## Selected Appendixes: 2000

Population and Housing Unit Counts

Issued August 2003

PHC-3-A



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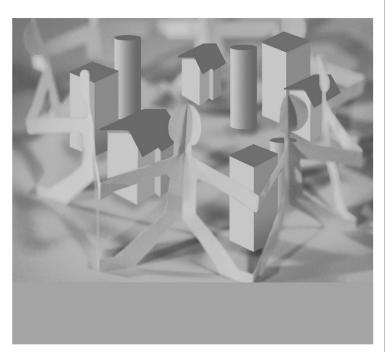
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### 2000 Census of Population and Housing





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<sup>\*</sup> Appendix may be found in the *Population and Housing Unit Counts*, PHC-3 statistical reports, in print and on the Internet at http://www.census.gov/census2000/pubs/phc-3.html.

## How to Use This Census Report

The appendixes contained in this volume supplement the Census 2000, *Population and Housing Unit Counts* reports for the United States, states, the District of Columbia, and Puerto Rico. These reports provide Census 2000 and historical comparisons of the 100-percent population and housing unit counts. They provide land and water area measurements, and population density. The user notes section documents geographic changes over the past decade. This series is similar to the 1990 census CPH-2 series. In prior decennial census publications, the appendixes that explained these subjects, geographic terms and concepts, and other general product information were included with the statistical tables; for Census 2000, these appendixes are found in this volume.

**Appendix A, Geographic Terms and Concepts.** Provides definitions of the types of geographic areas and related information in this report series.

**Appendix B, Definitions of Subject Characteristics.** Contains definitions for the subject-matter terms used in this report series, including explanations of derived measures and comparability with previous censuses. The subjects are listed alphabetically. Population characteristics are defined first, followed by the definitions of the housing subjects.

**Appendix C, Data Collection and Processing Procedures.** Explains the enumeration and residence rules used in counting the population and housing units in the United States and Puerto Rico. It also describes the major components of the operational plan for Census 2000, and includes a glossary of terms.

**Appendix D, Questionnaire.** Presents a facsimile of the Census 2000 questionnaire used to collect the data in the *Population and Housing Unit Counts* statistical reports.

**Appendix E, Data Products and User Assistance.** Summarizes the Census 2000 data products by describing the information available in printed reports and through electronic media such as CD-ROM, DVD, and the Internet. It also describes Census 2000 maps and other geographic products, reference materials, and sources of assistance.

**Appendix G, Accuracy of the Data.** Provides information on confidentiality of the data, imputation of housing unit status and population counts, sources of errors in the data, and editing of unacceptable data.

**Appendix H, Acknowledgments.** Lists many of the U.S. Census Bureau staff who participated in the various activities of Census 2000.

The following appendix is found in the volumes with the statistical tables:

**Appendix F, Maps.** Contains maps depicting the geographic areas shown in the *Population* and Housing Unit Counts statistical reports.

Information regarding Census 2000 is available through the Census 2000 Gateway (http://www.census.gov/main/www/cen2000.html). All reports in the PHC-3 series are available

in print and in Portable Document Format (PDF) on the U.S. Census Bureau's Internet site. Any changes to or explanatory information about the reports in this series that occur after they have gone to print are also available (http://www.census.gov/prod/cen2000/notes/errata.pdf). To receive notification of these user notes, subscribe to the Census Product Update (http://www.census.gov/mp/www/cpu.html), a biweekly e-mail newsletter available from the Customer Services Center of the Marketing Services Office at the U.S. Census Bureau, or contact the Customer Services Center directly on 301-763-INFO (4636) or at webmaster@census.gov.

# Appendix A. Geographic Terms and Concepts

Alaska Native Regional Corporation (ANRC) (See American Indian Area, Alaska Native Area, Hawaiian Home Land)
Alaska Native Village (ANV) (See American Indian Area, Alaska Native Area, Hawaiian
Home Land)
Area, Hawaiian Home Land)
American Indian Area, Alaska Native Area, Hawaiian Home Land
American Indian Off-Reservation Trust Land (See American Indian Area, Alaska Native
Area, Hawaiian Home Land)
Home Land)
American Indian Tribal Subdivision (See American Indian Area, Alaska Native Area,
Hawaiian Home Land)
American Samoa (See Island Areas of the United States)
Area Measurement
Barrio (See Puerto Rico)
Barrio-Pueblo (See Puerto Rico)
Borough (See County (or Statistically Equivalent Entity), see County Subdivision, see
Place)
Census Area (See County (or Statistically Equivalent Entity))
Census County Division (CCD) (See County Subdivision)
Census Designated Place (CDP) (See Place)
Census Division (See also Census Region)
Census Region (See also Census Division)
Census Subarea (See County Subdivision)
Central City (See Metropolitan Area)
Central Place (See Urban and Rural)
City (See Place)
Commonwealth of the Northern Mariana Islands (See Island Areas of the United States)
Comparability (See Boundary Changes)
Comunidad (See Puerto Rico)
Congressional District (CD)
Consolidated Metropolitan Statistical Area (CMSA) (See Metropolitan Area)
Consolidated City (See Place)
County (or Statistically Equivalent Entity)
County Subdivision
District (See County (or Statistically Equivalent Entity))
Division (See Census Division)
Extended Place (See Urban and Rural)
Geographic Hierarchy (See Introduction—Geographic Presentation of Data)
Geographic Presentation (See Introduction—Geographic Presentation of Data)
Geographic Presentation (See Introduction—Geographic Presentation of Data)
Hawaiian Home Land (HHL) (See American Indian Area, Alaska Native Area, Hawaiian
Home Land)
Hierarchical Presentation (See Introduction—Geographic Presentation of Data)
Historical Counts
Incorporated Place (See Place, see County Subdivision)
Independent City (See County (or Statistically Equivalent Entity))
Introduction—Geographic Presentation of Data
Inventory Presentation (See Introduction—Geographic Presentation of Data)

Island (See County (or Statistically Equivalent Entity))
Island Areas of the United States
Joint Use Area (See American Indian Area, Alaska Native Area, Hawaiian Home Land)
Land Area (See Area Measurement)
Metropolitan Area (MA)
Metropolitan Area Title (See Metropolitan Area)
Metropolitan Statistical Area (MSA) (See Metropolitan Area)
Minor Civil Division (MCD) (See County Subdivision)
Municipality (See County (or Statistically Equivalent Entity))
Municipio (See Puerto Rico)
New England County Metropolitan Area (NECMA) (See Metropolitan Area)
Land)Oklahoma Tribal Statistical Area (OTSA) (See American Indian Area, Alaska Native Area,
Hawaiian Home Land)
Outlying Areas (See Island Areas of the United States)
Parish (See County)
Place
Place Within Consolidated City (See Place)
Population or Housing Unit Density
Primary Metropolitan Statistical Area (PMSA) (See Metropolitan Area)
Puerto Rico
Region (See Census Region)
Rural (See Urban and Rural)
State (or Statistically Equivalent Entity)
State Designated American Indian Statistical Area (SDAISA) (See American Indian Area,
Alaska Native Area, Hawaiian Home Land)
Subbarrio (See Puerto Rico)
Sub-MCD (See Puerto Rico)
TIGER® Database
Town (See County Subdivision, see Place)
Township (See County Subdivision)
Tribal Designated Statistical Area (TDSA) (See American Indian Area, Alaska Native Area, Hawaiian Home Land)
Tribal Jurisdiction Statistical Area (TJSA) (See American Indian Area, Alaska Native Area,
Hawaiian Home Land)
Trust Land (See American Indian Area, Alaska Native Area, Hawaiian Home Land)
United States
Unorganized Territory (See County Subdivision)
Urban (See Urban and Rural)
Urban and Rural
Urban Area Central Place (See Urban and Rural)
Urban Area Title (See Urban and Rural)
Urban Cluster (UC) (See Urban and Rural)
Urbanized Area (UA) (See Urban and Rural)
Village (See Place)
Virgin Islands of the United States (See Island Areas of the United States)
Water Area (See Area Measurement)
Zona Urbana (See Puerto Rico)

#### INTRODUCTION-GEOGRAPHIC PRESENTATION OF DATA

In decennial census data products, geographic entities usually are presented in an hierarchical arrangement or as an inventory listing.

#### **Hierarchical Presentation**

An hierarchical geographic presentation shows the geographic entities in a superior/subordinate structure. This structure is derived from the legal, administrative, or areal relationships of the entities. The hierarchical structure is depicted in report tables by means of indentation, and is explained for computer-readable media in the geographic coverage portion of the abstract in the

technical documentation. An example of hierarchical presentation is the "standard census geographic hierarchy": within place, within county subdivision, within county, within state, within division, within region, within the United States. Graphically, this is shown as:

```
United States
Region
Division
State
County
County subdivision
Place (or part)
```

Figure A-1, which is a diagram of the geographic hierarchy, presents this information as a series of "nesting" relationships. For example, a line joining the lower-level entity "place" and the higher-level entity "state" means that a place cannot cross a state boundary; a line linking "census tract" and "county" means that a census tract cannot cross a county line; and so forth.

