authorize and approve each adjustment or combination. The Census Bureau then used these boundaries to define 1980 census ED boundaries, and kept track of which EDs equated to each election precinct. At the end of the process, the Census Bureau returned all State-submitted maps to the States for their use in the redistricting process. The Census Bureau kept no copies of these maps and did not show the boundaries of the precincts on any 1980 census maps available to the public. The submission of plans was further complicated by changes occurring in governmental unit boundaries between 1977 and 1980. Approximately 1,000 incorporated places were affected by boundary changes occurring over this time period.

The Census Bureau tabulated data for 36,361 precincts using the plans that States submitted. It also tabulated data for all the R-EDs, EDs, contract block States, and other standard decennial census geographic

entities. The Census Bureau delivered the data with census maps to all States by April 1, 1981. The Census Bureau produced the resultant election precinct tabulations as a special computer subfile and not, therefore, as part of the standard decennial data dissemination programs. As a result, the data were available only on computer listings and magnetic tape, not in any published report.

## **The Redistricting Data Program for the 1990 Census**

### **Evaluation of the Redistricting Data Program for 1980**

Immediately after releasing the 1980 P.L. 94-171 data to the States, the Census Bureau began evaluating the evolving needs of the redistricting officials to determine how best they could be addressed. In 1983, a Stakeholder's Conference co-sponsored by the Census Bureau and the NCSL produced a set of recommendations for the 1990 Census Redistricting Data Program. These were to:

- Eliminate large census blocks and block groups that had noncontiguous pieces.
- Expand the criteria for acceptable census block boundary features to include such features as power lines, permanent fences, mountain ridges, pipelines, and firebreaks.
- Allow more street extensions, to break up large census blocks.
- Develop a suffix to identify each component of a block split by a governmental unit boundary in order to account for changes in governmental unit boundaries that would occur after the Census Bureau assigned its initial block designations for the 1990 census operations.
- Allow States to specify block boundary features for inclusion on the Census Bureau's maps so that the block boundaries would correspond to voting district boundaries (in those States delineating voting districts based on census blocks).
- Issue the 1990 P.L. 94-171 criteria in early 1985.
- Provide nationwide census block coverage for 1990 data tabulations.

The Census Bureau determined that it could adopt some of these suggestions. As a result, the Census Bureau expanded the criteria for acceptable census block boundaries, allowing more frequent use of street extensions and other nonstandard features as a method to break up large census blocks. In addition, the Census Bureau adopted the use of an alphabetic suffix attached to the originally assigned census block number to facilitate the reporting of block-level data by governmental unit.

The Census Bureau also approved the recommendation to allow States to identify specific features they wanted the Census Bureau to hold as block boundaries. States that had contracted for block statistics in the 1980 census often found it difficult to use the resulting census blocks to delineate election precinct boundaries because these boundaries frequently did not coincide with the census block boundaries. As a result, States that had paid the Census Bureau to receive block-level data incurred additional expenses to receive detailed data for census blocks split by precinct boundaries. In addition, these States were forced to modify the Census Bureau's population counts and develop population estimates conforming to the redistribution of population within the adjusted boundaries.

In five States in 1984, the Census Bureau tested the feasibility of implementing the recommendation that States be allowed to specify individual block boundaries that would correspond to voting district boundaries. Two important assumptions for this test were that (1) the Census Bureau would hold all named roads and railroad boundaries as census block boundaries, and (2) the Census Bureau would hold all double-line drainage, as shown on the United States Geological Survey (USGS) quadrangle maps, as census block boundaries.

Technical staff from the States visited the Census Bureau's regional offices (ROs) to review the maps that RO staff were updating for entry into the Topologically Integrated Geographic Encoding and Referencing (TIGER) data base and for subsequent use to prepare the 1990 census enumeration maps. They compared these feature change maps (FCMs) to their own

maps showing voting district boundaries and the features those boundaries followed. The test of this project was successful; the Census Bureau found it could add most additional features requested by the States to the FCMs. The States were able to provide an acceptable level of verification for the features they wanted added, and they found the Census Bureau willing to accept nearly all of the suggested features as block boundaries.

### **The Block Boundary Suggestion Project: Phase 1 of the Redistricting Data Program for 1990**

In April 1985, the Census Bureau announced Phase 1 of the 1990 Redistricting Data Program, the Block Boundary Suggestion Project (BBSP). Thirty-eight States and the District of Columbia participated in the BBSP. (In addition, the Census Bureau devised a similar program called the Block Boundary Definition Project for the Commonwealth of Puerto Rico.) Using guidelines provided by the Census Bureau, participating States began the task of collecting their voting district information from local officials such as county clerks and election offices. Acknowledging the practical and technical reasons for the Census Bureau's requirement that visible features be used as census block boundaries, many States went a step further and initiated legislation requiring that all voting districts within their States follow visible features.

States divided their workload into whole counties and used the Census Bureau's internal work schedule to set their own priorities. With the help of the RO geographic staff, States compared their block boundary suggestions with the FCMs before the ROs sent the FCMs to the Census Bureau's Field Digitizing Sites; this was done to ensure that the Census Bureau could include the States' suggestions in the map updates it was entering in the TIGER data base for use in the 1990 census. Staff from many States visited the Census Bureau's ROs to review the FCMs. After one or two visits, State staff usually could review 16 or more counties in a day. States that were using the U.S. Geological Survey's 7.5 minute quadrangle maps as their cartographic base could expedite their review, as this was the base map being used by the Census Bureau for the FCM program. For cases in which local officials had drawn their voting district boundaries

along nonvisible features, the State staff selected a nearby visible feature that would approximate the location of the original voting district line. By June 1986, 95 percent of all BBSP work was complete. By early 1987, the remaining work, mostly for areas not having 7.5 minute map coverage, concluded successfully. The Census Bureau then inserted the visible features identified by the States into the TIGER data base, assigning special *must-hold* flags to ensure that it would hold these features as 1990 census block boundaries. (However, due to operational and technical considerations, the Census Bureau was unable to hold all railroads as census block boundaries.)

### **The 1986 Test Census and the 1988 Dress Rehearsal**

Participants in the 1980 Election Precinct Program recommended that the States be able to submit their 1990 VTD plans on block-numbered maps produced by the Census Bureau. The Census Bureau tested its ability to implement this recommendation and determine overall mapping requirements for the VTD program during the 1986 Test Census, held in central Los Angeles County, CA. This test generally proved successful. In response to Test Census recommendations, the Census Bureau adjusted its mapping specifications to limit the total number of map sheets required while ensuring that both VTD names and codes would be included on the maps.

The 1988 Dress Rehearsal, held in portions of central Missouri and eastern Washington State, provided another opportunity to test the procedures and operations to be used for defining VTDs. The Census Bureau worked with the Missouri Office of Administration to ensure that 57 VTDs in Boone County were properly inserted into the TIGER data base and that the VTDs were revised to account for changes in governmental unit boundaries reported in the 1988 Boundary and Annexation Survey (BAS). Most of this preparatory work had been completed by mid-1987.

### **Dress Rehearsal Data and Products**

In early 1989, the Census Bureau began to deliver the data and geographic products from the Dress Rehearsal to serve as prototypes for the release of

all the P.L. 94-171 products. For Boone County, this included Voting District Outline Maps, the P.L. 94-171 County Block Maps, a 1988 Dress Rehearsal TIGER/Line™ file, data listings, and a computer file providing the P.L. 94-171 population and housing data in the hierarchical format proposed for use in the 1990 census. The delivery schedule mirrored the planned delivery of P.L. 94-171 data and geographic products in the spring of 1991.

Based on the feedback from the 1988 Dress Rehearsal, the Census Bureau made several additional changes to its geographic plans for the 1990 Redistricting Data Program. First, the Census Bureau adopted the suggestion that it distinguish *true VTDs* from *pseudo VTDs* as an option for participating States. (True VTDs are those for which the boundaries shown on the Census Bureau's maps conform exactly to the boundaries that appeared on the local source maps; all other VTDs are termed pseudo VTDs, either because the State staff modified their boundaries in some way to conform to the Census Bureau's visible feature criteria for block boundaries or because the State staff identified default VTDs in a county for which local officials did not identify *true VTDs*.) Where States did not opt to provide this identification, the Census Bureau defaulted to the pseudo identification.

Second, the Census Bureau took steps to include, in its data products and the TIGER/Line™ files, latitude and longitude coordinates for a point internal to each census block (often referred to as a block centroid even though it might not be at the true center of the block). Finally, the Census Bureau attempted to implement a suggestion that would have allowed State staff to identify segments of a voting district boundary that were to remain coincident with the boundary of a legal entity if the underlying legal entity boundary was changed by a legal action, such as an annexation or detachment, and reported to the Census Bureau in the BAS. Because of technical and operational constraints, the Census Bureau was not able to automate this process, and the process of updating VTD boundaries to maintain consistency with the changing governmental unit boundaries remained a manual operation.

## **Implementing Phase 2 of the Redistricting Data Program for 1990**

Phase 2 of the 1990 Redistricting Data Program provided an opportunity for each State to designate a State Liaison to coordinate the State's participation, provide its VTD boundaries to the Census Bureau, update the boundaries to reflect changes in governmental unit boundaries, and receive all data and geographic products associated with the program.

During the summer of 1987, the Census Bureau sent a letter about participating in this voluntary project to officials in each State responsible for redistricting; this included the legislative leadership of each State, except Alaska and Maryland, in which the Governor is responsible. By January 1989, the 46 participating States had named a liaison (some States named more than one) for the Census Bureau to work with on Phase 2 of the project. In the spring of 1989, the Census Bureau delivered precensus maps depicting legally defined entities (with boundaries current as of 1988) and the 1990 collection geography (census tracts, block numbering areas, and non-suffixed census block numbers) to State liaisons. Participants had seven months to annotate the maps with their VTD boundaries and return them for the Census Bureau to produce the tabulated data products. After receiving the maps, the Census Bureau inserted the VTD boundaries into the TIGER data base. Subsequently, to ensure accurate data tabulations, the Census Bureau updated any VTD boundaries coincident with a governmental unit boundary that changed after 1988.

Table 14-1 lists the number of *true* and *pseudo* VTDs for the 46 States that participated in Phase 2 of the 1990 Redistricting Data Program. The District of Columbia and the Commonwealth of Puerto Rico also delineated all their VTDs. Thirty-eight States participated in full; that is, they delineated their VTDs in all counties or equivalent entities. Four States delineated their VTDs in all but one or two counties. In four other States, the extent of participation was significantly lower; the percentage of counties for which the States delineated VTDs ranged from a high of 57 percent to a low of 35 percent.

Table 14-1. True and Pseudo VTDs for 1990

	<b>Number of VTDs</b> <i>(total)</i>	<b>True VTDs</b> <i>(percent)</i>	<b>Pseudo VTDs</b> <i>(percent)</i>
Alabama	1,629	0	100
Alaska	442	11	89
Arizona	1,930	87	13
Arkansas	2,631	0	100
California	25,575	21	79
Colorado	2,812	99	>1
Connecticut	779	52	48
Delaware	346	66	34
District of Columbia	140	37	63
Florida	4,687	55	42
Georgia	2,296	91	9
Hawaii	279	32	68
Idaho	596	57	43
Illinois	11,827	6	94
Indiana	5,427	58	42
Iowa	2,815	49	51
Kansas	13,381	>1	99
Louisiana	3,286	>1	99
Maine	314	99	>1
Maryland	1,621	77	23
Massachusetts	2,158	59	41
Michigan	5,923	45	55
Minnesota	4,093	0	100
Missouri	14,180	58	42
Nebraska	2,088	54	46
Nevada	1,024	66	34
New Hampshire	109	99	>1
New Jersey	5,819	51	49
New Mexico	984	99	>1
New York	11,744	83	17
North Carolina	1,684	99	>1



Table 14-1. (cont.)

	<b>Number of VTDs</b> (total)	<b>True VTDs</b> (percent)	<b>Pseudo VTDs</b> (percent)
North Dakota	1,106	>1	99
Ohio	2,084	0	100
Oklahoma	2,317	>1	99
Pennsylvania	9,498	52	48
Rhode Island	580	61	39
South Carolina	1,929	12	88
South Dakota	1,353	44	56
Tennessee	2,303	32	68
Texas	2,313	0	100
Utah	1,649	20	80
Vermont	124	73	27
Virginia	11,985	55	45
Washington	2,672	67	33
West Virginia	2,038	12	88
Wisconsin	4,355	17	83
Wyoming	468	>1	99
Puerto Rico	1,479	85	15

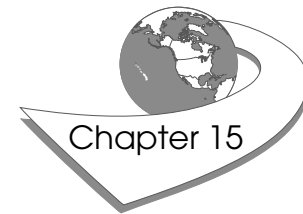
*Note: Kentucky, Mississippi, Montana, and Oregon did not participate in Phase 2.*

### **Delivery of the P.L. 94-171 Data and Geographic Products**

The Census Bureau delivered all 1990 P.L. 94-171 data and geographic products before the April 1, 1991 deadline. The official P.L. 94-171 products included (1) a summary tape file and paper listings reporting the P.L. 94-171 counts for all delineated geographic entities in each State, (2) Voting District Outline Maps for counties in which the States had provided VTD boundaries, (3) Census Tract/Block Numbering Area Outline Maps for counties in which the States had not submitted VTD boundaries, and (4) P.L. 94-171 County Block Maps depicting VTD boundaries in all appropriate counties. In addition, many States purchased the 1990 Census TIGER/Line™ files for their States in order to automate the redistricting process.

## *Notes and References*

- <sup>1</sup> U.S. Bureau of the Census, Census of Population: 1960, Supplementary Report PC(S1)-6, *Population of Cities of 10,000 or More by Wards*, U.S. Government Printing Office, Washington, DC, 1961.
- <sup>2</sup> U.S. Bureau of the Census, Census of Population: 1970 Supplementary Report PC(S1)-9, *Population of Places of 10,000 or more by Wards*, U.S. Government Printing Office, Washington, DC, 1972.
- <sup>3</sup> Richard L. Morrill, *Political Redistricting and Geographic Theory*, Association of American Geographers, Washington, DC: 1981.



# Area Measurement/Water Classification

For many decades, the Bureau of the Census has provided data users with area measurement information. Typically, this has been the calculated area, in square miles or square kilometers, for selected census geographic entities; usually States, counties, and some places and MCDs. It provides this information as a component of the data presentations resulting from each decennial census. Most area measurement information pertains only to land area, but there also have been figures for water and/or total area.

In conjunction with the 1990 census, the Census Bureau, for the first time, published area measurement information for all geographic entities down to the census block level. The geographic scope of this coverage includes the entire territory of the United States, Puerto Rico, and the Outlying Areas—American Samoa, Guam, the Northern Mariana Islands, Palau, and the Virgin Islands of the United States.

## **Area Measurement Through the 1980 Census**

A primary original purpose of area measurement information, most of which pertained only to land area, was to provide a basis for calculating population density figures. In response to other needs, the Census Bureau began to provide water and/or total area measurement information. Over time, the Census Bureau has revised its area measurement figures to take into account boundary changes, revisions in shorelines, construction of artificial water bodies, the latest technology for calculating area, and better maps.

### **Censuses Before 1940**

Area measurement data first appeared in an 1850 census publication, which reported the land area of the Nation, the States and territories, five major drainage areas, and a few other selected major divisions of the United States.<sup>1</sup> Similar area measurement data appeared in the

1860 and 1870 census publications. These data, which came from sources outside the Census Office (predecessor of the Census Bureau), show only the land area of the States and territories.

The first comprehensive area measurement information was published as part of the 1880 census. The measurements were done for many more types of geographic entities than in previous censuses. There were separate land and water area figures for the Nation, the individual States and territories, and for the first time, counties. Also, the Census Office began to calculate its own area measurement values. A special publication described the measurement techniques, sources consulted, and maps used.<sup>2</sup> From 1890 through 1930 there were gradual improvements in the quality and scope of the area measurement presentations, as the Census Bureau began to provide area measurement information for geographic entities below the State and county level, such as for more populous incorporated places and minor civil divisions (MCDs).

### **The 1940 Through 1970 Censuses**

There were important new advances in conjunction with the 1940 census. For the first time, the Census Bureau provided area measurement information for every MCD regardless of its population, and every incorporated place with a population of 1,000 or more.<sup>3</sup> The Census Bureau used aeronautical charts from the U.S. Coast and Geodetic Survey (scale of 1:500,000) to derive the total area of the United States and of each State; for counties, it used the U.S. Geological Survey's (USGS) State topographic quadrangle maps (also at a scale of 1:500,000); for county subdivisions and places, it used county highway maps. It then adjusted the State totals to agree with the previously derived U.S. total, and the county totals to agree with the State totals.

The Census Bureau defined land to include all dry land, land temporarily or partially covered by water (except tidal flats), and islands more than 40 acres in size. It defined inland water as permanent streams, sloughs, estuaries, and canals except those less than one-eighth of a mile (660 feet) in width, and permanent lakes, ponds, and reservoirs except those of less than 40 acres.

Also for the first time, the Census Bureau developed guidelines for measuring waters other than inland water; that is, coastal water, large embayments, sounds, straits, and the Great Lakes.

From its 1950 through its 1970 censuses, the Census Bureau used the same techniques to obtain updated area measurement data; each decade it revised the previous figures to take into account new geographic entities, shifts or transfers of territory, new reservoirs, better maps, and reported errors and inconsistencies. To perform these updates, it used information available from Federal, State, and local governmental sources. Where necessary, it remeasured geographic areas with polar planimeters or an electromechanical scanning device, the Map Area Computer. After the 1960 census, the Census Bureau published a series of reports to update the 1940 area measurement data.<sup>4</sup> The 1940 area measurement values, at the county level, were treated as control figures for the 1950, 1960, and 1970 updates; that is, all geographic entities comprising a county had to equal the county's total area figure.

### **The 1980 Census**

For the 1980 census, there were two major changes: an improved map base and the first use of computer processing techniques to obtain updated area measurements. The Census Bureau recalculated the area of every State and county from the largest scale USGS topographic maps available, usually the 1:24,000-scale series. (For Alaska, the 1:250,000-scale maps were used.) The Census Bureau obtained the new area measurement values digitally; that is, by a process that converted boundaries on maps into x, y coordinates based on a grid network (latitude/longitude). The digitized values, stored in a computer file, were processed to provide improved area measurement figures for States and counties. To obtain measurements for other geographic entities, such as places and MCDs, and for water bodies, the Census Bureau used a variety of sources: local estimates of area, State highway maps, individual maps of places, the Metropolitan Map Series,<sup>5</sup> and the records of governmental agencies that control development of new reservoirs and similar water bodies.

In conjunction with the 1980 census, the Census Bureau produced land area data for States; counties; places with a population of 2,500 or more; MCDs of 2,500 or more in 11 States (Connecticut, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin); metropolitan areas; urbanized areas; and postcensal congressional districts. (The Census Bureau did not produce area measurement data for small-area geographic entities such as census tracts, block groups, and census blocks.) The 1980 population census reports included land area data for places to tenths of a square mile and tenths of a square kilometer; for all other entities, the area figures were rounded to whole square miles and square kilometers.

## **Area Measurements for the 1990 Census**

### **Using TIGER to Calculate Area**

For the 1990 census, the Census Bureau created the TIGER (Topologically Integrated Geographic Encoding and Referencing) System, which included a nationwide digital geographic data base, to automate the mapping and related geographic activities required to support the Census Bureau's census and survey programs. The Census Bureau calculated all areal values, for both land and water, from the specific set of boundaries recorded for each entity in the TIGER data base. As a result, there are four major differences between the 1990 census and previous ones regarding area measurements:

- The values for the 1990 census area measurements are based on the information contained in a single, consistent geographic data base rather than on a variety of maps supplemented by historical and local information. The TIGER data base is based on the U.S. Geological Survey's 1:100,000-scale maps for the coterminous 48 States, except for the areas covered by the GBF/DIME-Files,<sup>6</sup> which are based on the MMS. The TIGER data base for Alaska, Hawaii, Puerto Rico, and the Outlying Areas reflects the results of manual digitizing outside GBF/DIME-File areas using primarily 1:24,000-, 1:63,360-, and 1:250,000-scale USGS maps for Alaska and 1:20,000-, 1:24,000-, and 1:25,000-scale maps for the other entities. By integrating these various map sources into a

single data base, all coastlines and inland bodies of water were shown more currently and consistently. With the information in the TIGER data base providing a comprehensive and consistent basis for a new set of area measurement figures, all previous data have been superseded by the 1990 census figures.

- The Census Bureau has provided 1990 area measurement figures for virtually *every geographic entity* included in its standard data tabulations, down to the census block level; these figures are available in each standard data product that includes a particular class of entity. This is the first time that the Census Bureau has provided measurements for some kinds of geographic entities: the least populous places, census tracts and block numbering areas (BNAs), block groups, census blocks, American Indian reservations, and Alaska Native village statistical areas.
- Inland water includes *every* body of water that appears in the data base and *every* stream or similar hydrographic feature recorded as a double-line feature in the data base. As a result of this more accurate and complete inventory of inland water area, the 1990 measurements show an increase in the amount of inland water area when compared to 1980.
- The water areas in the standard data products of the 1990 census reflect *all* water, whereas the measurements from previous censuses applied only to inland water. As a result, the total area reported for coastal States has increased correspondingly (see section below “The 1990 Census Water Classification Scheme”).

## **Methodology**

In its TIGER data base for the 1990 census, the Census Bureau has calculated measurements for total area, land area, and four types of water areas, for every polygon in the file *except* census blocks. A census block is identified in the TIGER data base as either all land or all water. This is because *tabulation census blocks*, that is, entities for which the Census Bureau presents population and housing data, always consist of

land area only. (All bodies of water entirely or partially within a tabulation block are identified by a separate, untabulated block number—N99, where N= the block group number. As such, the water body is not part of the land block. This separate, untabulated block number exists internally within the TIGER data base, and also is included in TIGER/Line™ data products.)

In its TIGER data base, the Census Bureau has recorded the area of each polygon in square meters (1 square meter= 0.000001 square kilometer= 10.764 square feet= 0.000247 acre). The data base can accommodate a single polygon area measurement up to almost 2,150,000,000 square meters (2,150 square kilometers, or about 830 square miles). The area measurement for the land surface of any geographic entity is the sum of all polygons comprising that entity. The Census Bureau recorded the area measurement figures in the appropriate geographic reference files (but not in the TIGER data base) in thousandths of a square kilometer (0.001 square kilometer= 1,000 square meters= 10,764 square feet= 0.247 acre= 0.000386 square mile). These parameters ensured the reporting of precise area measurements in square miles and square kilometers, as well as any other appropriate measures—acres, square feet, hectares, and so forth. Where square mile figures are shown in the 1990 census data products, the conversion from square kilometers to square miles was performed first, and rounding was then applied—to six decimal places in the TIGER data base, to three in the summary tape files (STFs), and to one in the printed reports.

## **The 1990 Census Water Classification Scheme**

All water in the TIGER data base is classified in one of four types:

- Inland water
- Coastal water
- Territorial sea
- Great Lakes



### **Inland Water**

Within the interior of the United States, Puerto Rico, and the Outlying Areas, with the exception of the Great Lakes, inland water includes all lakes, reservoirs, ponds, rivers, streams, creeks, or similar bodies of water recorded in the TIGER data base as a two-dimensional feature (rather than as a single line). Rivers and bays that empty into large embayments, the Great Lakes, the oceans, the Caribbean Sea, the Gulf of Mexico, and the Bering Sea are treated as inland water from the point at which they are narrower than one nautical mile across.

### **Coastal Water**

Coastal water refers to any embayments across which one can draw a closure line from 1 to 24 nautical miles in length (inland from the point at which the closure line is one mile or less, the water is treated as inland water). This line separates the coastal water from the territorial sea. For example, the coastal water of the Chesapeake Bay extends from this closure line towards the shoreline, and ends where the bay and its tributaries narrow to less than one nautical mile, where the water becomes classified as inland water.

### **Territorial Sea**

The territorial sea consists of water located between the 3-mile limit and the shoreline or the line that represents the extent of either inland or coastal water. It includes portions of the oceans, the Gulf of Mexico, the Caribbean Sea, and the Bering Sea, but does not include the Great Lakes.

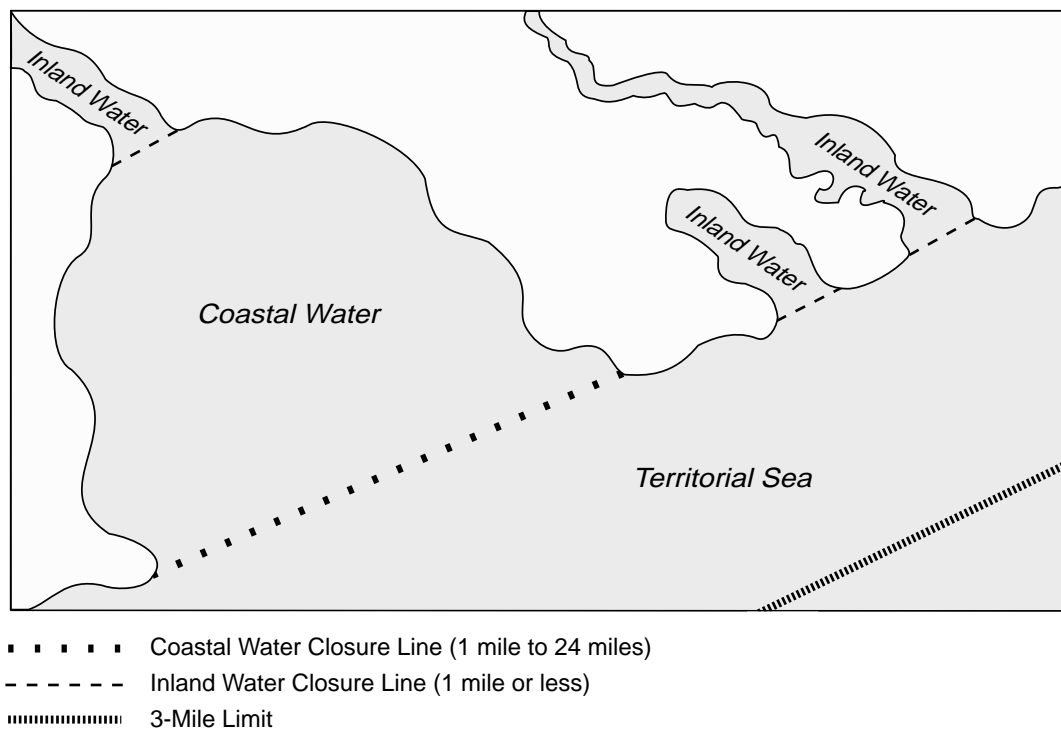
### **Great Lakes Water**

This includes the five Great Lakes and Lake St. Clair. Inland water also includes embayments of the Great Lakes, using the same criteria that distinguish it from coastal and territorial waters.

Figure 15-1 illustrates the geographic relationships between inland water, coastal water, and the territorial sea.

The use of the TIGER data base enhanced the Census Bureau's measurements of water area. Inland water was measured more accurately because the totals for inland water include bodies of water much smaller than those ever measured previously. This also is true for coastal water, where figures were limited to selected coastal water areas in the publications of previous censuses. The use of the TIGER data base also led to improvements in the area totals for Great Lakes water, and enabled the Census Bureau to provide measurements for a new water classification category, territorial sea.

Figure 15-1. **The Water Classification for 1990**



### Using Area Measurement Information

With the availability of area measurement information by census block, any data user can sum these figures to obtain the land area for any geographic entity composed of whole 1990 census blocks. (However, determining the area of an entity that does not comprise whole census blocks

requires the digitization of that entity into the TIGER data base and an independent summation of its component polygons.)