#### **Inventory Presentation**

An inventory presentation of geographic entities is one in which all entities of the same type are shown in alphabetical or geographic sequence, without reference to their hierarchical relationships. Generally, an inventory presentation shows totals for entities that may be split in a hierarchical presentation, such as place. An example of a series of inventory presentations is: state, followed by all the counties in that state, followed by all the places in that state. Graphically, this is shown as:

State
County A
County B
County C
Place X
Place Y
Place Z

#### American Indian/Alaska Native Area/Hawaiian Home Land (AIANA/HHL) Entities

Exceptions to the standard hierarchical presentation occur in the case of some American Indian/Alaska Native area (AIANA) entities, which do not necessarily "nest" within states and counties. For instance, the following American Indian entities can cross state lines: federally recognized American Indian reservations, off-reservation trust lands, tribal subdivisions, and tribal designated statistical areas. National summary data for American Indian reservations may be presented as an alphabetical listing of reservation names followed by the state portions of each reservation.

The diagram in Figure A-2 shows geographic relationships among geographic entities in the AIANA/HHL hierarchy. It does not show the geographic levels "county," "county subdivision," and "place" because AIANA/HHL entities do not necessarily nest within them.

The definitions below are for geographic entities and concepts that the U.S. Census Bureau includes in its standard data products. Not all entities and concepts are shown in any one data product.

#### AMERICAN INDIAN AREA, ALASKA NATIVE AREA, HAWAIIAN HOME LAND

There are both legal and statistical American Indian, Alaska Native, and native Hawaiian entities for which the U.S. Census Bureau provides data for Census 2000. The legal entities consist of federally recognized American Indian reservations and off-reservation trust land areas, the tribal subdivisions that can divide these entities, state recognized American Indian reservations, Alaska

Native Regional Corporations, and Hawaiian home lands. The statistical entities are Alaska Native village statistical areas, Oklahoma tribal statistical areas, tribal designated statistical areas, and state designated American Indian statistical areas. Tribal subdivisions can exist within the statistical Oklahoma tribal statistical areas.

In all cases, these areas are mutually exclusive in that no American Indian, Alaska Native, or Hawaiian home land can overlap another tribal entity, except for tribal subdivisions, which subdivide some American Indian entities, and Alaska Native village statistical areas, which exist within Alaska Native Regional Corporations. In some cases where more than one tribe claims jurisdiction over an area, the U.S. Census Bureau creates a joint use area as a separate entity to define this area of dual claims. The following provides more detail about each of the various American Indian areas, Alaska Native areas, and Hawaiian home lands.

#### **Alaska Native Regional Corporation (ANRC)**

Alaska Native Regional Corporations (ANRCs) are corporate entities established to conduct both business and nonprofit affairs of Alaska Natives pursuant to the Alaska Native Claims Settlement Act of 1972 (Public Law 92203). Twelve ANRCs are geographic entities that cover most of the state of Alaska (the Annette Island Reserve—an American Indian reservation—is excluded from any ANRC). (A thirteenth ANRC represents Alaska Natives who do not live in Alaska and do not identify with any of the 12 corporations; the U.S. Census Bureau does not provide data for this ANRC because it has no geographic extent.) The boundaries of ANRCs have been legally established.

The U.S. Census Bureau offers representatives of the 12 nonprofit ANRCs the opportunity to review and update the ANRC boundaries. The Census Bureau first provided data for ANRCs for the 1990 census.

#### Alaska Native Village Statistical Area (ANVSA)

Alaska Native village statistical areas (ANVSAs) are statistical entities that represent the densely settled portion of Alaska Native villages (ANVs), which constitute associations, bands, clans, communities, groups, tribes or villages, recognized pursuant to the Alaska Native Claims Settlement Act of 1972 (Public Law 92-203). ANVSAs are reviewed and delineated by officials of the ANV (or officials of the Alaska Native Regional Corporation (ANRC) in which the ANV is located if no ANV official chooses to participate in the delineation process) solely for data presentation purposes.

An ANVSA may not overlap the boundary of another ANVSA, an American Indian reservation, or a tribal designated statistical area. The U.S. Census Bureau first provided data for ANVSAs for the 1990 census.

#### **American Indian Reservation**

Federal American Indian reservations are areas that have been set aside by the United States for the use of tribes, the exterior boundaries of which are more particularly defined in the final tribal treaties, agreements, executive orders, federal statutes, secretarial orders, or judicial determinations. The U.S. Census Bureau recognizes federal reservations as territory over which American Indian tribes have primary governmental authority. These entities are known as colonies, communities, pueblos, rancherias, ranches, reservations, reserves, villages, Indian communities, and Indian villages. The Bureau of Indian Affairs maintains a list of federally recognized tribal governments. The Census Bureau contacts representatives of American Indian tribal governments to identify the boundaries for federal reservations.

Some state governments have established reservations for tribes recognized by the state. A governor-appointed state liaison provides the names and boundaries for state recognized American Indian reservations to the U.S. Census Bureau. The names of these reservations are followed by "(State)" in census data presentations.

Federal reservations may cross state boundaries, and federal and state reservations may cross county, county subdivision, and place boundaries. For reservations that cross state boundaries, only the portions of the reservations in a given state are shown in the data products for that state.

Lands that are administered jointly and/or are claimed by two tribes, whether federally or state recognized, are called "joint use areas," and are treated as if they are separate American Indian reservations for data presentation purposes. The entire reservations are shown in data products for the United States. The U.S. Census Bureau first provided data for American Indian reservations in the 1970 census.

#### **American Indian Off-Reservation Trust Land**

Trust lands are areas for which the United States holds title in trust for the benefit of a tribe (tribal trust land) or for an individual American Indian (individual trust land). Trust lands can be alienated or encumbered only by the owner with the approval of the Secretary of the Interior or his/her authorized representative. Trust lands may be located on or off of a reservation. The U.S. Census Bureau recognizes and tabulates data for reservations and off-reservation trust lands because American Indian tribes have primary governmental authority over these lands. Primary tribal governmental authority generally is not attached to tribal lands located off the reservation until the lands are placed in trust.

In the U.S. Census Bureau's data tabulations, off-reservation trust lands always are associated with a specific federally recognized reservation and/or tribal government. Such trust lands may be located in more than one state. Only the portions of off-reservation trust lands in a given state are shown in the data products for that state; all off-reservation trust lands associated with a reservation or tribe are shown in data products for the United States. The Census Bureau first provided trust land data for off-reservation tribal trust lands in the 1980 census; in 1990, the trust land data included both tribal and individual trust lands. The Census Bureau does not identify restricted fee land or land in fee simple status as a specific geographic category.

In decennial census data tabulations, the printed reports show separate tabulations for all off-reservation trust land areas, but do not provide separate tabulations for the tribal versus individual trust lands. Trust lands associated with tribes that do not have a reservation are presented by tribal name, interspersed alphabetically among the reservation names.

#### **American Indian Tribal Subdivision**

American Indian tribal subdivisions are administrative subdivisions of federally recognized American Indian reservations, off-reservation trust lands, or Oklahoma tribal statistical areas (OTSAs), known as areas, chapters, communities, or districts. These entities are internal units of self-government or administration that serve social, cultural, and/or economic purposes for the American Indians on the reservations, off-reservation trust lands, or OTSAs.

The U.S. Census Bureau obtains the boundary and name information for tribal subdivisions from tribal governments. The Census Bureau first provided data for American Indian tribal subdivisions in the 1980 census when it identified them as "American Indian subreservation areas." It did not provide data for these entities in conjunction with the 1990 census.

#### **Hawaiian Home Land (HHL)**

Hawaiian home lands (HHLs) are areas held in trust for native Hawaiians by the state of Hawaii, pursuant to the Hawaiian Homes Commission Act of 1920, as amended. The U.S. Census Bureau obtained the names and boundaries of HHLs from state officials. HHLs are a new geographic entity for Census 2000.

#### Oklahoma Tribal Statistical Area (OTSA)

Oklahoma tribal statistical areas (OTSAs) are statistical entities identified and delineated by the U.S. Census Bureau in consultation with federally recognized American Indian tribes in Oklahoma that do not currently have a reservation, but once had a reservation in that state. Boundaries of OTSAs will be those of the former reservations in Oklahoma, except where modified by agreements with neighboring tribes for data presentation purposes. OTSAs replace the "tribal jurisdiction statistical areas" of the 1990 census. The Census Bureau first provided data for the former Oklahoma reservations in conjunction with the 1980 census, when it defined a single allencompassing geographic entity called the "Historic Areas of Oklahoma (excluding urbanized areas)."