The Census Bureau tabulates and publishes demographic data for land blocks only. Because the TIGER data base identifies all water bodies with a separate series of unique numbers, the water area of a census block is always zero. The Census Bureau reports water area only for entities at the block group level and larger.

Land area measurements may disagree with the information displayed on the Census Bureau's maps and in the TIGER data base because, for area measurement purposes, features identified as *intermittent water* and *glacier* are reported as land area. For this reason, it may not be possible to derive the land area for an entity (as opposed to its total area) by summing the land area of its component census blocks.

In addition, the water area measurement figures reported for some geographic areas include water, while those for some lower-level geographic entities do not. This occurs, for example, where water is associated with a county but is not within the legal boundary of any MCD, or the water is associated with a State but is not within the legal boundary of any county. Therefore, because water area values are contained only in the totals for higher-level geographic entities, summing the water measurements for all component lower-level geographic entities will not necessarily yield the water area of that higher-level entity. Therefore, at any given higher level of geography, there may be water area that is not part of a particular lower-level geographic entity.

Some census tracts, BNAs, and census blocks are classified as *crews-of-vessels* entities, populated entirely by people aboard one or more civilian or military ships. Such entities do not encompass territory (the ships are assumed to be docked and part of the adjacent land block for this purpose) and therefore have no separate area measurement value.

Also, because ZIP Codes are not true geographic entities (they are collections of addresses that share a common numeric identifier) it is not possible to determine the extent of territory they cover with any precision. Therefore, the Census Bureau does not provide area measurement values for them, even though the 1990 STF 3B ZIP Code data tabulations are based on whole census blocks.

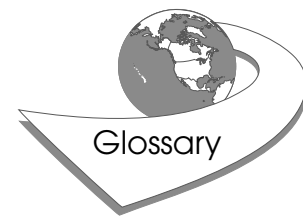
The accuracy of any area measurement data is limited by the inaccuracy inherent in (1) the location and shape of the various boundary features in the TIGER data base, (2) rounding affecting the last digit in all operations that compute and/or sum the area measurement values of individual polygons, and (3) conversion from square meters to other measures. Furthermore, it is preferable to sum the areas of polygons, or census blocks and/or tabulated block groups, rather than to perform an independent measurement of an entire large area, because independent area measurement values tend to become inaccurate for very large geographic entities. Although the effects of these limitations tend to be insignificant, especially since they affect measurements represented in very small units (square meters), users of the data should be aware that these inaccuracies exist.

## **Future Improvements**

As updated USGS files and other more accurate map bases replace current information in the TIGER data base, and as the GBF/DIME-File features there are replaced by new USGS or local records, the water and land content of the TIGER data base will become more accurate. Basing the TIGER records for Alaska on a data base similar to the one used for the coterminous 48 States will improve the land and water definition considerably, and can be expected to change the area measurement figures for portions of this State significantly. The result will be further changes to the area measurement figures of the United States and its component geographic entities when the 2000 census figures are calculated—changes that may have nothing to do with any changes to the areal configuration of the United States or those entities.

## Notes and References

- <sup>1</sup> DeBow, J.D.B., *The Seventh Census of the United States, 1850. An Appendix*, Washington [DC], 1853; reprinted in Proudfoot, Malcolm J., *Measurement of Geographic Area*, (Washington, DC), Bureau of the Census, 1946, Appendix C, pp. 69-70.
- <sup>2</sup> Gannett, Henry, *The Areas of the United States, the Several States and Territories, and their Counties, an Extra Census Bulletin*, Washington [DC], 1881, reprinted in Proudfoot, *op. cit.*, Appendix F, pp. 83-106. Also of interest is another publication by Henry Gannett, prepared to reconcile the differences between the 1881 Census Office publication and an 1899 report from the Commissioner of the General Land Office: *The Areas of the United States, the States, and the Territories*, U.S. Geological Survey Bulletin No. 302, Washington [DC], 1906; reprinted in Proudfoot, *op. cit.*, Appendix G, pp. 109-113.
- <sup>3</sup> U.S. Bureau of the Census, *Sixteenth Census of the United States: 1940/Areas of the United States, 1940*, Washington, DC, 1942.
- <sup>4</sup> U.S. Bureau of the Census, *Area Measurement Reports* (Series GE-20), Nos. 1-52, Washington, DC, 1963-1970.
- <sup>5</sup> The Metropolitan Map Series (MMS) was a set of maps developed by the Census Bureau using the 1:24,000-scale map series of the USGS and extensive local assistance. They were used for the 1970 and 1980 censuses. Each MMS covered the urbanized core of a metropolitan area.
- <sup>6</sup> The Census Bureau's GBF/DIME-Files (Geographic Base File/Dual Independent Map Encoding Files) are a series of geographic base files representing the MMS on a segment basis. They contain the segment name, address range, and ZIP Code if applicable; census geographic entity codes for both sides of each segment; feature intersection node numbers; and x, y coordinate information for each record in the file. The file contains information describing an urban street network.



**ACG** *See Address Coding Guide.*

**Active governmental unit** A governmental unit that has elected or appointed officials, raises revenues, and performs governmental activities (such as enactment of laws, provision of services, and entering into contracts). *See also functional status (governmental), functioning governmental unit, inactive governmental unit, nonfunctioning governmental unit.*

**Address** The number or other designation assigned to a housing unit, business establishment, or other structure for purposes of mail delivery, emergency services, and so forth. *See also city-style address, general delivery address, post office box address, rural address.*

**Address coding guide (ACG)** A computerized inventory of street names, address ranges, and census block numbers, created by the Census Bureau in cooperation with local agencies, to permit the automated assignment of addresses on a mailing list to the geographic entity codes for the 145 largest urban cores of metropolitan areas (MAs) at the time of the 1970 census. Each file contained the name of each block side that was a street or road, its associated address range and ZIP Code, and 1970 census geographic entity information for that side of the street. It was the forerunner of the GBF/DIME-Files and the TIGER data base. *See also GBF/DIME-File, TIGER data base.*

**Address Reference File (ARF)** A series of computerized files containing street and building records used to geocode the economic censuses. The files show, by ZIP Code, the low and high addresses associated with each street name within incorporated places of 2,500 or more population, special economic urban areas (SEUAs) of 10,000 or more population, balances of counties, and balances of (S)MSAs.

**Address register area (ARA)** A geographic entity established by the Census Bureau for 1990 census data collection purposes. It usually consists of a census tract or block group. *See also enumeration district, tape address register.*

**Adjacent** A term descriptive of geographic entities that are next to each other and share all or a portion of a common boundary. *See also conjoint, contiguous, jump, jump corridor, merger.*

**Administrative entity** A geographic area, usually with legally defined boundaries but often without elected officials, created to administer elections and other governmental functions. Administrative areas include school districts, voting districts, ZIP Codes, and nonfunctioning MCDs such as election precincts, election districts, and assessment districts. *See also governmental unit, legal entity, minor civil division, statistical entity.*

**Agriculture (census)** *See census of agriculture.*

**AIANA** *See American Indian and Alaska Native area.*

**AIANA code** A four-digit number assigned by the Census Bureau to identify AIANAs for data processing and tabulation during the 1990 census; AIANA codes range from 0001 through 4989. A five-digit FIPS code used to identify each AIANA (or portion of an AIANA) within a State. *See also Geographic Identification Code Scheme, Federal Information Processing Standards.*

**Alaska Native** For decennial census purposes, includes people who report their race as Aleut or Eskimo as well as those who report race entries such as Alutiiq, Egegik, Pribilovian, Arctic Slope, Inupiat, and Yupik.

**Alaska Native Claims Settlement Act (ANCSA)** Legislation enacted in 1972 establishing 13 ANRCs to conduct business and nonprofit activities by and for Alaska Natives. *See also Alaska Native Regional Corporation, Alaska Native village, Alaska Native village statistical area.*

**Alaska Native Regional Corporation (ANRC)** A corporate entity established by the ANCSA. Twelve ANRCs have specific boundaries that together cover the State of Alaska except for the Annette Islands Reserve (an American Indian reservation). A thirteenth corporation represents Alaska Natives not resident in Alaska who do not identify with any of the other 12 corporations. *See also Alaska Native Claims Settlement Act, Alaska Native village, Alaska Native village statistical area.*

**Alaska Native village (ANV)** A type of local governmental unit found in Alaska, with boundaries identified for the Census Bureau by an appropriate authority, that constitutes an association, band, clan, community, group, tribe, or village recognized pursuant to the ANCSA. The Census Bureau tabulated statistical data for ANVs for the 1980 census. ANVs do not have legally defined boundaries. *See also Alaska Native Claims Settlement Act, Alaska Native village statistical area.*

**Alaska Native village statistical area (ANVSA)** A 1990 census statistical entity that represents the densely settled extent of an ANV as delineated for the Census Bureau by officials of the ANRC in which the ANVSA is located, or by other appropriate officials, for the purpose of presenting decennial census data. *See also Alaska Native Regional Corporation, Alaska Native village.*

**Aldea** A closely settled population center delineated by Puerto Rico officials as the equivalent of a CDP for decennial censuses before 1990. The term was replaced by *comunidad* for the 1990 census. *See also census designated place, comunidad.*

**American Indian** A person who identifies herself or himself as being in the racial classification of an American Indian for decennial census purposes.

**American Indian and Alaska Native area (AIANA)** A Census Bureau term referring to these entity types: American Indian reservation, American Indian subreservation area, American Indian trust land, tribal jurisdictional statistical area, tribal designated statistical area, Alaska Native Regional Corporation, Alaska Native village, and Alaska Native village statistical area.



**American Indian reservation** An American Indian entity with boundaries established by treaty, statute, and/or executive or court order. Federal and individual State governments have established reservations as territory over which American Indians have governmental jurisdiction. These entities are designated as colonies, communities, pueblos, rancherias, reservations, and reserves. The Federally recognized reservations, their names, and their boundaries are identified for the Census Bureau by the Bureau of Indian Affairs (BIA), an agency in the U.S. Department of the Interior; State governments identify the names and boundaries of State reservations.

**American Indian subreservation area** An administrative subdivision of an American Indian reservation, known as an area, chapter, community, district, or segment. These entities are internal units of self-government or administration that serve social, cultural, and/or economic purposes for the American Indians on the reservation. Subreservation areas may lie wholly or partially within an American Indian reservation; a few are located entirely outside any reservation (off-reservation). Tribal governments identified and delineated subreservation areas for the Census Bureau for the 1980 decennial census, the only census in which the Census Bureau has tabulated data for these areas.

**American Indian trust land** Land held in trust by the Federal government for either a tribe (tribal trust land) or an individual member of that tribe (individual trust land). Such land always is associated with a specific Federally recognized reservation or tribe, but may be located on or off the reservation. The Census Bureau recognizes and tabulates data separately only for off-reservation trust lands. The BIA identifies and provides maps of these areas for use by the Census Bureau.

**Analysis unit (AU)** A small geographic area consisting of one or more contiguous census blocks, created by the Census Bureau to evaluate their land area and population density and to determine if they should be included in a UA area or extended city. *See also extended city, urbanized area.*

**ANCSA** *See Alaska Native Claims Settlement Act.*

**Annex** To add territory to a governmental unit, usually an incorporated place, by an ordinance, a court order, or other legal action. *See also detach.*

**Annexation** The act or process of adding land to a governmental unit, usually an incorporated place, by an ordinance, a court order, or other legal action.

**ANRC** *See Alaska Native Regional Corporation.*

**ANV** *See Alaska Native village.*

**ANVSA** *See Alaska Native village statistical area.*

**ARA** *See address register area.*

**Area measurement** The determination of the extent of surface area, expressed in square miles and/or square kilometers, of land and/or water within a predetermined boundary. Formerly accomplished by measuring on a correctly scaled map, area measurements for the 1990 census were calculated by computer based on the locations of features and boundaries in the TIGER data base.

**Assessment district** A nonfunctioning MCD defined only to administer tax assessments for a county. For the 1990 census, the Census Bureau recognized assessment districts as MCDs only in Anne Arundel County, Maryland.

**AU** *See analysis unit.*

**Barrio** A nonfunctioning legal subdivision of a municipio in Puerto Rico, treated as an MCD by the Census Bureau. A barrio (or group of barrios) is the area from which municipio officials and the Commonwealth legislature are elected. *See also barrio-pueblo, ciudad, county subdivision, nonfunctioning government.*

**Barrio-pueblo** A nonfunctioning legal subdivision of a municipio in Puerto Rico, treated as an MCD by the Census Bureau. The barrio-pueblo replaces the *pueblo* reported in decennial censuses prior to 1990. The barrio-pueblo is differentiated from other barrios because it is the historical center and seat of government of its municipio. *See also* *barrio, county subdivision, pueblo.*

**BAS** *See* *Boundary and Annexation Survey.*

**Beat** The former term for a *supervisor's district* (MCD) in Mississippi; an MCD in Alabama before the establishment of CCDs. *See also* *minor civil division, supervisor's district.*

**BG** *See* *block group.*

**BIA** *See* *Bureau of Indian Affairs.*

**Block** *See* *census block.*

**Block boundary** A census map feature, visible or nonvisible, that delimits a census block. Usually, it takes two or more features to delimit a census block, but a single feature may delimit a census block in the case of an island or a circumferential street.

**Block group (BG)** A combination of census blocks that is a subdivision of a census tract or BNA. A BG consists of all blocks whose numbers begin with the same digit in a given census tract or BNA; for example, BG 3 within a census tract or BNA includes all blocks numbered between 301 and 399. The BG is the lowest level of geography for which the Census Bureau has tabulated sample data in the 1990 census; it was used to tabulate sample data in the 1970 and 1980 censuses only for those areas that had block numbers. *See also* *block number, enumeration district, sample data.*

**Block number** A three-digit number, which may have a one- or two-letter alphabetic suffix for the 1990 census, that identifies a specific census block

on census maps and Summary Tape Files (STFs). Block numbers are not repeated within a census tract or BNA.