#### State Designated American Indian Statistical Area (SDAISA)

State designated American Indian statistical areas (SDAISAs) are statistical entities for state recognized American Indian tribes that do not have a state recognized land base (reservation). SDAISAs are identified and delineated for the U.S. Census Bureau by a state liaison identified by the governor's office in each state. SDAISAs generally encompass a compact and contiguous area that contains a concentration of people who identify with a state recognized American Indian tribe and in which there is structured or organized tribal activity. A SDAISA may not be located in more than one state unless the tribe is recognized by both states, and it may not include area within an American Indian reservation, off-reservation trust land, Alaska Native village statistical area, tribal designated statistical area (TDSA), or Oklahoma tribal statistical area.

The U.S. Census Bureau established SDAISAs as a new geographic statistical entity for Census 2000, to differentiate between state recognized tribes without a land base and federally recognized tribes without a land base. For the 1990 census, all such tribal entities had been identified as TDSAs.

#### Tribal Designated Statistical Area (TDSA)

Tribal designated statistical areas (TDSAs) are statistical entities identified and delineated for the U.S. Census Bureau by federally recognized American Indian tribes that do not currently have a federally recognized land base (reservation or off-reservation trust land). A TDSA generally encompasses a compact and contiguous area that contains a concentration of people who identify with a federally recognized American Indian tribe and in which there is structured or organized tribal activity. A TDSA may be located in more than one state, and it may not include area within an American Indian reservation, off-reservation trust land, Alaska Native village statistical area, state designated American Indian statistical area (SDAISA), or Oklahoma tribal statistical area.

The U.S. Census Bureau first reported data for TDSAs in conjunction with the 1990 census, when both federally and state recognized tribes could identify and delineate TDSAs. TDSAs now apply only to federally recognized tribes. State recognized tribes without a land base, including those that were TDSAs in 1990, are identified as SDAISAs, a new geographic entity for Census 2000.

#### AREA MEASUREMENT

Area measurement data provide the size, in square units (metric and nonmetric) of geographic entities for which the U.S. Census Bureau tabulates and disseminates data. Area is calculated from the specific boundary recorded for each entity in the Census Bureau's geographic database (see TIGER® database).

The U.S. Census Bureau provides area measurement data for both land area and total water area. The water area figures include inland, coastal, Great Lakes, and territorial water. (For the 1990 census, the Census Bureau provided area measurements for land and total water; water area for each of the four water classifications was available in the Geographic Identification Code Scheme product only.) "Inland water" consists of any lake, reservoir, pond, or similar body of water that is recorded in the Census Bureau's geographic database. It also includes any river, creek, canal, stream, or similar feature that is recorded in that database as a two-dimensional feature (rather than as a single line). The portions of the oceans and related large embayments (such as the Chesapeake Bay and Puget Sound), the Gulf of Mexico, and the Caribbean Sea that belong to the United States and its territories are classified as "coastal" and "territorial" waters; the Great Lakes are treated as a separate water entity. Rivers and bays that empty into these bodies of water are treated as "inland water" from the point beyond which they are narrower than one nautical mile across. Identification of land and inland, coastal, territorial, and Great Lakes waters is for data presentation purposes only, and does not necessarily reflect their legal definitions.

Land and water area measurements may disagree with the information displayed on U.S. Census Bureau maps and in the TIGER® database because, for area measurement purposes, features identified as "intermittent water" and "glacier" are reported as land area. The water area measurement

reported for some geographic entities includes water that is not included in any lower-level geographic entity. Therefore, because water is contained only in a higher-level geographic entity, summing the water measurements for all the component lower-level geographic entities will not yield the water area of that higher-level entity. This occurs, for example, where water is associated with a county but is not within the legal boundary of any minor civil division.

The accuracy of any area measurement data is limited by the accuracy inherent in (1) the location and shape of the various boundary information in the TIGER® database, (2) the location and shapes of the shorelines of water bodies in that database, and (3) rounding affecting the last digit in all operations that compute and/or sum the area measurements.

#### **BOUNDARY CHANGES**

Many of the legal and statistical entities for which the U.S. Census Bureau tabulates decennial census data have had boundary changes between the 1990 census and Census 2000; that is, between January 2, 1990 and January 1, 2000. Boundary changes to legal entities result from:

- 1. Annexations to or detachments from legally established governmental units.
- 2. Mergers or consolidations of two or more governmental units.
- 3. Establishment of new governmental units.
- 4. Disincorporations or disorganizations of existing governmental units.
- 5. Changes in treaties or executive orders, and governmental action placing additional lands in trust.
- 6. Decisions by federal, state, and local courts.
- 7. Redistricting for congressional districts or county subdivisions that represent single-member districts for election to a county governing board.

Statistical entity boundaries generally are reviewed by local, state, or tribal governments and can have changes to adjust boundaries to visible features, to better define the geographic area each encompasses, or to account for shifts and changes in the population distribution within an area.

The historical counts shown for counties, county subdivisions, places, and American Indian, Alaska Native, and Native Hawaiian areas are not updated for such changes, and thus reflect the population and housing units in each entity as delineated at the time of each decennial census. Boundary changes are not reported comprehensively for some entities, such as census designated places.

#### **CENSUS DIVISION**

Census divisions are groupings of states and the District of Columbia that are subdivisions of the four census regions. There are nine census divisions, which the U.S. Census Bureau established in 1910 for the presentation of census data.

Puerto Rico and the Island Areas are not part of any census region or census division. For a list of all census regions, census divisions, and their constituent states, see Figure A-3.

#### **CENSUS REGION**

Census regions are groupings of states and the District of Columbia that subdivide the United States for the presentation of census data. There are four census regions—Northeast, Midwest, South, and West. Each of the four census regions is divided into two or more census divisions. Before 1984, the Midwest region was named the North Central region. From 1910, when census regions were established, through the 1940s, there were three census regions—North, South, and West. Each census region is identified by a single-digit census code.

Puerto Rico and the Island Areas are not part of any census region or census division. For a list of all census regions, census divisions, and their constituent states, see Figure A-3.

#### **CONGRESSIONAL DISTRICT (CD)**

Congressional districts (CDs) are the 435 areas from which people are elected to the U.S. House of Representatives. After the apportionment of congressional seats among the states, based on census population counts, each state is responsible for establishing CDs for the purpose of electing representatives. Each CD is to be as equal in population to all other CDs in the state as practicable.

The CDs in effect at the time of Census 2000 are those of the 106th Congress, whose session began in January 1999. The CDs of the 103rd Congress (January 1993 to 1995) were the first to reflect redistricting based on the 1990 census. These CD boundaries and numbers remained in effect until after Census 2000, except where a state initiative or a court-ordered redistricting had required a change. Six states redistricted for the 104th Congress (Georgia, Louisiana, Maine, Minnesota, South Carolina, and Virginia), five states redistricted for the 105th Congress (Florida, Georgia, Kentucky, Louisiana, and Texas), and three states (New York, North Carolina, and Virginia) redistricted for the 106th Congress. The 108th Congress will be the first to reflect reapportionment and redistricting based on Census 2000 data.

American Samoa, Guam, the Virgin Islands of the United States, and the District of Columbia are represented in the House of Representatives by a delegate, and Puerto Rico by a resident commissioner, all of whom may not vote on the floor of the House of Representatives, but may vote on legislation as it is considered by committees to which they have been named. The Northern Mariana Islands does not have representation in Congress.

#### **COUNTY (OR STATISTICALLY EQUIVALENT ENTITY)**

The primary legal divisions of most states are termed "counties." In Louisiana, these divisions are known as parishes. In Alaska, which has no counties, the statistically equivalent entities are census areas, city and boroughs (as in Juneau City and Borough), a municipality (Anchorage), and organized boroughs. Census areas are delineated cooperatively for data presentation purposes by the state of Alaska and the U.S. Census Bureau. In four states (Maryland, Missouri, Nevada, and Virginia), there are one or more incorporated places that are independent of any county organization and thus constitute primary divisions of their states; these incorporated places are known as "independent cities" and are treated as equivalent to counties for data presentation purposes. (In some data presentations, they may be treated as county subdivisions and places.) The District of Columbia has no primary divisions, and the entire area is considered equivalent to a county for data presentation purposes. In American Samoa, the primary divisions are districts and islands; in the Northern Mariana Islands, municipalities; in the Virgin Islands of the United States, the principal islands of St. Croix, St. John, and St. Thomas. Guam has no primary divisions, and the entire area is considered equivalent to a county for data presentation purposes.

#### **COUNTY SUBDIVISION**

County subdivisions are the primary divisions of counties and statistically equivalent entities for data presentation purposes. They include census county divisions, census subareas, minor civil divisions (MCDs), unorganized territories, and incorporated places that are independent of any MCD.

#### **Census County Division (CCD)**

Census county divisions (CCDs) are county subdivisions that were delineated by the U.S. Census Bureau, in cooperation with state and local government officials for data presentation purposes. CCDs have been established in 21 states where there are no legally established minor civil divisions (MCDs), where the MCDs do not have governmental or administrative purposes, where the boundaries of the MCDs are ambiguous or change frequently, and/or where the MCDs generally are not known to the public. CCDs have no legal functions and are not governmental units.

The boundaries of CCDs usually are delineated to follow visible features, and coincide with census tracts where applicable. (In a few instances, two CCDs may constitute a single census tract.) The name of each CCD is based on a place, county, or well-known local name that identifies its location. CCDs have been established in the following 21 states: Alabama, Arizona, California, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Kentucky, Montana, Nevada, New Mexico, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Washington, and Wyoming.

#### Census Subarea

Census subareas are statistical subdivisions of boroughs, census areas, city and boroughs, and the municipality (entities that are statistically equivalent to counties) in Alaska. Census subareas are delineated cooperatively by the state of Alaska and the U.S. Census Bureau. They were first used for data presentation purposes in conjunction with the 1980 census.

#### **Minor Civil Division (MCD)**

Minor civil divisions (MCDs) are the primary governmental or administrative divisions of a county in many states (parish in Louisiana). MCDs represent many different kinds of legal entities with a wide variety of governmental and/or administrative functions. MCDs are variously designated as American Indian reservations, assessment districts, boroughs, charter townships, election districts, election precincts, gores, grants, locations, magisterial districts, parish governing authority districts, plantations, precincts, purchases, road districts, supervisor's districts, towns, and townships. In some states, all or some incorporated places are not located in any MCD (independent places) and thus serve as MCDs in their own right. In other states, incorporated places are part of the MCDs in which they are located (dependent places), or the pattern is mixed—some incorporated places are independent of MCDs and others are included within one or more MCDs. Independent cities, which are statistically equivalent to a county, also are treated as a separate MCD equivalent in states containing MCDs. In Maine and New York, there are American Indian reservations and off-reservation trust lands that serve as MCD equivalents; a separate MCD is created in each case where the American Indian area crosses a county boundary.

The U.S. Census Bureau recognizes MCDs in the following 28 states: Arkansas, Connecticut, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, Virginia, West Virginia, and Wisconsin. The District of Columbia has no primary divisions, and the city of Washington is considered equivalent to an MCD for data presentation purposes. Arlington County, Virginia also has no MCDs and the entire county is designated as an MCD with the name Arlington.

In the Island Areas, the U.S. Census Bureau recognizes the following entities as MCDs:

- American Samoa: Counties (within the three districts; the two islands have no legal subdivisions).
- Northern Mariana Islands: Municipal districts.
- Guam: Election districts.
- Virgin Islands of the United States: Census subdistricts.

The MCDs in 12 states (Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin) also serve as general-purpose local governments that generally can perform the same governmental functions as incorporated places. The U.S. Census Bureau presents data for these MCDs in all data products in which it provides data for places.

In eight MCD states (Illinois, Indiana, Kansas, Missouri, Nebraska, North Dakota, Ohio, and South Dakota), the MCD townships serve as general-purpose local governments but do not have the ability to perform all the governmental functions of incorporated places. This category also includes the counties in American Samoa. Missouri is exceptional in that it has a minority of townships that serve as general-purpose governments (the majority of townships in Missouri fall into the category described below).

In the remaining eight MCD states (Arkansas, Iowa, Louisiana, Maryland, Mississippi, North Carolina, Virginia, and West Virginia); the counties containing precincts in Illinois and Nebraska; the townships in Williamson County, Illinois; and the majority of townships in Missouri, the MCDs are geographic subdivisions of the counties and are not governmental units. The MCDs in Puerto Rico and the Island Areas (except American Samoa) also fall into this classification.

#### **Unorganized Territory**

Unorganized territories occur in 10 minor civil division (MCD) states (Arkansas, Indiana, Iowa, Louisiana, Maine, Minnesota, North Carolina, North Dakota, Ohio, and South Dakota) where portions of counties are not included in any legally established MCD or independent incorporated place. The U.S. Census Bureau recognizes such area as one or more separate county subdivisions for purposes of data presentation. It assigns each unorganized territory a descriptive name, followed by the designation "unorganized territory" or "UT." Unorganized territories were first used for data presentation purposes in conjunction with the 1960 census.

#### **HISTORICAL COUNTS**

Historical counts for total population and total housing units are shown in the Census 2000 PHC-3, *Population and Housing Unit Counts*, report series. As in past censuses, the general rule for presenting historical data for states, counties, county subdivisions, and places is to show historical counts only for single, continually existing entities. Stated another way, if an entity existed for both the current and preceding censuses, the tables show counts for the preceding censuses. Included in this category are entities of the same type (county, county subdivision, place) even if they had changed their names. Also included are entities that merged, but only if the new entity retained the name of one of the merged entities. The historical counts shown are for each entity as it was bounded at each census.

In cases where an entity was formed since a preceding census, such as a newly incorporated place or a newly organized township, an "(X)" is shown for the earlier censuses. This is the case even if a newly incorporated place was shown as an unincorporated place in the preceding census. The "(X)" also is shown for those parts of a place that have extended into an additional county or county subdivision through annexation or other revision of boundaries since the preceding census.

In a few cases, changes in the boundaries of county subdivisions caused a place to be split into two or more parts, or to be split differently than in the preceding census. If historical counts for the parts of the place as currently split did not appear in a preceding census, "(NA)" is shown for the place in each county subdivision; however, the historical population and housing unit counts of the place appear in tables that show the entire place. Changes in boundaries and creation of new entities since January 1, 1990, are shown for counties, county subdivisions, and places in the "User Notes" section of the Census 2000 PHC-3 state reports.

In some cases, population and housing unit counts for individual areas were revised (indicated by the prefix "r") since publication of the 1990 Census CPH-2, *Population and Housing Unit Counts*, report series. In a number of tables of Census 2000 PHC-3 reports, 1990 counts are shown for aggregations of individual areas, such as the number, population, and housing unit counts of places in size groups, or urban and rural distributions. Revisions of population and housing unit counts for individual areas were not applied to the various aggregations. Therefore, it may not be possible to determine the individual areas in a given aggregation using the historical counts; conversely, the sum of the counts shown for individual areas may not agree with the aggregation.

#### **ISLAND AREAS OF THE UNITED STATES**

The Island Areas of the United States are American Samoa, Guam, the Commonwealth of the Northern Mariana Islands (Northern Mariana Islands), and the Virgin Islands of the United States. The U.S. Census Bureau treats the Island Areas as entities that are statistically equivalent to states for data presentation purposes. Geographic definitions specific to the Island Areas are shown in the appropriate publications and documentation that accompany the data products for the Island Areas.

Sometimes the Island Areas are referred to as "Island Territories" or "Insular Areas." For the 1990 and previous censuses, the U.S. Census Bureau referred to the entities as "Outlying Areas." The term "U.S. Minor Outlying Islands" refers to certain small islands under U.S. jurisdiction in the Caribbean and Pacific: Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Palmyra Atoll, and Wake Island.

#### **METROPOLITAN AREA (MA)**

The general concept of a metropolitan area (MA) is one of a large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that nucleus. Some MAs are defined around two or more nuclei.

The MAs and the central cities within an MA are designated and defined by the federal Office of Management and Budget, following a set of official standards that are published in a Federal Register Notice. These standards were developed by the interagency Federal Executive Committee on Metropolitan Areas, with the aim of producing definitions that are as consistent as possible for all MAs nationwide.

Each MA must contain either a place with a minimum population of 50,000 or a U.S. Census Bureau-defined urbanized area and a total MA population of at least 100,000 (75,000 in New England). An MA contains one or more central counties. An MA also may include one or more outlying counties that have close economic and social relationships with the central county. An outlying county must have a specified level of commuting to the central counties and also must meet certain standards regarding metropolitan character, such as population density, urban population, and population growth. In New England, MAs consist of groupings of cities and county subdivisions (mostly towns) rather than whole counties.

The territory, population, and housing units in MAs are referred to as "metropolitan." The metropolitan category is subdivided into "inside central city" and "outside central city." The territory, population, and housing units located outside territory designated "metropolitan" are referred to as "nonmetropolitan." The metropolitan and nonmetropolitan classification cuts across the other hierarchies; for example, generally there are both urban and rural territory within both metropolitan and nonmetropolitan areas.

To meet the needs of various users, the standards provide for a flexible structure of metropolitan definitions that classify each MA either as a metropolitan statistical area (MSA) or as a consolidated metropolitan statistical area divided into primary metropolitan statistical areas. In New England, there also is an alternative county-based definition of MSAs known as the New England County Metropolitan Areas. (See definitions below.) Documentation of the MA standards and how they are applied is available from the Population Distribution Branch, Population Division, U.S. Census Bureau, Washington, DC 20233-8800.

#### **Central City**

In each metropolitan statistical area and consolidated metropolitan statistical area, the largest place and, in some cases, one or more additional places are designated as "central cities" under the official standards. A few primary metropolitan statistical areas do not have central cities. The largest central city and, in some cases, up to two additional central cities, are included in the title of the metropolitan area (MA); there also are central cities that are not included in an MA title. An MA central city does not include any part of that place that extends outside the MA boundary.