**Block numbering area (BNA)** An area delineated by State officials or (lacking State participation) by the Census Bureau, following Census Bureau guidelines, for the purpose of grouping and numbering decennial census blocks in counties or statistically equivalent entities in which census tracts have not been established. A BNA is equivalent to a census tract in the Census Bureau's geographic hierarchy. *See also block numbering area number, census tract.*

**Block numbering area (BNA) number** A four-digit number, possibly with a two-digit suffix, used to identify a BNA within a county. BNA numbers range from 9501 to 9989.

**Block side** The section of a feature drawn on a Census Bureau map that has a single name and defines one boundary of a census block; for example, one side of Main Street from First Street to Second Street.

**BNA** *See block numbering area.*

**Borough** In Alaska, the type of governmental unit that is the primary legal subdivision of the organized portion of the State, similar to a county in other States. In New York, a functioning MCD; the boroughs are the five entities, one for each county, that together constitute New York city. In Connecticut, New Jersey, and Pennsylvania, an incorporated place; in New Jersey and Pennsylvania, also a county subdivision. *See also census area, census subarea, county subdivision, dependent place, incorporated place, independent place, unorganized borough.*

**Boundary** A line, which may or may not follow a visible feature, that defines the limits of a geographic entity such as a block, BNA, census tract, county, or place. *See also nonvisible feature, visible feature.*

**Boundary and Annexation Survey (BAS)** A Census Bureau survey of a specified universe of counties (and legally equivalent entities), MCDs, and incorporated places. The purpose of the BAS is to determine the inventory of legally defined entities and the correct names, political descriptions, and legal boundaries of counties, MCDs, and incorporated places as of January 1 of the year of the survey. The survey also collects specific information on the legal actions that effect boundary changes.

**Bureau of Indian Affairs (BIA)** The Federal Government agency, located in the Department of the Interior, responsible for the historic and legal relationships between the Federal Government and American Indian communities.

**CBD** *See central business district.*

**CCD** *See census county division.*

**CD** *See congressional district.*

**CDP** *See census designated place.*

**CD-ROM** *See compact disc—read-only memory.*

**Census** A complete enumeration, usually of a population, but also businesses and commercial establishments, farms, governments, and so forth. *See also census of agriculture, census of governments, decennial census, economic census, sample, survey.*

**Census area** The statistical equivalent of a county in Alaska. Census areas are delineated cooperatively by the State of Alaska and the Census Bureau for statistical purposes in the portion of Alaska not within an organized borough; they were used first in the 1980 census. *See also borough, census subarea, unorganized borough.*

**Census block** The smallest entity for which the Census Bureau collects and tabulates decennial census information; bounded on all sides by visible and

nonvisible features shown on Census Bureau maps. *See also collection block, 100-percent data, tabulation block.*

**Census county division (CCD)** A statistical subdivision of a county, established cooperatively by the Census Bureau and State and local government authorities, for the presentation of decennial census data in 21 States that do not have well-defined MCDs; that is, where MCDs have not been legally established, do not serve a legal or administrative governmental purpose, are not well known, have poorly defined boundaries, and/or have frequent boundary changes. A CCD boundary normally follows visible features and county lines, but may follow corporate boundaries and other nonvisible features in selected instances. *See also census subarea, county subdivision, minor civil division.*

**Census designated place (CDP)** A statistical entity, defined for each decennial census according to Census Bureau guidelines, comprising a densely settled concentration of population that is not within an incorporated place, but is locally identified by a name. CDPs are delineated cooperatively by State and local officials and the Census Bureau, following Census Bureau guidelines. These entities were called unincorporated places for the 1940 through 1970 censuses. *See also aldea, comunidad, whole-town CDP, zona urbana.*

**Census division** *See division (census geographic).*

**Census geography** A collective term referring to the geographic entities used by the Census Bureau in its data collection and tabulation operations, including their structure, designations, and relationships to one another.

**Census map** Any map produced by the Census Bureau that displays the geographic entities used in a Census Bureau census or survey.

**Census of agriculture** An enumeration of the Nation's farms, farm population, and agricultural production, conducted by the Census Bureau every five years, in years ending in 2 and 7. *See also economic census.*

**Census of governments** An enumeration of all general-purpose governmental units such as States, counties, municipalities, towns and townships, plus *limited-purpose local governments* (school district governments and special district governments such as housing authorities, and bridge and toll facilities). The Census Bureau conducts the census of governments every five years, in years ending in 2 and 7.

**Census region** *See region (census geographic).*

**Census statistical areas committee (CSAC)** A committee established by local officials and other interested individuals to identify, in cooperation with the Census Bureau, the census tracts, CDPs, and other statistical entities for a county. Referred to as a *census tract committee* until 1973. *See also census statistical areas key person.*

**Census statistical areas key person (CSAKP)** A person designated by the CSAC to act as its contact person with the Census Bureau. Referred to as a *census tract key person* until 1973. *See also census statistical areas committee.*

**Census subarea (CSA)** A statistical division of a borough or census area in Alaska, equivalent to a CCD in other States. Census subareas are delineated cooperatively by officials from Alaska and the Census Bureau. *See also borough, census area, census county division.*

**Census subdistrict** A nonfunctioning MCD equivalent in the Virgin Islands of the United States. Census subdistricts were legally defined by the Virgin Islands legislature for the 1980 census.

**Census tract** A small, relatively permanent statistical subdivision of a county in a metropolitan area (MA) or a selected nonmetropolitan county, delineated by a local committee of census data users (a CSAC) for the purpose of presenting decennial census data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other nonvisible features in some instances; they always nest within counties.

Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time the CSAC established them, census tracts usually contain between 2,500 and 8,000 inhabitants. They may be split by any subcounty geographic entity. *See also block numbering area, census statistical areas committee, census tract number, central business district.*

**Census tract committee** *See census statistical areas committee.*

**Census tract key person (CTKP)** *See census statistical areas key person.*

**Census Tract Manual** A Census Bureau publication that described the steps a local census tract committee had to follow when it developed a census tract plan. The first edition was published in 1934; the last, in 1966. *See also census statistical areas committee, Geographic Areas Reference Manual.*

**Census tract number** A four-digit number, possibly with a two-digit suffix, used to identify a census tract. Census tract numbers are always unique within a county and usually unique within an MA. Almost all census tract numbers range from 0001 to 9499. Leading zeros are not shown on the Census Bureau's maps or in its printed reports.

**Census Tract/Block Numbering Area Outline Map** A map (or set of maps) depicting the boundaries and numbers of census tracts/BNAs in a county or equivalent entity. The map also displays features and feature names underlying the boundaries, and the boundaries and names of counties, AIANAs, county subdivisions, and places (but not the street pattern within census tracts/BNAs). Each map sheet is approximately three feet by four feet in size.

**Central business district (CBD)** The commercial center of an MA central city or other MA city with a population of 50,000 or more, recognized for tabulating statistical data in the 1948 through 1982 economic censuses, and in the 1950 to 1980 decennial censuses. A CBD was defined as an area of very high land valuation and high traffic flow, characterized by a high concentration of



retail and service businesses. CBDs usually consisted of one or more whole census tracts; in the few cases where a CBD tract extended beyond the city limits, the Census Bureau recognized only that part of the census tract within the city as the CBD (or part of the CBD). *See also major retail center.*

**Central city** The largest city of an MA or, from the 1950 through 1980 censuses, an urbanized area (UA). (Also included as central cities are the CDP of Honolulu in Hawaii, highly urban MCDs in Massachusetts and New Jersey, and several zonas urbanas in Puerto Rico.) Central cities are a basis for establishment of an MA, and prior to the 1990 census, a UA. Additional cities that meet specific criteria also are identified as central city(ies). In a number of instances, only part of a city qualifies as central, because another part of the city extends beyond the MA boundary. *See also central place.*

**Central place** The core incorporated place(s) or CDP(s) of a UA, usually consisting of the most populous place(s) in the UA. If a central place also is defined as an extended city, only the portion of the central place contained within the UA is recognized as the central place. The term was first used for the 1990 census to recognize a CDP as the most populous place in a UA. *See also central city, extended city.*

**Centroid** The central location within a specified geographic area. A centroid may fall outside its geographic area, or may be adjusted so that it is located within its geographic area. *See also internal point.*

**Chapter (American Indian)** *See American Indian subreservation area.*

**City** A type of incorporated place in 49 States and the District of Columbia. In 20 States, some or all cities are not part of any MCD, and the Census Bureau also treats these as county subdivisions, statistically equivalent to MCDs. *See also county subdivision, dependent place, incorporated place, independent place.*

**City Reference File** A file from the Economic and Agriculture Census that links the ZIP Codes and post office name information to the geographic entities and their associated codes used in that census (MAs, counties, and places, including incorporated places with more than 2,500 people, and selected MCDs referred to as *special economic urban areas*, or SEUAs).

**City-style address** An address consisting of a structure number and street name; for example, 201 Main St. *See also address, general delivery address, post office box address, rural address.*

**Ciudad** A term used by the government of Puerto Rico before the 1990 census to refer to a group of barrios (if they contained at least 50,000 people) that identified the municipio's center of government. *See also barrio.*

**Civil township** A type of MCD with a functioning government. *See also county subdivision, functioning government, minor civil division.*

**CMSA** *See consolidated metropolitan statistical area.*

**Code** The alphanumeric characters assigned to identify a geographic entity (geocode) or a class of population, industries, and occupations, for ease in computer processing, such as a county code, an industry code, an occupational code, a place size code, or an income level; to assign data on a questionnaire to one or more classes of some sort, the entities of which are identified through the use of codes. *See also Federal Information Processing Standards, geocode, geographic code, geographic hierarchy, Geographic Identification Code Scheme.*

**Coextensive** Descriptive of two or more geographic entities that cover the same area, with their boundaries coincident.

**Coextensive place** A place that covers exactly the same area and has the same boundaries as its county subdivision or county.

**Coincident** Descriptive of two or more features or boundaries that are physically in the same location; for example, a census tract boundary that also serves as a CCD boundary. Also, the common boundary of adjacent entities. *See also adjacent, conjoint, contiguous.*

**Collection block** For the 1990 census, a physical block, identified by a unique three-digit number, that was enumerated as a single geographic area regardless of any legal or statistical boundaries that passed through it. *See also census block, collection geography, tabulation block, tabulation geography.*

**Collection geography** The geographic entities used by the Census Bureau to take a census. In the 1980 census, this was district office/enumeration district/block; for 1990, district office/address register area/collection block.

**Colony (American Indian)** A type of American Indian reservation.

**Commonwealth** The legal designation for four States (Kentucky, Massachusetts, Pennsylvania, and Virginia) and two of the Outlying Areas (Puerto Rico and the Northern Mariana Islands). The Census Bureau does not use this term in presenting census data.

**Community (American Indian)** A type of American Indian reservation. *See also American Indian subreservation area.*

**Compact disc—read-only memory (CD-ROM)** A type of high-density optical or laser disc for use on small computers. One 4 3/4-inch CD-ROM can hold the contents of approximately 500 printed reports, 1,600 flexible diskettes, or 3 or 4 high-density computer tapes.

**Comunidad** A CDP in Puerto Rico for the 1990 census; formerly called an aldea. *See also aldea, census designated place.*

**Congressional district (CD)** An area established by State officials or the courts for the purpose of electing a person to the U.S. House of Representatives.

Within each State, these areas must contain, as nearly as possible, an equal number of inhabitants. The number of CDs in each State may change after each decennial census, and the boundaries may be changed more than once during a decade. *See also reapportionment, redistricting.*

**Congressional township** *See public land survey system, township (congressional or survey), township and range system.*

**Conjoint** Descriptive of the boundaries for two or more geographic entities or governmental units for which governmental and administrative functions are carried out jointly; descriptive of a boundary shared by two adjacent geographic areas. *See also adjacent, consolidated city, consolidated government, consolidation, contiguous, merger.*

**Consolidated city** An incorporated place that has combined its governmental functions with a county or subcounty entity but contains one or more other incorporated places that continue to function as local governments within the consolidated government. *See also consolidated government, consolidation, merger.*

**Consolidated government** A governmental unit that comprises two or more legal entities that have joined together to form a common government; for example, a consolidated city-county government. The combined governmental units may or may not occupy the same territory. *See also consolidated city, consolidation, merger.*

**Consolidated metropolitan statistical area (CMSA)** A geographic entity defined by the Federal Office of Management and Budget (OMB) for use by Federal statistical agencies. An area becomes a CMSA if it meets the requirements to qualify as a metropolitan statistical area (MSA), has a population of 1,000,000 or more, if component parts are recognized as primary metropolitan statistical areas (PMSAs), and local opinion favors the designation. Whole counties are components of CMSAs outside of

New England, where they are composed of cities and towns instead. *See also metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.*

**Consolidation** A combination of two or more governmental units. The units may be at the same or different levels of government. *See also consolidated city, consolidated government, merger.*

**Construction (census)** *See economic census.*

**Conterminous States** The coterminous 48 States and the District of Columbia; that is, the United States excluding Alaska and Hawaii.

**Contiguous** Descriptive of geographic areas that are adjacent to one another, sharing either a common boundary or point. *See also adjacent, conjoint.*

**Contract block area** An area for which a local government paid the Census Bureau to collect and publish decennial census data at the block level because the area was not included automatically in the block-numbering program for a decennial census. This kind of area did not exist for the 1990 census, because the Census Bureau automatically collected and published census block-level data nationwide. *See also census block, free block area.*

**Corporate corridor** A narrow strip of land, generally consisting of all or part of the right-of-way of a road, proposed road, power line, or similar feature, that is part of an incorporated place; a corridor also may exist without relation to any accompanying visible feature.