#### Consolidated and Primary Metropolitan Statistical Area (CMSA and PMSA)

If an area that qualifies as a metropolitan area (MA) has 1 million people or more, two or more primary metropolitan statistical areas (PMSAs) may be defined within it. Each PMSA consists of a large urbanized county or cluster of counties (cities and towns in New England) that demonstrate very strong internal economic and social links, in addition to close ties to other portions of the larger area. When PMSAs are established, the larger MA of which they are component parts is designated a consolidated metropolitan statistical area (CMSA). CMSAs and PMSAs are established only where local governments favor such designations for a large MA.

#### Metropolitan Statistical Area (MSA)

Metropolitan statistical areas (MSAs) are metropolitan areas (MAs) that are not closely associated with other MAs. These areas typically are surrounded by nonmetropolitan counties (county subdivisions in New England).

#### **Metropolitan Area Title**

The title of a metropolitan statistical area contains the name of its largest central city and up to two additional central city names, provided that the additional places meet specified levels of population, employment, and commuting. Generally, a place with a population of 250,000 or more is in the title, regardless of other criteria.

The title of a primary metropolitan statistical area (PMSA) may contain up to three place names, as determined above, or up to three county names, sequenced in order of population size, from largest to smallest. A consolidated metropolitan statistical area (CMSA) title also may include up to three names, the first of which generally is the most populous central city in the area. The second name may be the first city or county name in the most populous remaining PMSA; the third name may be the first city or county name in the next most populous PMSA. A regional designation may be substituted for the second and/or third names in a CMSA title if local opinion supports such a designation and the federal Office of Management and Budget deems it to be unambiguous and suitable.

The titles for all metropolitan areas (MAs) also contain the U.S. Postal Service's abbreviation for the name of each state in which the MA is located.

#### **New England County Metropolitan Area (NECMA)**

New England county metropolitan areas (NECMAs) are defined as a county-based alternative to the city- and town-based New England metropolitan statistical areas (MSAs) and consolidated metropolitan statistical areas (CMSAs). The NECMA defined for an MSA or a CMSA includes:

- The county containing the first-named city in that MSA/CMSA title (this county may include the first-named cities of other MSAs/CMSAs as well), and
- Each additional county having at least half its population in the MSAs/CMSAs whose first-named cities are in the previously identified county. NECMAs are not identified for individual primary metropolitan statistical areas.

Central cities of a NECMA are those places in the NECMA that qualify as central cities of an MSA or a CMSA. NECMA titles derive from the names of these central cities.

#### **PLACE**

Places, for the reporting of decennial census data, include census designated places, consolidated cities, and incorporated places.

#### **Census Designated Place (CDP)**

Census designated places (CDPs) are delineated for each decennial census as the statistical counterparts of incorporated places. CDPs are delineated to provide census data for concentrations of population, housing, and commercial structures that are identifiable by name but are not within an incorporated place. CDP boundaries usually are defined in cooperation with state, local, and tribal officials. These boundaries, which usually coincide with visible features or the boundary of an adjacent incorporated place or other legal entity boundary, have no legal status, nor do these places have officials elected to serve traditional municipal functions. CDP boundaries may change from one decennial census to the next with changes in the settlement pattern; a CDP with the same name as in an earlier census does not necessarily have the same boundary.

For Census 2000, for the first time, CDPs did not need to meet a minimum population threshold to qualify for tabulation of census data. For the 1990 census and earlier censuses, the U.S. Census Bureau required CDPs to qualify on the basis of various minimum population size criteria.

Beginning with the 1950 census, the U.S. Census Bureau, in cooperation with state and local governments (and American Indian tribal officials starting with the 1990 census), identified and delineated boundaries and names for CDPs. In the data products issued in conjunction with Census

2000, the name of each such place is followed by "CDP," as was the case for the 1990 and 1980 censuses. In the data products issued in conjunction with the 1950, 1960, and 1970 censuses, these places were identified by "(U)," meaning "unincorporated place."

Hawaii is the only state that has no incorporated places recognized by the U.S. Census Bureau. All places shown in the data products for Hawaii are CDPs. By agreement with the state of Hawaii, the Census Bureau does not show data separately for the city of Honolulu, which is coextensive with Honolulu County.

All places in the Northern Mariana Islands and Guam are CDPs. The Virgin Islands of the United States has both CDPs and incorporated places. There are no CDPs in American Samoa; the U.S. Census Bureau treats the traditional villages as statistically equivalent to incorporated places.

#### **Consolidated City**

A consolidated government is a unit of local government for which the functions of an incorporated place and its county or minor civil division (MCD) have merged. The legal aspects of this action may result in both the primary incorporated place and the county or MCD continuing to exist as legal entities, even though the county or MCD performs few or no governmental functions and has few or no elected officials. In a few instances, the consolidated government contains other incorporated places within its boundaries that continue to function as separate governments. When the county or MCD performs few or no governmental functions, and the consolidated government contains one or more other incorporated places, the primary incorporated place is referred to as a consolidated city.

The presentation of data for consolidated cities varies depending on the geographic presentation. In some hierarchical presentations, consolidated cities are not shown. These presentations include the places within the consolidated city and the "consolidated city (balance)." Although hierarchical presentations do not show the consolidated city, the data for it are the same as the county or county subdivision with which it is coextensive. Other hierarchical presentations do show the consolidated city, county or county subdivision, and (balance) as separate entities.

For inventory geographic presentations, the consolidated city appears alphabetically sequenced within the listing of places; in 1990, consolidated places appeared at the end of the listing. The data for the consolidated city include the data for all places that are part of and within the consolidated city. The "consolidated city (balance)" entry shows the data for the portion of the consolidated government minus the separately incorporated places within the consolidated city, and is shown in alphabetical sequence with other places that comprise the consolidated city. For data presentation purposes these "balance" entities are treated as statistically equivalent to a place; they have no legal basis or functions.

In summary presentations by size of place, the consolidated city is not included. The places within consolidated cities are categorized by their size, as is the "consolidated city (balance)." A few incorporated places are partially inside and partially outside a consolidated city. Data tabulations by place will include all territory within the place, while the tabulation for the place within a consolidated city is only for part of the place.

#### **Incorporated Place**

Incorporated places recognized in decennial census data products are those reported to the U.S. Census Bureau as legally in existence on January 1, 2000, under the laws of their respective states, as cities, boroughs, city and boroughs, municipalities, towns, and villages, with the following exceptions: the towns in the New England states, New York, and Wisconsin, and the boroughs in New York are recognized as minor civil divisions for decennial census purposes; the boroughs, city and boroughs (as in Juneau City and Borough), and municipality (Anchorage) in Alaska are county equivalents for decennial census statistical presentation purposes. In four states (Maryland, Missouri, Nevada, and Virginia), there are one or more incorporated places known as "independent cities" that are primary divisions of a state and legally not part of any county. For data presentation purposes, the Census Bureau may treat an independent city as a county equivalent, county subdivision, and place.

The U.S. Census Bureau treats the villages in American Samoa as incorporated places because they have their own officials, who have specific legal powers as authorized in the American Samoa Code. The village boundaries are traditional rather than being specific, legally defined locations. There are no incorporated places in Guam and the Northern Mariana Islands. The Census Bureau treats the three towns in the Virgin Islands of the United States as incorporated places.

There are a few incorporated places that do not have a legal description. An incorporated place is established to provide governmental functions for a concentration of people as opposed to a minor civil division, which generally is created to provide services or administer an area without regard, necessarily, to population.

#### POPULATION OR HOUSING UNIT DENSITY

Population and housing unit density are computed by dividing the total population or number of housing units within a geographic entity (for example, United States, state, county, place) by the land area of that entity measured in square miles. Density is expressed as "average population per square mile" or "average housing units per square mile."

#### **PUERTO RICO**

The U.S. Census Bureau treats the Commonwealth of Puerto Rico as the statistical equivalent of a state for data presentation purposes.

#### Municipio

The primary legal divisions of Puerto Rico are termed "municipios." For data presentation purposes, the U.S. Census Bureau treats a municipio as the equivalent of a county in the United States.

#### Barrio, Barrio-Pueblo, and Subbarrio

The U.S. Census Bureau recognizes barrios and barrios-pueblo as the primary legal divisions of municipios. These entities are similar to the minor civil divisions (MCDs) used for reporting decennial census data in 28 states of the United States. Subbarrios in 23 municipios are the primary legal subdivisions of the barrios-pueblo and some barrios. The Census Bureau presents the same types of Census 2000 data for these "sub-MCDs" as it does for the barrios and barrios-pueblo. (There is no geographic entity in the United States equivalent to the subbarrio.)

#### Zona Urbana and Comunidad

There are no incorporated places in Puerto Rico; instead, the U.S. Census Bureau provides decennial census data for two types of census designated places (CDPs): (1) zonas urbanas, representing the governmental center of each municipio, and (2) comunidades, representing other settlements. For Census 2000, there are no minimum population size requirements for CDPs. (For the 1990 census, the Census Bureau had required comunidades to have at least 1,000 people.)

Some types of geographic entities do not apply in Puerto Rico. For instance, Puerto Rico is not in any census region or census division. (See also CONGRESSIONAL DISTRICT (CD).)

#### STATE (OR STATISTICALLY EQUIVALENT ENTITY)

States are the primary governmental divisions of the United States. The District of Columbia is treated as a statistical equivalent of a state for data presentation purposes. For Census 2000, the U.S. Census Bureau also treats a number of entities that are not legal divisions of the United States as statistically equivalent to a state: American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, Puerto Rico, and the Virgin Islands of the United States.

#### TIGER® DATABASE

TIGER® is an acronym for the Topologically Integrated Geographic Encoding and Referencing system or database. It is a digital (computer-readable) geographic database that automates the mapping and related geographic activities required to support the U.S. Census Bureau's census and

survey programs. The Census Bureau developed the TIGER® System to automate the geographic support processes needed to meet the major geographic needs of the 1990 census: producing the cartographic products to support data collection and map presentations, providing the geographic structure for tabulation and dissemination of the collected statistical data, assigning residential and employer addresses to the correct geographic location and relating those locations to the geographic entities used for data tabulation, and so forth. The content of the TIGER® database is undergoing continuous updates, and is made available to the public through a variety of TIGER/Line® files that may be obtained free of charge from the Internet or packaged on CD-ROM or DVD from Customer Services, U.S. Census Bureau, Washington, DC 20233-1900; Internet http://www.census.gov/geo/www/tiger.

#### **UNITED STATES**

The United States consists of the 50 states and the District of Columbia.

#### **URBAN AND RURAL**

The U.S. Census Bureau classifies as urban all territory, population, and housing units located within urbanized areas (UAs) and urban clusters (UCs). It delineates UA and UC boundaries to encompass densely settled territory, which generally consists of:

- A cluster of one or more block groups or census blocks each of which has a population density of at least 1,000 people per square mile at the time.
- Surrounding block groups and census blocks each of which has a population density of at least 500 people per square mile at the time.
- Less densely settled blocks that form enclaves or indentations, or are used to connect discontiguous areas with qualifying densities.

Rural consists of all territory, population, and housing units located outside of UAs and UCs.

Geographic entities such as metropolitan areas, counties, minor civil divisions, and places often contain both urban and rural territory, population, and housing units.

The urban and rural classification applies to the 50 states, the District of Columbia, Puerto Rico, American Samoa, Guam, the Northern Mariana Islands, and the Virgin Islands of the United States.

#### **Urbanized Area (UA)**

An urbanized area (UA) consists of densely settled territory that contains 50,000 or more people, except in Guam (see below). The U.S. Census Bureau delineates UAs to provide a better separation of urban and rural territory, population, and housing in the vicinity of large places.

For Census 2000, the UA criteria were extensively revised and the delineations were performed using a zero-based approach. Because of more stringent density requirements, some territory that was classified as urbanized for the 1990 census has been reclassified as rural. (Area that was part of a 1990 UA has not been automatically grandfathered into the 2000 UA.) In addition, some areas that were identified as UAs for the 1990 census have been reclassified as urban clusters.

#### **Urban Cluster (UC)**

An urban cluster (UC) consists of densely settled territory that has at least 2,500 people but fewer than 50,000 people, except in Guam. By agreement with the Government of Guam, the U.S. Census Bureau recognizes Hagt!na as a UC rather than an urbanized area.

The U.S. Census Bureau introduced the UC for Census 2000 to provide a more consistent and accurate measure of the population concentration in and around places. UCs are defined using the same criteria that are used to define UAs. UCs replace the provision in the 1990 and previous censuses that defined as urban only those places with 2,500 or more people located outside of urbanized areas.

#### **Urban Area Title**

The title of each urbanized area (UA) and urban cluster (UC) may contain up to three incorporated place names, and will include the two-letter U.S. Postal Service abbreviation for each state into which the UA extends. However, if the UA or UC does not contain an incorporated place, the urban area title will include the single name of a census designated place, minor civil division, or populated place recognized by the U.S. Geological Survey's Geographic Names Information System.

In printed reports, the differentiation between UAs and UCs is included in the name.

#### **Urban Area Central Place**

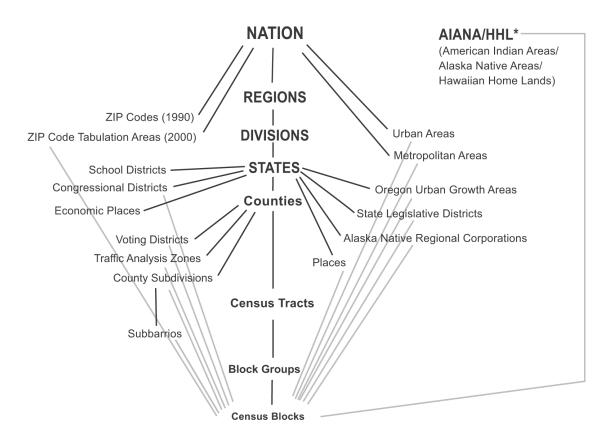
A central place functions as the dominant center of an urban area. The U.S. Census Bureau identifies one or more central places for each urbanized area (UA) or urban cluster (UC) that contains a place. Any incorporated place or census designated place (CDP) that is in the title of the urban area is a central place of that UA or UC. In addition, any other incorporated places and CDPs that have an urban population of 50,000, or an urban population of at least 2,500 people and at least 2/3 the population of the largest place within the urban area, also are central places.

#### **Extended Place**

As a result of the urbanized area (UA) and urban cluster (UC) delineations, an incorporated place or census designated place may be partially within and partially outside of a UA or UC. Any place that is split by a UA or UC is referred to as an extended place.

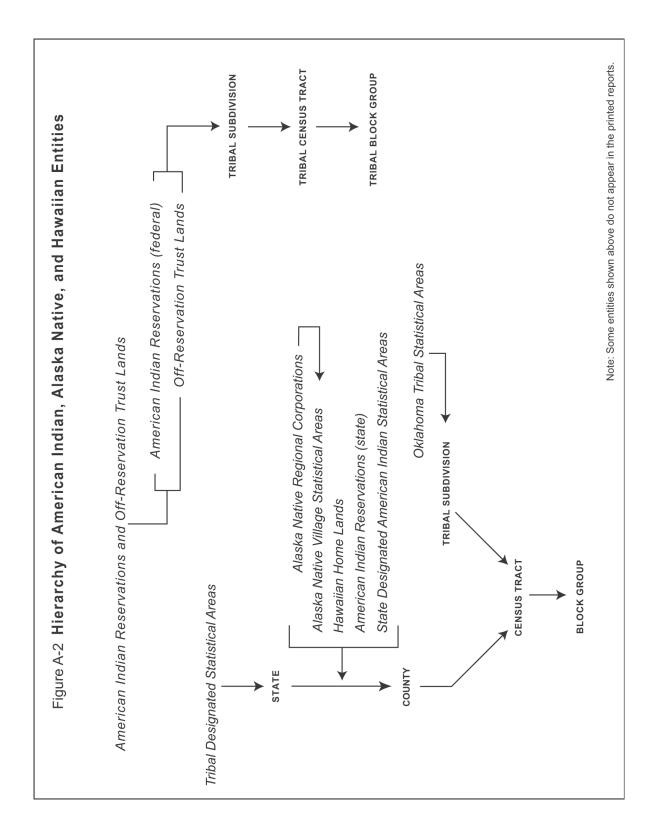
Documentation of the UA, UC, and extended place criteria is available from the Geographic Areas Branch, Geography Division, U.S. Census Bureau, Washington, DC 20233-7400.

Figure A-1. Standard Hierarchy of Census Geographic Entities



Note: Some entities shown above do not appear in the printed reports.

<sup>\*</sup>Refer to Figure A-2: Hierarchy of American Indian, Alaska Native, and Hawaiian Entities.



#### Figure A-3. Census Regions, Census Divisions, and Their Constituent States

#### **Northeast Region**

New England Division:

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut

Middle Atlantic Division:

New York, New Jersey, Pennsylvania

#### **Midwest Region**

East North Central Division:

Ohio, Indiana, Illinois, Michigan, Wisconsin

West North Central Division:

Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas

#### **South Region**

South Atlantic Division:

Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida

East South Central Division:

Kentucky, Tennessee, Alabama, Mississippi

West South Central Division:

Arkansas, Louisiana, Oklahoma, Texas

#### **West Region**

Mountain Division:

Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada

Pacific Division:

Washington, Oregon, California, Alaska, Hawaii

# Appendix B. Definitions of Subject Characteristics

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#### **POPULATION**

In this report, counts of all people living in housing units and group quarters are presented for various geographic entities. Separate population characteristics are not shown.

#### **HOUSING**

#### **Living Quarters**

Living quarters are either housing units or group quarters. Living quarters are usually found in structures intended for residential use, but also may be found in structures intended for nonresidential use as well as in places such as tents, vans, emergency and transitional shelters, dormitories, and barracks.