**Coterminous** A term descriptive of geographic entities that are contiguous with one another and are contained within the same boundaries; for example, the coterminous 48 States and the District of Columbia. *See also conterminous States.*

**County** A type of governmental unit that is the primary legal subdivision of every State except Alaska and Louisiana; also, a type of functioning MCD found in American Samoa. *See also borough, county equivalent, parish.*

**County Block Map** A set of large-scale maps for each county or equivalent entity, displaying boundaries and names/numbers of census blocks, decennial census tabulation entities, and ground features such as roads and streams. These maps are the most detailed and complete set of cartographic information that the Census Bureau provides.

**County code** A three-digit code assigned by the National Institute of Standards and Technology (NIST) to identify each county and statistically equivalent entity within a State. The NIST assigns the codes based on the alphabetic sequence of county names; it documents these codes in a FIPS publication (FIPS PUB 6). The Census Bureau also documents these codes in its Geographic Identification Code Scheme. The NIST leaves gaps in the numbering system to accommodate new counties or statistically equivalent entities. *See also Federal Information Processing Standards, Geographic Identification Code Scheme.*

**County equivalent** A geographic entity that is not legally referred to as a county, but is recognized by the Census Bureau as equivalent to a county for purposes of data presentation. *See also borough, census area, district, independent city, island, municipality, municipio, parish, State.*

**County group** An area with a population of 100,000 or more, generally comprising a group of contiguous counties, identified on one of the 1980 or 1990 census public-use microdata samples (PUMS). The term is applied loosely, since some of the areas included are single counties, single cities, groups of places, or groups of towns or townships in New England and a few other States, all of which meet the 100,000 minimum population criterion. *See also public-use microdata area, public-use microdata sample.*

**County subdivision** A legal or statistical division of a county recognized by the Census Bureau for data presentation. *See also* *barrio, barrio-pueblo, census county division, census subarea, census subdistrict, city, gore, grant, island, location, minor civil division, municipality, plantation, purchase, town, township, unorganized territory, village.*

**County Subdivision Outline Map** A State-based map depicting the boundaries and names of the counties and equivalent entities, county subdivisions, AIANAs, and places for which the Census Bureau tabulated 1990 census data. These maps are issued as electrostatic plots consisting of only one or a few map sheets for each State; they also are available in smaller scale, sectionalized form in census publications.

**Crews of vessels** The shipboard populations of U.S. Navy, U.S. Coast Guard, and merchant marine vessels. For a decennial census, they are assigned to the offshore area adjacent to the land area that contains the facility, pier, or dock associated with the ship; this location is assigned a unique census tract or BNA number, with a suffix of .99, and a unique block number of either 199 (for a military vessel) or 299 (for a civilian vessel). This area is more conceptual than geographic, and has no area measurement assigned to it.

**CRF** *See City Reference File.*

**CSA** *See census subarea.*

**CSAC** *See census statistical areas committee.*

**CSAKP** *See census statistical areas key person.*

**CTKP** *See census tract key person.*

**Cultural feature** Any type of artificial feature, such as a street, power line, or fence. *See also* *feature, natural feature, visible feature.*

**Data base (census geographic)** *See TIGER data base.*

**Decennial census** The census of population and housing, taken by the Census Bureau in years ending in 0 (zero). Article I of the Constitution requires that a census be taken every ten years for the purpose of reapportioning the U.S. House of Representatives. The first census of population occurred in 1790; the census of housing has been conducted since 1940. *See also reapportionment, redistricting.*

**Delineate** To draw or identify on a map the specific location of a boundary.

**Dependent place** An incorporated place or CDP that is legally or statistically part of the county(ies) and/or county subdivision(s) within which it is located; the statistical data for the place also are tabulated as part of the total for the county(ies) and/or county subdivision(s) that these data are part of. There are three types of dependent places: (1) an incorporated place that is legally part of the county(ies) and/or MCD(s) within which it is located, (2) an incorporated place that is legally part of the county(ies) and statistically part of the county subdivision(s) within which it is located, and (3) a CDP that always is statistically part of the county(ies) and county subdivision(s) within which it is located. *See also incorporated place, independent place.*

**Detach** To legally remove an area from a governmental unit, usually an incorporated place, by an ordinance, a court order, or other legal action. Also refers to the act or process of being separated from a governmental unit. *See also annex.*

**Disincorporate** To end the legal existence of an incorporated place as an active or inactive governmental unit through legal action by the incorporated place, or a county/State. *See also active governmental unit, disorganize, functional status (governmental), functioning governmental unit, inactive governmental unit.*



**Disorganize** To end the legal existence of an MCD as a governmental unit through legal action taken by a county/State. *See also disincorporate, functional status (governmental), functioning governmental unit, nonfunctioning governmental unit.*

**District** A type of nonfunctioning county equivalent found in American Samoa; any of several types of geographic areas recognized by the Census Bureau. *See also American Indian subreservation area, assessment district, election district, magisterial district, municipal district, Outlying Area, parish governing authority district, road district, voting district.*

**Division (census geographic)** A grouping of States within a census geographic region, established by the Census Bureau for the presentation of census data. The current nine divisions (East North Central, East South Central, Middle Atlantic, Mountain, New England, Pacific, South Atlantic, West North Central, and West South Central) are intended to represent relatively homogeneous areas that are subdivisions of the four census geographic regions. *See also region (census geographic).*

**EC** *See economic census.*

**Economic census (EC)** Collective name for the censuses of construction, manufactures, minerals, minority- and women-owned businesses, retail trade, service industries, transportation, and wholesale trade, conducted by the Census Bureau every five years, in years ending in 2 and 7. *See also census of agriculture, census of governments.*

**Economic Geographic Information Reference Tape (EGIRT)** Before 1992, the control file for geographic codes related to all economic censuses, used for editing the Address Reference File (ARF) and the City Reference File (CRF). The EGIRT contained names and codes for all geographic entities that the Census Bureau recognized in the EC data tabulations.

**Economic Geographic Reference File (EGRF)** The reference file of geographic entities for the 1992 economic census; replaces the EGIRT used in earlier economic censuses. *See also Economic Geographic Information Reference Tape.*

**Economic subregion (ESR)** A combination of two or more State economic areas into a larger, relatively homogeneous geographic unit. The subregions may cross State lines, but are intended to preserve the similar characteristics of the state economic areas used by the Census Bureau to report decennial census data from the 1950 through the 1980 censuses. *See also State economic area.*

**ED** *See enumeration district.*

**ED number** A one- to four-digit number, in some instances including an alphabetic suffix, that uniquely identified each enumeration district within a district office and county for the 1980 and earlier decennial and special censuses. *See also enumeration district.*

**EGIRT** *See Economic Geographic Information Reference Tape.*

**EGRF** *See Economic Geographic Reference File.*

**Election district** A nonfunctioning class of MCDs in Guam and Maryland.

**Election precinct (EP)** A nonfunctioning class of MCDs in Illinois and Nebraska that represent a voting area. In the 1980 census, the term used by the Census Bureau for a voting district. *See also precinct, voting district.*

**Elementary school district** A school district inclusive of kindergarten through either the eighth or ninth grade or the first through either the eighth or the ninth grade. For the data tabulations from the 1980 and 1990 decennial censuses, this term includes both elementary and intermediate/middle districts. *See also independent district, intermediate/middle district, school district, secondary district.*

**Enclave** An island of area with one set of geographic codes within and completely surrounded by an area with a different set of geographic codes; usually refers to unincorporated area that is completely surrounded by an incorporated place.

**Enumeration district (ED)** A small geographic entity established by the Census Bureau as a basic unit for data collection and tabulation in a decennial or special census before 1990. (For the 1970 and 1980 censuses it was superseded by the BG as the lowest level for which the Census Bureau tabulated sample data in those areas that had block numbers assigned.) An ED usually consisted of the area to be assigned to an individual enumerator for canvassing. All area included in a single ED was in the same governmental unit(s) or statistical area(s). The ED was replaced by the address register area (ARA) for data collection purposes in the 1990 census; it also was totally replaced by the BG as the lowest level of geography for which the Census Bureau tabulated sample data. *See also address register area, block group, ED number, sample data.*

**EP** *See election precinct.*

**ESR** *See economic subregion.*

**Exclave** A discontinuous part of a geographic entity; also referred to as an outlier. Usually refers to a small portion of an incorporated place that is completely separate from the remainder of the place.

**Extended city** An incorporated place that contains large, sparsely settled area(s) within its legally defined boundaries; that is, one or more areas with a population density of less than 100 persons per square mile, each of which is at least 5 square miles in extent, which together constitute at least 25 percent of the place's total land area or at least 25 square miles. These low-density areas are classified as rural; the remainder of the extended city is classified as urban. Before the 1990 census, the Census Bureau identified extended cities only within urbanized areas.

**Feature** Any part of the landscape, whether natural (such as a stream or ridge) or artificial (such as a road or power line). In a geographic context, features are any part of the landscape portrayed on a map, including legal entity boundaries such as city limits or county lines. *See also cultural feature, nonvisible feature, visible feature.*

**Feature extension** The imaginary straight-line extension from the end of a map feature, usually a street or road, to another feature; for example, from the end of a dead-end street to a nearby river.

**Federal Information Processing Standards (FIPS)** Any of the standardized systems of numeric and/or alphabetic coding issued by the National Institute of Standards and Technology (NIST), an agency in the U. S. Department of Commerce, for use by the Federal Government and others. Several series of FIPS identify standard geographic codes for States, counties, metropolitan areas, congressional districts, foreign geographic entities, and named populated and related locational entities. Geographic elements to be assigned codes are first alphabetized and then assigned codes serially, generally with systematic gaps that permit additions to the list. The basic geographic code formats published in FIPS publications (FIPS PUBs) are (1) States—two digits, (2) counties and county equivalents—three digits, (3) metropolitan areas—four digits; CMSAs and the former SCSAs also have two-digit codes, (4) congressional districts—two digits, (5) foreign geographic entities—two or three digits, (6) named populated places, primary county divisions, and other locational entities used to assign codes to places, county subdivisions, and AIANAs—five digits. *See also FIPS code.*

**FIPS** *See Federal Information Processing Standards.*

**FIPS code** One of a series of codes, issued by the NIST, assigned for the purpose of ensuring uniform identification during computer processes involving geographic entities throughout all Federal Government programs and agencies. *See also Federal Information Processing Standards.*

**FIPS PUB** *See FIPS publication.*

**FIPS publication (FIPS PUB)** One in a series of U.S. Government publications containing a standard set of geocodes for different types of geographic entities. *See also Federal Information Processing Standards, FIPS code.*

**Free block area** An area for which the Census Bureau provided block-level data without charge in the 1980 and earlier decennial censuses. *See also census block, contract block area.*

**Functional status (governmental)** The administrative or legal activities associated with performing the legally prescribed functions of a governmental unit; that is, the administrative or legal entity is functioning or nonfunctioning, and if functioning, is either active or inactive. *See also active governmental unit, functioning governmental unit, governmental unit, inactive governmental unit, nonfunctioning governmental unit.*

**Functioning governmental unit** A general-purpose government that has the legal capacity to elect or appoint officials, raise revenues, provide services, and enter into contracts. *See also active governmental unit, functional status (governmental), general-purpose government, governmental unit, inactive governmental unit, nonfunctioning governmental unit.*

**GARM** *See Geographic Areas Reference Manual.*

**GBF** *See Geographic Base File.*

**GBF/DIME-File (Geographic Base File/Dual Independent Map Encoding File)** A geographic base file created by the Census Bureau, usually in cooperation with local officials, representing the line segments and related geographic attributes that comprised all or part of the urban cores of all metropolitan areas. Created for the 80 smaller urban cores to supplement the ACG coverage for the 1970 census and support the place of work coding operation,

this format was expanded to include all urban cores for the 1980 census by converting the ACGs in a program called the ACG Improvement Program. Each file contained the name of each segment of a mapped feature, its associated address range and ZIP Code if applicable, 1980 census geographic area information for both sides of each segment, node numbers that identified feature intersections and selected points of a curved line, and x,y coordinate information for each node in the file. The file contained information describing the street network in the major urban centers, and was used to build the TIGER data base. *See also Address Coding Guide, geographic base file, TIGER data base, TIGER System.*

**General delivery address** A type of postal delivery service offered at post offices without carrier delivery service for customers who do not want a post office box, and at any post office to serve transients and customers who are not permanently located. *See also address, city-style address, post office box address, rural address.*

**General-purpose government** A functioning governmental unit that, through appointed or elected officials, performs many tasks and provides a wide range of services. *See also governmental unit.*

**Geocode** A code assigned to identify a geographic entity; to assign an address (such as housing unit, business, industry, farm) to the full set of geographic code(s) applicable to the location of that address on the surface of the Earth. *See also Address Coding Guide, GBF/DIME-File, geographic base file, geographic code, TIGER data base, TIGER System.*

**Geographic Areas Reference Manual (GARM)** A geographic reference source developed by the Census Bureau as a guide for local CSACs and other agencies and groups working with the Census Bureau to maintain and improve the geographic areas, concepts, and methods used for the presentation of decennial and economic census data. *See also census statistical areas committees, census tract manual.*

**Geographic base file (GBF)** A generic term for a computer file of geographic attributes of an area (such as street names, address ranges, geographic codes, hydrography, railroads). *See also Address Coding Guide, GBF/DIME-File, TIGER data base, TIGER System.*

**Geographic code** One or more alphanumeric symbols used to identify a legal, administrative, or statistical entity. *See also Address Coding Guide, Federal Information Processing Standards, GBF/DIME-File, geocode, geographic base file, geographic data base, TIGER data base, TIGER System.*

**Geographic data base** A computer-readable data base, the primary structure of which includes geographic codes and/or coordinates. The GBF/DIME-File and TIGER data base are geographic data bases used by the Census Bureau to conduct the 1980 and 1990 censuses, respectively. *See also Address Coding Guide, GBF/DIME-File, TIGER data base, TIGER System.*

**Geographic entity** A geographic unit of any type—legal, administrative, or statistical. *See also geographic code, geographic data base, geographic hierarchy.*

**Geographic hierarchy** A system of relationships among geographic entities in which each geographic entity (except the smallest one) is subdivided into lower-order units that in turn may be subdivided further. For example, States are subdivided into counties, which are subdivided into county subdivisions. Most 1990 census reports and STFs present data in all or part of the hierarchical sequence: United States, region, division, State, county, county subdivision, place (incorporated/census designated), place part or remainder of county subdivision, census tract/block numbering area (or part), block group (or part), and block. *See also geographic code, geographic data base, part.*

**Geographic Identification Code Scheme (GICS)** A detailed listing of the geographic codes, associated names, and attributes that the Census Bureau used to identify the various legal, administrative, and statistical geographic entities of the United States in a specific census. *See also administrative entity, legal entity, statistical entity.*

**Geographic reference file (GRF)** A generic term for a file that contains geographic information such as area names, geographic codes, and selected x,y coordinate values (entity centroid or internal point). Geographic reference files may be used for determining the name of a particular geographic entity when only its code is known (or vice versa), and for control of geographic operations, computer mapping, and entity name placement, depending on the information contained in the specific file. *See also Economic Geographic Information Reference Tape, Economic Geographic Reference File, Geographic Identification Code Scheme, Geographic Reference File (Codes), Geographic Reference File (Names).*

**Geographic Reference File (Codes) (GRF-C)** A Census Bureau computer file listing all geographic codes associated with a census block record.

**Geographic Reference File (Names) (GRF-N)** A Census Bureau computer file listing the names of each geographic entity and their associated attributes.

**Geographic Support System (GSS)** The TIGER System, plus all other activities undertaken by the Geography division to support the census and survey activities of the Census Bureau. This includes all decennial census geographic products—maps, TIGER/Line files™, other TIGER extract products, and related computer systems; all economic and agriculture censuses geographic products—the Address Reference File (ARF), City Reference File (CRF), Economic Geographic Reference File (EGRF), and related computer systems. Also includes geographic activities related to the Master Address File (MAF), the special census program, the current sample survey program, all future census research and development activities, the operations that use the boundary change information collected in the BAS, the U.S. Geological Survey (USGS) quadrangles and other reference/map source files, and the congressional district referral service. *See also TIGER data base, TIGER System.*

**GICS** *See Geographic Identification Code Scheme.*

**Gore** A type of nonfunctioning MCD found in Maine and Vermont.



**Governmental unit** A geographic entity established by legal action, and for the purpose of implementing administrative or governmental functions. Most governmental units have officially recognized boundaries. All area and population of the United States are part of one or more legal units, such as American Indian reservations, States, counties, county subdivisions, and incorporated places. *See also active governmental unit, administrative entity, functioning governmental unit, general-purpose government, inactive governmental unit, legal entity, nonfunctioning governmental unit.*

**Governments, (census)** *See census of governments.*

**Grant** A type of nonfunctioning MCD in New Hampshire and Vermont.

**GRF** *See Geographic Reference File.*

**GRF-C** *See Geographic Reference File (Codes).*

**GRF-N** *See Geographic Reference File (Names).*

**Group quarters** A place where unrelated people live, such as a barracks, a boarding house, a dormitory, a hospital, or a prison. Group quarters are not typical housing units such as apartments, townhouses, and single family homes.

**GSS** *See Geographic Support System.*

**Hierarchy (census geographic)** *See geographic hierarchy.*

**Historic Areas of Oklahoma** The area of the former American Indian reservations that had legally established boundaries during the period 1900 through 1907 but were dissolved during the two- to three-year period preceding the establishment of Oklahoma as a State in 1907. The Historic Areas boundaries were delineated for the Census Bureau by the BIA and excluded all territory in urbanized areas. They were used for tabulating data from the 1980 census.

The Census Bureau did not retain the Historic Areas for the 1990 census. *See also tribal jurisdiction statistical area.*

**Inactive governmental unit** A governmental unit that is not exercising its legal capacity to have elected or appointed officials; thus, it neither raises revenue nor provides services. An inactive governmental unit is not classified as a government by the Census Bureau. *See also active governmental unit, functional status (governmental), functioning governmental unit, governmental unit, nonfunctioning governmental unit.*

**Incorporated place** A type of governmental unit, incorporated under State law as a city, town (except in New England, New York, and Wisconsin), borough (except in Alaska and New York), or village, having legally prescribed limits, powers, and functions. *See also dependent place, governmental unit, independent place.*

**Independent city** An incorporated city that is a primary division of a State and legally not part of any county. The Census Bureau treats an independent city as both a county equivalent and MCD equivalent for data tabulation purposes. *See also incorporated place.*

**Independent place** An incorporated place that legally is not part of any MCD. The Census Bureau treats independent places as a primary division of a county and an MCD equivalent for data tabulation purposes. *See also dependent place, incorporated place.*

**Independent school district** A type of public school system that is administratively and fiscally independent of any other governmental unit. (By contrast, a *dependent* public school system is an agency of some other government—State, county, municipal, or township.) The census of governments collects and tabulates data for both kinds of school districts.

**Indian reservation** *See American Indian reservation.*

**Individual trust lands** *See American Indian trust land.*

**Intermediate/middle school district** A school district inclusive of the fifth through eighth grade, the sixth through the ninth grade, the seventh and eighth grades, or the seventh through ninth grade. The Census Bureau did not provide a separate identification of intermediate/middle school districts in its 1990 census tabulations. *See also elementary district, independent district, school district, secondary district.*

**Internal point** A coordinate value for a point that lies within its geographic area; where possible, the internal point also is a centroid. *See also centroid.*

**Island** An area of land totally surrounded by water; a type of nonfunctioning county equivalent in American Samoa and the Virgin Islands of the United States; a type of nonfunctioning MCD equivalent in American Samoa.

**Joint use area (American Indian)** Territory that is administered jointly and/or claimed by two or more American Indian tribes.

**Jump** The process by which the Census Bureau includes qualifying territory (that is, territory with a population density of at least 1,000 people per square mile) in an urbanized area (UA) when that territory is not adjacent to the main body of the UA. The non-adjacent qualifying territory must be connected to the main body of the UA either by roads or other transportation arteries; these arteries may be no more than 1.5 miles in combined length over developable land, or no more than 5 miles in combined length over water or undevelopable territory. *See also adjacent, jump corridor, population density, undevelopable land, urbanized area.*

**Jump corridor** Territory forming a corridor along the transportation artery(ies) connecting non-adjacent qualifying territory to the main body of an urbanized area (UA). For the 1990 census, the jump corridor, together with the qualifying territory that was not adjacent to the main body of the UA, had to have a population density of at least 500 people per square mile. *See also adjacent, jump, population density, urbanized area.*

**Legal entity** A geographic entity whose boundaries, name, origin, and political/statistical area description result from charters, laws, treaties, or other administrative or governmental action. In earlier censuses, often referred to as a *political* area or entity. Legal entities include States, counties, minor civil divisions, American Indian reservations, and Alaska Native Regional Corporations. *See also administrative entity, governmental unit, political/statistical area description, statistical entity.*

**Legislative district** An area from which a person is elected to serve in a State legislative body. *See also voting district.*

**Linear feature** A feature, such as a railroad, road, street, stream, pipeline, or boundary that can be represented by a line in a geographic data base. *See also TIGER data base, visible feature.*

**Location** A type of nonfunctioning MCD found in New Hampshire.

**Long form** The decennial census questionnaire, sent to approximately one in six households for the 1980 and 1990 censuses, that contains, in addition to all questions on the short form, detailed questions relating to the social, economic, and housing characteristics of each individual and household. Information derived from the long form is referred to as sample data, and is tabulated for geographic entities as small as the block group level in 1980 and 1990 census data products. *See also block group, 100-percent data, sample data, short form.*

**MA** *See metropolitan area.*

**MA code** The NIST issues numeric FIPS codes for MAs. FIPS codes for MSAs and PMSAs (and NECMAs) are four-digit codes; CMSAs are assigned two-digit FIPS codes. NIST also has made available an alternative set of four-digit codes for CMSAs. *See also Federal Information Processing Standards, Geographic Identification Code Scheme.*

**MAF** *See Master Address File.*

**Magisterial district** A type of nonfunctioning MCD found in Virginia and West Virginia.

**Major retail center (MRC)** A cluster of retail stores outside the CBD containing at least one general merchandise store, with a specified minimum dollar amount in annual sales or a specified minimum amount of floor space. Defined and used by the Census Bureau for the Censuses of Retail Trade from 1954 through 1982. *See also central business district.*

**Manufactures (census)** *See economic census.*

**Master Address File (MAF)** The Census Bureau's permanent list of addresses for individual living quarters that is linked to the TIGER data base and will be continuously maintained through partnerships with the USPS, with Federal, State, regional, and local agencies, and with the private sector. (The MAF will eventually include addresses for business establishments.)

**MCD** *See minor civil division.*

**Merger** The joining of two or more geographic entities, generally governmental units, but also MAs or UAs, into a single geographic entity. *See also annexation, conjoint, consolidated city, consolidated government, consolidation.*

**Metropolitan area (MA)** A collective term, established by the Federal OMB and used for the first time in 1990, to refer to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, there is an alternative set of areas termed NECMAs. *See also metropolitan districts.*

**Metropolitan Areas Map** A large-scale color map showing the boundaries and names of all MSAs, CMSAs, and PMSAs in the United States and Puerto Rico as of June 30, 1993. The MAs are displayed in four different population size categories; also shown are the extent of UAs and the location of State and county boundaries. Formatted in wall size (46 inches by 30 inches), this map is Number 4 in the Census Bureau's GE-90 Map Series.

**Metropolitan district** A statistical area comprising a central city and adjacent incorporated places, densely settled MCDs, and, in some cases, EDs. It was used in the 1910, 1920, 1930, and 1940 decennial censuses, and was the forerunner of the MA and the UA.

**Metropolitan planning organization (MPO)** A local governmental unit that has legal jurisdiction over a geographic area for government service planning such as transportation and land-use planning.

**Metropolitan statistical area (MSA)** A geographic entity, defined by the Federal OMB for use by Federal statistical agencies, based on the concept of a core area with a large population nucleus, plus adjacent communities having a high degree of economic and social integration with that core. Qualification of an MSA requires the presence of a city with 50,000 or more inhabitants, or the presence of a UA and a total population of at least 100,000 (75,000 in New England). The county or counties containing the largest city and surrounding densely settled territory are central counties of the MSA. Additional outlying counties qualify to be included in the MSA by meeting certain other criteria of metropolitan character, such as a specified minimum population density or percentage of the population that is urban. MSAs in New England are defined in terms of cities and towns, following rules concerning commuting and population density. MSAs were first defined and effective June 30, 1983. *See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.*

**Microdata** *See public-use microdata sample.*

**Minerals (census)** *See economic census.*

**Minor civil division (MCD)** A type of governmental unit that is the primary legal subdivision of a county in 28 States, created to govern or administer an area rather than a specific population. The several types of MCDs are

identified by a variety of terms, such as town, township, and district, and include both functioning and nonfunctioning governmental units. Many MCDs represent local, general-purpose governmental units, which makes them required areas for presentation of decennial census data. *See also census county division, census subarea, county subdivision, incorporated place, independent place, unorganized territory.*

**Minor civil division (MCD) code** A three-digit numeric code assigned by the Census Bureau to identify each MCD within a county (the Census Bureau assigns the codes based on the alphabetical sequence of the MCD names); also, a five-digit numeric code assigned by the NIST to identify populated places, primary county divisions, and other locational entities within a State. The NIST assigns the codes based on the alphabetic sequence of the entity names; it documents these codes in FIPS 55. *See also Geographic Identification Coding Scheme, Federal Information Processing Standards.*

**Minority- and women-owned businesses, (census of)** *See economic census.*

**MPO** *See metropolitan planning organization.*

**MRC** *See major retail center.*

**MSA** *See metropolitan statistical area.*

**Municipal district** A type of nonfunctioning MCD found in Guam.

**Municipality** A type of functioning county equivalent found in the Northern Mariana Islands for the 1990 census; a functioning MCD found in the Northern Mariana Islands for the 1980 census and in Palau for the 1990 census; the generic term used for a general-purpose local government, such as an incorporated place or MCD.

**Municipio** A type of governmental unit that is the primary legal subdivision of Puerto Rico; the Census Bureau treats the municipio as the statistical equivalent of a county.

**National Institute of Standards and Technology (NIST)** An agency of the U.S. Department of Commerce, the NIST (formerly the National Bureau of Standards) serves as the Nation's science and engineering laboratory for measurement technology and standards research.

**Natural feature** Any part of the landscape resulting from natural processes (such as a stream or ridge), in contrast to the activity of man. *See also cultural feature, feature, visible feature.*

**NECMA** *See New England County Metropolitan Area.*

**Neighborhood** A special-purpose entity delineated for the Census Bureau's 1980 Neighborhood Statistics Program. Neighborhoods have locally defined boundaries, and the Census Bureau treated them as subareas within a legally defined governmental unit, usually an incorporated place or county.