**Housing unit.** A housing unit may be a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or, if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building and that have direct access from outside the building or through a common hall. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible. If that information cannot be obtained, the criteria are applied to the previous occupants.

Both occupied and vacant housing units are included in the housing unit inventory. Boats, recreational vehicles (RVs), vans, tents, and the like are housing units only if they are occupied as someone's usual place of residence. Vacant mobile homes are included provided they are intended for occupancy on the site where they stand. Vacant mobile homes on dealers' lots, at the factory, or in storage yards are excluded from the housing inventory. Also excluded from the housing inventory are quarters being used entirely for nonresidential purposes, such as a store or an office, or quarters used for the storage of business supplies or inventory, machinery, or agricultural products.

**Occupied housing unit.** A housing unit is occupied if it is the usual place of residence of the person or group of people living in it at the time of enumeration or if the occupants are only temporarily absent; that is, away on vacation or business. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living quarters.

Occupied rooms or suites of rooms in hotels, motels, and similar places are classified as housing units only when occupied by permanent residents; that is, people who consider the hotel as their usual place of residence or who have no usual place of residence elsewhere.

If any of the occupants in rooming or boarding houses, congregate housing, or continuing care facilities live separately from others in the building and have direct access, their quarters are classified as separate housing units.

The living quarters occupied by staff personnel within any group quarters are separate housing units if they satisfy the housing unit criteria of separateness and direct access; otherwise, they are considered group quarters.

**Vacant housing unit.** A housing unit is vacant if no one is living in it at the time of enumeration, unless its occupants are only temporarily absent. Units temporarily occupied at the time of enumeration entirely by people who have a usual residence elsewhere are classified as vacant.

New units not yet occupied are classified as vacant housing units if construction has reached a point where all exterior windows and doors are installed and final usable floors are in place.

Vacant units are excluded from the housing inventory if they are open to the elements; that is, the roof, walls, windows, and/or doors no longer protect the interior from the elements. Also excluded are vacant units with a sign that they are condemned or they are to be demolished.

**Comparability.** The first Census of Housing in 1940 established the "dwelling unit" concept. Although the term became "housing unit" and the definition was modified slightly in succeeding censuses, the housing unit definition remained essentially comparable between 1940 and 1990. Since 1990, two changes were made to the housing unit definition.

The first change eliminated the concept of "eating separately." The elimination of the eating criterion is more in keeping with the United Nations' definition of a housing unit that stresses the entire concept of separateness rather than the specific "eating" element. Although we previously included the "eating separately" criterion in the definition of a housing unit, data were not collected that allowed us to distinguish whether the occupants ate separately from any other people in the building. (Questions that asked households about their eating arrangements have not been included in the census after 1970.) Therefore, the current definition better reflects the information that is used in the determination of a housing unit.

The second change for Census 2000 eliminated the "number of nonrelatives" criterion; that is, "9 or more people unrelated to the householder" which caused a conversion of housing units to group quarters. This change was prompted by the following considerations: (1) there were relatively few such conversions made as a result of this rule in 1990; (2) household relationship and housing data were lost by converting these units to group quarters; and (3) there was no empirical support for establishing a particular number of nonrelatives as a threshold for these conversions.

In 1960, 1970, and 1980, vacant rooms in hotels, motels, and other similar places where 75 percent or more of the accommodations were occupied by permanent residents were counted as part of the housing inventory. We intended to classify these vacant units as housing units in the 1990 census. However, an evaluation of the data collection procedures prior to the 1990 census indicated that the concept of permanency was a difficult and confusing procedure for enumerators to apply correctly. Consequently, in the 1990 census, vacant rooms in hotels, motels, and similar places were not counted as housing units. In Census 2000, we continued the procedure adopted in 1990.

#### **DERIVED MEASURES**

Census data products include various derived measures, such as medians, means, and percentages, as well as certain rates and ratios. Derived measures that round to less than 0.1 are not shown but indicated as zero. Zero is indicated by showing a dash (-).

#### Average (Mean)

This measure represents an arithmetic average of a set of values. It is derived by dividing the sum (or aggregate) of a group of numerical items by the total number of items in that group. For example, average population or housing units per square mile is computed by dividing the total population or number of housing units within a geographic entity (for example, United States, state, county, place) by the land area of that entity measured in square miles.

#### **Percentage**

This measure is calculated by taking the number of items in a group possessing a characteristic of interest and dividing by the total number of items in that group, and then multiplying by 100.

# Appendix C. Data Collection and Processing Procedures

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#### **ENUMERATION AND RESIDENCE RULES**

In accordance with census practice dating back to the first U.S. census in 1790, each person was to be enumerated as an inhabitant of his or her "usual residence" in Census 2000. Usual residence is the place where the person lives and sleeps most of the time. This place is not necessarily the same as the person's legal residence or voting residence. In the vast majority of cases, however, the use of these different bases of classification would produce substantially the same statistics, although there might be appreciable differences for a few areas.

The implementation of this practice has resulted in the establishment of rules for certain categories of people whose usual place of residence is not immediately apparent. Furthermore, this practice means that people were not always counted as residents of the place where they happened to be staying on Census Day (April 1, 2000).

#### **United States**

**Enumeration rules.** Each person whose usual residence was in the United States was to be included in the census, without regard to the person's legal status or citizenship. As in previous censuses, people specifically excluded from the census were citizens of foreign countries temporarily traveling or visiting in the United States who had not established a residence.

Americans temporarily overseas were to be enumerated at their usual residence in the United States. With some exceptions, Americans with a usual residence outside the United States were not enumerated in Census 2000. U.S. military personnel and federal civilian employees stationed outside the United States and their dependents living with them, are included in the population counts for the 50 states for purposes of Congressional apportionment but are excluded from all other tabulations for states and their subdivisions. The counts of overseas U.S. military personnel,

federal civilian employees, and their dependents were obtained from administrative records maintained by the employing federal departments and agencies. Other Americans living overseas who were not affiliated with the U.S. government were not included in the census.

**Residence rules.** Each person included in the census was to be counted at his or her usual residence the place where he or she lives and sleeps most of the time. If a person had no usual residence, the person was to be counted where he or she was staying on Census Day.

People temporarily away from their usual residence on Census Day, such as on a vacation or business trip, were to be counted at their usual residence.

**Armed forces personnel in the United States.** Members of the U.S. Armed Forces were counted at their usual residence (the place where they lived and slept most of the time), whether it was on or off the military installation. Family members of armed forces personnel were counted at their usual residence (for example, with the armed forces person or at another location).

Personnel assigned to each Navy and Coast Guard vessel with a U.S. homeport were given the opportunity to report an onshore residence where they usually stayed when they were off the ship. Those who reported an onshore residence were counted there; those who did not were counted at their vessel's homeport.

**Personnel on U.S. flag merchant vessels.** Crews of U.S. flag merchant vessels docked in a U.S. port, sailing from one U.S. port to another U.S. port, or sailing from a U.S. port to a Puerto Rico port were counted at their usual onshore residence if they reported one. Those who did not were counted as residents of the ship and were assigned as follows:

- The U.S. port, if the vessel was docked there on Census Day.
- The port of departure, if the ship was sailing from one U.S. port to another U.S. port, or from a U.S. port to a Puerto Rico port.

Crews of U.S. merchant ships docked in a foreign port (including the U.S. Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, and Guam), sailing from one foreign port to another foreign port, sailing from a U.S. port to a foreign port, or sailing from a foreign port to a U.S. port were not included in the census.

**People away at school.** College students were counted as residents of the area in which they were living while attending college, as they have been since the 1950 census. Children in boarding schools below the college level were counted at their parental home.

**People in institutions.** People under formally authorized, supervised care or custody, such as in federal or state prisons; local jails; federal detention centers; juvenile institutions; nursing or convalescent homes for the aged or dependent; or homes, schools, hospitals, or wards for the physically handicapped, mentally retarded, or mentally ill; or in drug/alcohol recovery facilities were counted at these places.

**People in general hospitals.** People in general hospitals or wards (including Veterans Affairs hospitals) on Census Day were counted at their usual residence. Newborn babies were counted at the residence where they would be living.

**People in shelters.** People staying on Census Day at emergency or transitional shelters with sleeping facilities for people without housing, such as for abused women or runaway or neglected youth, were counted at the shelter.

**People with multiple residences.** People who lived at more than one residence during the week, month, or year were counted at the place where they lived most of the time. For example, commuter workers living away part of the week while working were counted at the residence where they stayed most of the week. Likewise, people who lived in one state but spent the winter in another state with a warmer climate ("snowbirds") were to be counted at the residence where they lived most of the year.

**People away from their usual residence on Census Day.** Temporary, migrant, or seasonal workers who did not report a usual U.S. residence elsewhere were counted as residents of the place where they were on Census Day.

In some areas, natural disasters (hurricanes, tornadoes, flooding, and so forth) displaced households from their usual place of residence. If these people reported a destroyed or damaged residence as their usual residence, they were counted at that location.

People away from their usual residence were counted by means of interviews with other members of their families, resident managers, or neighbors.