**New England County Metropolitan Area (NECMA)** County-based areas defined by the Federal OMB to provide an alternative to the city- and town-based MSAs and CMSAs in New England. A NECMA includes the county containing the first-named place in an MSA/CMSA title (this county may include the first-named places of other MSAs or CMSAs), and each additional county having at least half its population in the MSA(s)/CMSA(s) whose first-named place is in the county identified in the previous step. NECMAs were first defined in 1975. *See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area.*

**NIST** *See National Institute of Standards and Technology.*

**Nonfunctioning governmental unit** A legally defined governmental unit that does not have appointed or elected officials, raise revenues, or perform general purpose governmental activities such as enacting laws, entering into contracts, or providing services. The term usually refers to an entity established to administer a task assigned to another governmental unit. A nonfunctioning governmental unit is not classified as a government by the



Census Bureau. *See also active governmental unit, administrative entity, functioning governmental unit, functional status (governmental), governmental unit, inactive governmental unit.*

**Nonmetropolitan** The area and population not located in any MA.

**Nonphysical feature** *See nonvisible feature.*

**Nonresidential urban land use** Any type of cultural land use, such as parks, transportation facilities (airports and railyards), factories, and office and industrial parks, that generally are not populated, but are considered to be integral parts of the urban landscape. When calculating the population density of a census block or AU to define a UA or extended city, the Census Bureau disregards the land area occupied by such land uses; the resultant population density figure more accurately reflects the residential density of the census block or AU. *See also population density.*

**Nonstreet feature** A map feature that is not a street, but for which records exist on a map or in a geographic base file. Nonstreet features include pipelines, governmental unit boundaries, power lines, railroads, and water features. *See also nonvisible feature, visible feature.*

**Nonvisible feature** A map feature that is not visible, such as a city or county boundary, a property line, a short imaginary extension of a street or road, or a point-to-point line. *See also visible feature.*

**OA** *See Outlying Area.*

**Off-reservation** A subreservation entity, or tribal or individual trust land, that is located entirely outside the boundaries of an American Indian reservation. *See also American Indian subreservation area, American Indian trust land.*

**Office of Management and Budget (OMB)** The OMB (formerly the Bureau of the Budget) is that part of the Executive Branch responsible for evaluating, formulating, and coordinating management procedures and program

objectives within and among Federal departments and agencies. It also controls the administration of the Federal budget, while routinely providing the President with recommendations regarding budget proposals and relevant legislative enactments.

**OMB** *See Office of Management and Budget.*

**100-percent data** Population and housing information collected from both the long form and the short form for every inhabitant and household in the United States, and tabulated for all geographic levels down to the census block. *See also geographic hierarchy, long form, sample data, short form.*

**Organized territory** Any area that lies within an established legal entity, such as a State, county, MCD, or incorporated place. *See also unorganized territory.*

**Outlier** *See exclave.*

**Outlying Area** An entity, other than a State or the District of Columbia, under the jurisdiction of the United States; for the 1990 census, this included American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, the Virgin Islands of the United States, and several small islands in the Caribbean Sea and the Pacific Ocean. The Census Bureau treated other entities as outlying areas in earlier censuses. The Census Bureau uses *Puerto Rico and the Outlying Areas* to refer to these areas as a group.

**Parish** A type of governmental unit that is the primary legal subdivision of Louisiana, similar to a county in other States.

**Parish governing authority district (PGAD)** A type of nonfunctioning MCD found in Louisiana used for reporting decennial census data.

**Part** That portion of a geographic entity contained within some higher-level geographic entity, the boundary of which transects the first entity. *See also administrative entity, geographic entity, geographic hierarchy, legal entity, statistical entity.*

**PGAD** *See parish governing authority district.*

**Physical feature** *See visible feature.*

**Place** A concentration of population either legally bounded as an incorporated place, or identified by the Census Bureau as a CDP. Incorporated places have political/statistical descriptions of borough (except in Alaska and New York), city, town (except in New England, New York, and Wisconsin), or village. *See also census designated place, incorporated place, political/statistical area description.*

**Place code** A four-digit code assigned by the Census Bureau to identify each incorporated or census designated place within a State (the Census Bureau assigns the codes based on the alphabetic sequence of the place names). Also, the five-digit numeric code assigned by the NIST to identify populated places, primary county divisions, and other locational entities within a State. The NIST assigns the codes based on the alphabetic sequence of the entity names; it documents the codes in FIPS PUB 55. *See also Geographic Identification Code Scheme, Federal Information Processing Standards.*

**Plantation** A type of functioning MCD found in Maine.

**PLSS** *See public land survey system.*

**PMSA** *See primary metropolitan statistical area.*

**Police jury ward** A type of nonfunctioning MCD found in Louisiana and used to tabulate data in the 1980 and several earlier decennial censuses; replaced by the parish governing authority district for the 1990 census.

**Political entity** *See administrative entity, governmental unit, legal entity, statistical entity.*

**Political/statistical area description (PSAD)** A two-digit numeric code identifying each type of geographic entity in terms of its legal status or status as a statistical entity. (The Census Bureau established 98 PSADs for use in the 1990 census.) The Census Bureau uses PSADs to tabulate data for geographic entities by type, and, where necessary, to append the type to the entity name in the census data presentations.

**Population density** A numerical method of expressing the extent to which people are clustered within a specific geographic area, usually in terms of people per square mile or per square kilometer. The population density of an area is derived by dividing the total population of the entity by the total land area of the entity. *See also jump, nonresidential urban land use, urban fringe, urbanized area.*

**Post office box address** An address that refers to a box number in a post office building, and not to the actual physical location of a housing unit or business establishment. *See also address, city-style address, general delivery address, rural address.*

**Precinct** A legal entity subdividing a county, established by counties or municipalities for administrative or electoral purposes and used by the Census Bureau as an MCD in Illinois and Nebraska; one of several types of small geographic entities created by State and local governments for the purpose of administering elections, and for which the Census Bureau tabulated data in 1980 and 1990 as prescribed by Public Law 94-171. *See also administrative entity, election precinct, minor civil division, voting district.*

**Primary metropolitan statistical area (PMSA)** A geographic entity defined by the Federal OMB for use by Federal statistical agencies. If an area meets the requirements to qualify as a metropolitan statistical area (MSA) and has a population of one million or more, two or more PMSAs may be defined within it if statistical criteria are met and local opinion is in favor. A PMSA consists of a large urbanized county, or a cluster of such counties (cities and towns in New England) that have substantial commuting interchange.

When one or more PMSAs have been recognized, the balance of the original, larger area becomes an additional PMSA; the larger area of which they are components then is designated a consolidated metropolitan statistical area (CMSA). PMSAs were first defined and effective on June 30, 1983. *See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.*

**PSAD** *See political/statistical area description.*

**Pseudo MCD** Refers to the MCD recognized in, and comprising the area of, Arlington County, Virginia; St. Louis, Missouri; other independent cities; and independent places below the county level. Although these entities have no MCDs, it is inappropriate to classify them as unorganized territory. *See also county subdivision, independent city, independent place.*

**Public land survey system (PLSS)** The grid system by which units of land in the United States are described in relation to established north-south (township) and east-west (range) base lines. The resultant areas are referred to as congressional townships, survey townships, or townships, and generally are six-square-mile units. Townships, in turn, may be subdivided into one-square-mile units, called sections, which also may be subdivided further. Because of the spherical shape of the earth and irregularities in the original surveys, occasional corrections, which appear on maps as jogs or offsets, are introduced along specific township and range lines. *See also minor civil division, survey township, township (civil or governmental), township (congressional or survey), township and range system.*

**Public-use microdata area (PUMA)** An area that defines the extent of territory for which the Census Bureau tabulates PUMS data. *See also public-use microdata samples.*

**Public-use microdata samples (PUMS)** Computerized files consisting of the actual responses provided by individuals about themselves and their housing units rather than summary or tabulated statistics for geographic areas.

To maintain confidentiality, the PUMS files contain no names, addresses, or other information that would permit identification of an individual person or housing unit. Users can manipulate these files to prepare tabulations of their own design. *See also public-use microdata area.*

**Pueblo** A type of American Indian reservation; before the 1990 census, the term used for the legal subdivision, or MCD equivalent, of a municipio (the county equivalent) in Puerto Rico. The term *barrio-pueblo* replaced *pueblo* for the 1990 census. *See also barrio-pueblo.*

**PUMA** *See public-use microdata area.*

**PUMS** *See public-use microdata samples.*

**Purchase** A type of nonfunctioning MCD found in New Hampshire.

**Rancheria (American Indian)** A type of American Indian reservation.

**Range** *See public land survey system, township and range system.*

**Reapportionment** The redistribution of seats in the U.S. House of Representatives among the several States on the basis of the most recent decennial census, as required under Article I of the Constitution. *See also decennial census, redistricting.*

**Redistricting** The delineation of representational district boundaries, based on the most recent decennial census, for the purpose of electing representatives to a State legislature, the U.S. House of Representatives, or a county or city council. *See also decennial census, election district, election precinct, precinct, reapportionment, voting district.*

**Region (census geographic)** Four groupings of States (Northeast, South, Midwest, and West) established by the Census Bureau in 1942 for the presentation of census data. Each region is subdivided into divisions. *See also division (census geographic).*

**Reservation** A type of functioning MCD equivalent found in Maine and New York, consisting of an American Indian reservation recognized by the Federal government or a State government; the reservation is independent of any other MCD. *See also American Indian reservation.*

**Reserve (American Indian)** A type of American Indian reservation.

**Retail trade (census)** *See economic censuses.*

**Road district** A type of functioning MCD found in Potter County, Pennsylvania, originally established to maintain roads, that has become a general-purpose government.

**Rural** The population and territory outside any UA and the urban part of any place with a decennial census population of 2,500 or more. *See also extended city, place, urban, urban area, urban place, urbanized area.*

**Rural address** An address consisting of a delivery route number and a box number, both assigned by the local post office for delivery of mail at a specific physical location. RR (rural route) is the most frequent route designation; also possible are HC (highway contract), RD (rural delivery), RFD (rural free delivery). *See also address, city-style address, general delivery address, post office address.*

**Rural place** Any incorporated place or CDP located outside a UA and having fewer than 2,500 residents in the most recent decennial census. *See also census designated place, incorporated place, urban place.*

**SAC** *See Statistical Areas Committee.*

**Sample** A statistical subset of the total population, used to estimate information about the population; to statistically select a subset of the total population, for the purpose of estimating information about that population. *See also census, sample data, survey.*

**Sample data** Detailed social, economic, and housing information collected on the decennial census long form from approximately one in six households nationwide. The Census Bureau tabulated sample data from the 1980 and 1990 decennial census to the block group level. *See also decennial census, long form, 100-percent data, short form.*

**Sample survey** The collection of information for a sample of people, housing units, and economic activities. *See also census, sample.*

**SCA** *See standard consolidated area.*

**School attendance area** A special-purpose geographic entity delineated by State, county, or local officials designating the school(s) that school-age children in that particular area must attend. The Census Bureau does not provide separate data for school attendance areas. *See also elementary school district, independent district, intermediate/middle school district, school district, secondary school district, unified school district.*

**School district** The territory administered by the elected or appointed authorities of a State, county, or other local governmental unit to provide educational services to a resident population. A school district typically includes several school buildings, teachers, and related staff. The Census Bureau provided data tabulations for school districts from the 1970, 1980, and 1990 censuses. *See also elementary school district, independent district, intermediate/middle school district, secondary school district, unified school district.*

**SCSA** *See standard consolidated statistical area.*

**SEA** *See State Economic Area.*

**Secondary school district** A school district inclusive of only high school (either the ninth through the twelfth grades or the tenth through the twelfth grades). *See also elementary district, independent district, intermediate/middle district, school district, unified school district.*



**Segment** A portion, or subset, of a larger unit, generally in reference to population groups. For the Census Bureau, there are three specific uses of the term: (1) a type of administrative subdivision found on an American Indian reservation; (2) a portion of a linear feature, generally occurring between the intersections with two other linear features, but also between two points used to define the shape of a feature; and (3) the part of a census block (or ED in earlier decennial censuses) used as the sampling unit for the Census Bureau's sample surveys in areas without city-style addresses geocoded to the census block level. *See also American Indian subreservation area, GBF/DIME-File, linear feature, TIGER data base, TIGER System.*

**Serpentine numbering** The method or pattern of assigning numbers on a map in a snake-like, winding manner, with the intent of having each number located next to the other in the sequence.

**Service industries (census)** *See economic census.*

**Short form** The decennial census questionnaire, sent to approximately five of six households for the 1980 and 1990 censuses, that contains population questions related to household relationship, sex, race, age, marital status, and Hispanic origin as well as housing questions about the number of units in each structure, the number of rooms per unit, tenure, and value. The questions contained on the short form also are asked, along with additional questions, on the long form. *See also long form, 100-percent data, sample data.*

**SMA** *See standard metropolitan area.*

**Small-area data** The Census Bureau uses this term to refer to census statistics tabulated at the census block, block group, and census tract/BNA level. (Many people also would include in this category, data for places and MCDs having fewer than 5,000 inhabitants.)

**SMSA** *See standard metropolitan statistical area.*

**Special economic urban area (SEUA)** A minor civil division in the Northeastern States, Michigan, Minnesota, and Wisconsin treated by the Census Bureau as equivalent to a place for statistical purposes in the economic censuses.

**Standard consolidated area (SCA)** The SCA was a forerunner of the CMSA. Two SCAs (for the New York and Chicago areas) existed between 1959 and 1975. These SCAs were combinations of SMSAs, although the New York SCA also included two counties that were not within any SMSA. The SCA was replaced by the SCSA. *See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.*

**Standard consolidated statistical area (SCSA)** The SCSA was a forerunner of the CMSA. An SCSA was a combination of two or more SMSAs that had substantial commuting between them and where at least one of the SMSAs had a population of 1,000,000 or greater. SCSAs were first defined in 1975 and used until June 1983. *See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard metropolitan area, standard metropolitan statistical area.*

**Standard metropolitan area (SMA)** SMA was the first term used for official metropolitan areas as defined by the then Bureau of the Budget. SMAs were first defined in 1949 for the 1950 decennial census, and the term was used until replaced in 1959 with the term SMSA. *See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan statistical area.*

**Standard metropolitan statistical area (SMSA)** In 1959, the term SMSA replaced SMA for the official metropolitan areas defined by the then Bureau of the Budget. The term SMSA was used until MSAs, CMSAs, and

PMSAs were introduced in 1983. *See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area.*

**State/state** A type of governmental unit that is the primary legal subdivision of the United States; a functioning county equivalent in Palau, where it also serves as a nonfunctioning MCD.

**State certifying official** The State official designated annually by the Governor of each State to review and certify that the Census Bureau's inventory of local governmental units in that State is accurate, and that the boundary change actions reported in response to its BAS are accomplished in accordance with State law.

**State code** A two-digit FIPS code assigned by the NIST to identify each State and statistically equivalent entity. The NIST assigns the codes based on the alphabetic sequence of State names (Puerto Rico and the Outlying Areas appear at the end); it documents these codes in a FIPS publication (FIPS PUB 5). Also, a two-digit code assigned by the Census Bureau to identify each State within its census geographic division (Puerto Rico and the Outlying Areas appear at the end). *See also division (census geographic), Federal Information Processing Standards, Geographic Identification Code Scheme.*

**State/County Outline Map** A page-size, State-based map series depicting the boundaries and names of all counties and equivalent entities in a State.

**State economic area (SEA)** A group of adjacent counties within a State that have similar economic and social characteristics, as determined by various governmental agencies. An SEA may be a single metropolitan county with unique characteristics. SEAs are the lower level of a two-tiered system of county combinations that includes the economic subregions (ESRs). From 1950 through 1980, the Census Bureau tabulated decennial census data by SEA/ESR. *See also economic subregion.*

**State equivalent** A type of governmental unit treated by the Census Bureau as if it were a State for purposes of data presentation. For the 1990 decennial census, the State equivalents included the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands of the United States, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and Palau. *See also Outlying Area, State.*

**State/Metropolitan Area Outline Map** A page-size, State-based map series displaying the boundaries and names of States, counties, and MAs; also shown are the location and name of the State capital, each MA central city, and other places with a population of 25,000 or more in the State.

**Statistical Areas Committee (SAC)** A committee composed of individuals representing the various divisions and staffs of the Census Bureau. The committee meets as needed to discuss proposals and problems related to the recognition and delineation of geographic entities used for data tabulation.

**Statistical entity** Any specially defined geographic entity or combination of entities, such as a block group, BNA, CCD, CDP, census tract, or UA, for which the Census Bureau tabulates data. Statistical entity boundaries are not legally defined and the entities have no governmental standing. *See also administrative entity, governmental unit, legal entity, statistically equivalent entity.*

**Statistically equivalent entity** A type of geographic entity that, for purposes of data tabulation and presentation, the Census Bureau treats as the counterpart of a similar type of entity; for example, in Louisiana (which has no counties) the parish is the statistical equivalent of a county. *See also administrative entity, governmental unit, legal entity, statistical entity.*

**STF** *See Summary Tape File.*

**Subbarrio** A legally defined nonfunctioning subdivision of a barrio-pueblo or barrio in Puerto Rico, which serves as an electoral and representational entity. *See also barrio, barrio-pueblo, sub-MCD.*

**Sub-MCD** A primary legal division of an MCD, found only in Puerto Rico. *See also subbarrio.*

**Subreservation area (American Indian)** *See American Indian subreservation area.*

**Summary Tape File (STF)** One of a series of computer files containing large amounts of decennial census data for the various levels of the Census Bureau's geographic hierarchy. *See also 100-percent data, sample data.*

**Supervisor's district** A nonfunctioning MCD found in Mississippi, used for the election of a member to the county board; in decennial censuses before 1990, the set of EDs for which one supervisor was responsible. The Census Bureau did not tabulate or publish data for supervisor's districts.

**Survey** *See sample survey.*

**Survey township** *See public land survey system, township (congressional or survey), township and range system.*

**Tabulation block** All blocks for which the Census Bureau tabulates decennial census data, either an unsplit census block, or each portion of a decennial census collection block that was split into two or more separately identified parts to recognize any legal, administrative, or statistical boundaries that transect it. For the 1990 census, a tabulation block was identified by a three-digit number and, when it consisted of the portion of a collection block delimited by some other boundary, a one- or two-character alphabetic suffix; earlier decennial censuses did not identify these portions of split blocks with unique suffixes. *See also census block, collection block, collection geography, tabulation geography.*

**Tabulation geography** The geographic entities for which the Census Bureau tabulates and presents data, such as States, counties, places, census tracts, and census blocks.

**Tape address register (TAR)** For the 1970, 1980, and 1990 decennial censuses, a computerized list of residential addresses created from a commercial mailing list and post office check. The extent of this file was restricted to the areas covered by the ACGs (for the 1970 census), the GBF/DIME Files (for the 1980 census), and the TIGER data base (for the 1990 census). The address information was supplemented by field-listed addresses that the lister geocoded because the computer could not geocode them.

**TAR** *See tape address register.*

**TAZ** *See traffic analysis zone.*

**TDSA** *See tribal designated statistical area.*

**TIGER** The acronym for Topologically Integrated Geographic Encoding and Referencing System. *See also TIGER data base, TIGER System.*

**TIGER data base** A computer file that contains geographic information representing the position of roads, rivers, railroads, and other census-required map features; the attributes associated with each feature, such as feature name, address ranges, and class codes; the position of the boundaries for those geographic areas that the Census Bureau uses in its data collection, processing, and tabulation operations; and the attributes associated with those areas, such as their names and codes. This file is stored in multiple partitions, such as by *counties* or *groups of counties*, although it represents all U.S. *space* (including Puerto Rico, and the Outlying Areas) as a single seamless data inventory. *See also Geographic Support System, TIGER System.*

**TIGER File** *See TIGER data base.*

**TIGER System** The TIGER data base plus the specifications, procedures, computer programs, and related source (input) materials required to build and use it. It also includes the specifications, procedures, and computer

programs for *using* the TIGER data base to perform geocoding, plot maps, and generate tabulation control files such as the GRF. *See also Geographic Support System, TIGER data base.*

**TJSA** *See tribal jurisdiction statistical area.*

**Topography** In its broadest sense, topography includes landforms, water and other drainage features, and features such as gravel pits and mine tailings. A single feature (such as a mountain or valley) is called a topographic feature.

**Topologically Integrated Geographic Encoding and Referencing System**

*See TIGER data base, TIGER System.*

**Topology** One component of the science of mathematics dealing with geometric configurations that do not vary when transformed through bending, stretching, or mapping at various scales.

**Town** A type of functioning MCD found in the New England States, New York, and Wisconsin; a type of incorporated place in 30 States and the Virgin Islands of the United States. In New Jersey, Pennsylvania, and South Dakota, the Census Bureau treats these towns as the equivalent of an MCD. *See also county subdivision, dependent place, incorporated place, independent place.*

**Township (civil or governmental)** A type of functioning MCD in 12 States, a type of nonfunctioning MCD in 3 States (Arkansas, New Hampshire, and North Carolina), and a type of county subdivision that can be functioning and nonfunctioning in Missouri. (There also are nonfunctioning survey townships in Maine, but these are not recognized by the Census Bureau for data tabulation purposes.) In States where land was subdivided under the PLSS, many townships correspond to the survey townships. *See also county subdivision, minor civil division, public land survey system, township (congressional or survey), township and range system.*

**Township (congressional or survey)** A unit of land created under the PLSS for the sale of public lands. A survey township is usually a six-square-mile area consisting of 36 one-square-mile sections aligned along cardinal compass points. Survey townships have not been used for decennial census tabulations in recent decades except where they are organized into a civil township; if unorganized, the area is treated as the statistical equivalent of an MCD, called an unorganized territory. *See also organized territory, public land survey system, township (civil or governmental), township and range system, unorganized territory.*

**Township and range system** A common name for the United States Public Land Survey System, which covers 29 whole States and part of Ohio. *See also public land survey system, township (civil or governmental), township (congressional or survey).*

**Traffic analysis zone (TAZ)** A special-purpose geographic entity delineated by an MPO for tabulating transportation statistics from the decennial census.

**Transportation (census)** *See economic census.*

**Tribal designated statistical area (TDSA)** A statistical entity delineated for the 1990 decennial census by an American Indian tribe recognized by the Federal Government or a State government when that tribe does not have a land base (reservation). It encompasses the area that includes the American Indian population over which the tribe has jurisdiction. A TDSA cannot overlap with a Federal or State reservation or American Indian trust land; it also cannot cross a State line, and must be delineated following census block boundaries. *See also tribal jurisdiction statistical area.*

**Tribal jurisdiction statistical area (TJSA)** A statistical area identified and delineated for the 1990 decennial census by American Indian tribal officials in Oklahoma. They encompass the area that includes the American Indian population over which the tribe has jurisdiction. TJSAs replaced the Historic Areas of Oklahoma recognized by the Census Bureau for



the 1980 decennial census. *See also* *Historic Areas of Oklahoma, tribal designated statistical area.*

**Tribal trust land** *See* *American Indian trust land.*

**UA** *See* *urbanized area.*

**UA code** A four-digit numeric code assigned by the Census Bureau to identify UAs. *See also* *Federal Information Processing Standards, Geographic Identification Code Scheme.*

**Undevelopable territory (urbanized area)** Includes water areas, mud flats, swamps, marshlands, steep slopes, and other terrain on which residential or commercial development is virtually impossible because of physical limitations. Local zoning classifications of land do not necessarily correspond to the Census Bureau's definition of undevelopable land for the purpose of defining UAs. Territory that is undeveloped is not necessarily undevelopable. *See also* *jump, jump corridor, urbanized area.*

**U.S.** *See* *United States*

**Unified district** A school district inclusive of kindergarten through twelfth grade. *See also* *school district.*

**Unincorporated place** *See* *census designated place.*

**United States** The 50 States and the District of Columbia.

**United States Geological Survey (USGS)** A bureau of the U.S. Department of the Interior, the USGS is the Nation's main topographic mapping agency.

**United States Postal Service (USPS)** An independent corporation of the U.S. Government, the USPS provides mail processing and delivery services to individuals and businesses in the United States, Puerto Rico, and the Outlying Areas.

**Unorganized borough** A legal entity in Alaska, covering the portion of the State not within any legally established, organized borough; it is administered by the State of Alaska. The unorganized borough is subdivided into county-equivalent *census areas* for statistical purposes. *See also borough, census area.*

**Unorganized territory (UT)** The statistical equivalent of an MCD encompassing contiguous area that is not within any organized MCD or an incorporated place. The Census Bureau identified UTs in nine States for the 1990 census. *See also county subdivision, minor civil division, organized territory, statistical entity, township (congressional or survey).*

**Urban** All population and territory within the boundaries of UAs and the urban portion of places outside of UAs that have a decennial census population of 2,500 or more. *See also extended city, rural, urban area, urbanized area, whole-town CDP.*

**Urban area** For Census Bureau purposes, the territory within UAs and the urban portion of places outside of UAs that have a decennial census population of 2,500 or more. Other Federal Government agencies may define the term based on different criteria. *See also extended city, rural, urban, urbanized area.*

**Urban fringe** The closely settled territory adjacent to the central place(s) of a UA. The census blocks that constitute the urban fringe generally have an overall population density of at least 1,000 people per square mile of land area. *See also population density, urbanized area.*

**Urban place** Any place with a decennial census population of 2,500 or more, whether incorporated or census designated (a CDP), and any place regardless of population located within a UA. Some urban places (extended cities) contain territory that is not designated as urban. *See also extended city, place, rural place, urbanized area.*

**Urbanized area (UA)** An area consisting of a central place(s) and adjacent urban fringe that together have a minimum residential population of at least 50,000 people and generally an overall population density of at least 1,000 people per square mile of land area. The Census Bureau uses published criteria to determine the qualification and boundaries of UAs. *See also central place, jump, jump corridor, nonresidential urban land use, population density, undevelopable territory, urban, urban area, urban fringe.*

**Urbanized Area Outline Map** A small-scale map of each UA, showing the boundaries and names of the major component geographic entities (such as all AIANAs, county subdivisions, and places). Formatted at a scale of four miles to the inch, these maps appear in selected decennial census publications.

**USGS** *See United States Geological Survey.*

**USPS** *See United States Postal Service.*

**UT** *See unorganized territory.*

**Village** A type of incorporated place in 20 States and American Samoa. The Census Bureau treats all villages in New Jersey, South Dakota, and Wisconsin, and some villages in Ohio as county subdivisions. *See also incorporated place, independent place.*

**Visible feature** A feature that can be seen on the ground, such as a street or road, railroad track, power line, stream, shoreline, fence, ridge, or cliff. A visible feature can be a cultural or natural feature. *See also cultural feature, feature, nonvisible feature.*

**Voting district (VTD)** Any of a variety of areas, such as election districts, precincts, legislative districts, or wards, established by States and local governments for voting purposes. The 1990 census term *voting district* replaces the 1980 term *election precinct*. *See also administrative entity, election precinct, precinct.*

**Voting District Outline Map** A county-based map showing VTD names and codes, VTD boundaries and underlying features, boundaries and names of AIANAs, county subdivisions, and places. These maps are available only as electrostatic plots, and cover only those counties for which States delineated VTDs in the 1990 census.

**VTD** *See voting district.*

**Ward** A type of local electoral subdivision of an incorporated place or MCD; a type of MCD formerly recognized by the Census Bureau in Louisiana; officially called a police jury ward. *See also voting district.*

**Wholesale trade (census)** *See economic census.*

**Whole-town CDP** For the 1980 census only, a CDP coextensive with an MCD in one of the nine Northeastern States, Michigan, or Wisconsin. At least 95 percent of the MCD's population and 80 percent of its land area had to qualify as urban under the UA criteria. The Census Bureau did not tabulate data for this entity for the 1990 census.

**ZIP (Zone Improvement Plan) Code** A five-, seven-, nine-, or eleven-digit code assigned by the U.S. Postal Service to a section of a street, a collection of streets, an establishment, structure, or group of post office boxes, for the delivery of mail.

**Zona Urbana (ZU)** In Puerto Rico, the area consisting of the municipio seat of government and the adjacent built-up area. ZUs are delineated using a process similar to that for comunidades, except that ZUs have no minimum population threshold for qualification and cannot cross municipio boundaries. *See also census designated place, comunidad.*

**Zone Improvement Plan (ZIP)** *See ZIP Code.*

**ZU** *See zona urbana.*