#### **Puerto Rico**

**Enumeration rules.** Each person whose usual residence was in Puerto Rico was to be included in the census, without regard to the person's legal status or citizenship. As in previous censuses, people specifically excluded from the census were citizens of foreign countries temporarily traveling or visiting in Puerto Rico who had not established a residence.

Americans usually living in Puerto Rico but temporarily overseas were to be enumerated at their usual residence in Puerto Rico. Americans with a usual residence outside Puerto Rico were not counted as part of the Puerto Rico resident population.

**Residence rules.** Each person included in the census was to be counted at his or her usual residence the place where he or she lives and sleeps most of the time. If a person had no usual residence, the person was to be counted where he or she was staying on Census Day.

People temporarily away from their usual residence were to be counted at their usual residence. People who moved around Census Day were counted at the place they considered to be their usual residence.

**Armed forces personnel in Puerto Rico.** Members of the U.S. Armed Forces were counted at their usual residence (the place where they lived and slept most of the time), whether it was on or off the military installation. Family members of armed forces personnel were counted at their usual residence (for example, with the armed forces person or at another location).

Personnel assigned to each Navy and Coast Guard vessel with a Puerto Rico homeport were given the opportunity to report an onshore residence where they usually stayed when they were off the ship. Those who reported an onshore residence were counted there; those who did not were counted at their vessel's homeport.

**Personnel on U.S. flag merchant vessels.** Crews of U.S. flag merchant vessels docked in a Puerto Rico port, sailing from one Puerto Rico port to another Puerto Rico port, or sailing from a Puerto Rico port to a U.S. port were counted at their usual onshore residence if they reported one. Those who did not were counted as residents of the ship and were attributed as follows:

- The Puerto Rico port if the vessel was docked there on Census Day.
- The port of departure if the ship was sailing from one Puerto Rico port to another Puerto Rico port or from a Puerto Rico port to a U.S. port.

Crews of U.S. merchant ships docked in a foreign port (including the U.S. Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, and Guam), sailing from a Puerto Rico port to a foreign port, or sailing from a foreign port to a Puerto Rico port were not included in the census.

**People away at school.** College students were counted as residents of the area in which they were living while attending college, as they have been since the 1950 census. Children in boarding schools below the college level were counted at their parental home.

**People in institutions.** People under formally authorized, supervised care or custody, such as in federal or state prisons; local jails; federal detention centers; juvenile institutions; nursing or convalescent homes for the aged or dependent; or homes, schools, hospitals, or wards for the physically handicapped, mentally retarded, or mentally ill; or in drug/alcohol recovery facilities were counted at these places.

**People in general hospitals.** People in general hospitals or wards (including Veterans Affairs hospitals) on Census Day were counted at their usual residence. Newborn babies were counted at the residence where they would be living.

**People in shelters.** People staying on Census Day at emergency or transitional shelters with sleeping facilities for people without housing, such as for abused women or runaway or neglected youth, were counted at the shelter.

**People with multiple residences.** People who lived at more than one residence during the week, month, or year were counted at the place where they lived most of the time. For example, commuter workers living away part of the week while working were counted at the residence where they stayed most of the week.

**People away from their usual residence on Census Day.** Temporary, migrant, or seasonal workers who did not report a usual Puerto Rico residence elsewhere were counted as residents of the place where they were on Census Day.

In some areas, natural disasters (hurricanes, tornadoes, flooding, and so forth) displaced households from their usual place of residence. If these people reported a destroyed or damaged residence as their usual residence, they were counted at that location.

People away from their usual residence were counted by means of interviews with other members of their families, resident managers, or neighbors.

#### **MAJOR COMPONENTS OF THE CENSUS 2000 PLAN**

The Census Bureau prepared the Census 2000 plan to ensure the most accurate decennial census legally possible. This plan included data collection from 100 percent of households and housing units. In addition, the plan included an extensive statistical operation to measure and correct overall and differential coverage of U.S. residents in Census 2000. This operation consisted of a scientific sample of approximately 300,000 housing units and used regional groupings to generate corrected counts. To ensure that Census 2000 will be both more accurate and more cost-effective than the 1990 Census, the Census Bureau reviewed its procedures with input from a wide array of experts. In addition, the Census Bureau and Department of Commerce officials held more than 100 briefings for the members of Congress and their staff on the plan for Census 2000. The result has been an innovative departure from past practices that substantially increased overall accuracy and addressed the differential undercount of children, renters, and minorities. At the same time, the new methods of enumeration saved money and delivered results more quickly. The major components of the plan for Census 2000 included:

#### 1. The Master Address File

To conduct Census 2000, the Census Bureau needed to identify and locate an estimated 118 million housing units in the Nation. The Census Bureau accomplished this goal by developing and maintaining the Master Address File (MAF). This vital operation took place with the assistance of the U.S. Postal Service (USPS); other federal agencies; tribal, state and local governments; community organizations; and by an intensive canvass of selected areas. The resulting file was more comprehensive than ever before.

In 1990, the Census Bureau relied on address lists purchased from vendors. As these lists were originally generated for marketing purposes, they proved to be less accurate in low-income areas. As a result, during the 1990 census, housing units were missed often enough to contribute notably to the undercount problem. Plans for Census 2000 were designed to address weaknesses found in the 1990 address list. The Census 2000 MAF started with the USPS address list, a list that does not discriminate against certain areas because of their marketing potential. Partnerships with state and local officials, community organizations, and tribal governments also played an important role in making sure the MAF is accurate; the local officials who knew the areas best helped develop the MAF. Finally, the Bureau made intensive efforts to create address lists in rural areas well in advance of the census.

City-style addresses. The USPS uses the term "city-style" for an address such as "123 Main Street," even though such an address may occur in small towns and increasingly along country roads. In areas where the USPS delivers mail primarily to city-style addresses, the Census Bureau created the MAF by combining addresses from the 1990 Census Address Control File with those addresses in the USPS Delivery Sequence File (DSF). The DSF is a national file of individual delivery point addresses. As part of a cooperative agreement, the USPS provided the Census Bureau with updated DSFs on a regular basis. The Bureau then located these addresses in its computer mapping system called TIGER® (Topologically Integrated Geographic Encoding and Referencing). If an address could not be located, the location was researched and resolved through an office operation or through assistance from local partners. As a result of this research, the Bureau identified new features and corrected and added address ranges to the TIGER® database.

**Noncity-style addresses.** In late 1998 and early 1999, the Census Bureau launched a comprehensive effort to canvass areas where most residences did not have city-style addresses. Over 30,000 canvassers visited approximately 22 million residences without a street address to enter their locations in the TIGER® system. The combination of innovative use of computer data and technology along with these visits allowed the Bureau to construct the most accurate address list ever, giving field enumerators more time to meet other challenges presented by the 2000 count.

**Remote areas.** In a few extremely remote and sparsely settled areas, census enumerators created the address list at the time of the initial census data collection while canvassing their assignment area and picking up or completing unaddressed questionnaires that the USPS previously had delivered to each household.

**Nontraditional living quarters.** A separate operation built an inventory of all facilities that were not traditional living quarters; for example, prisons and hospitals. The Bureau interviewed an official at each location using a Facility Questionnaire. The responses to the questionnaire identified each group quarters and any housing units associated with the location. The Bureau classified each group quarters and its associated housing units at the location according to whether they would be enumerated as part of special place enumeration or through regular enumeration. The Bureau added these group quarters and housing units to the MAF and linked them to the TIGER® database.

Local government partnerships. The Bureau relied on local knowledge to build the MAF. State, local, and tribal governments; regional and metropolitan planning agencies; and related nongovernmental organizations were encouraged to submit locally developed and maintained city-style address lists to the Census Bureau to enhance the MAF. The Bureau matched the local lists both to the MAF and TIGER® database and verified the status of each newly identified address through ongoing matches to updated address information from the USPS, other independent sources, and its own field operations. The Local Update of Census Addresses (LUCA) program was a partnership that allowed local and tribal governments to designate a liaison to review the portion of the MAF that covered their jurisdiction to help ensure its completeness. After processing the LUCA input, the Census Bureau provided feedback on the status of the adds, deletes, and corrections of addresses to the liaisons. The updated address list then was used to deliver census questionnaires.

#### 2. Public Outreach and Marketing

In 1990, the mail response rate dropped in spite of the Census Bureau's support of a public service announcement (PSA) effort that aired donated advertisements. Part of this drop was caused by the Bureau's inability to ensure that PSAs were broadcast at optimum times and in appropriate markets. An evaluation of the 1990 PSA campaign noted that the ads were seldom placed at optimal times because decisions about when to air PSAs rested with local radio and television stations. Sixty percent of the U.S. population received 91 percent of the census advertising impact; 40 percent received only 9 percent. Based on its studies of prior outreach campaigns, the Bureau concluded that the professional control of a paid media campaign would produce the best results. Census 2000 launched a vigorous public outreach campaign to educate everyone about the importance of being counted. Among the improvements in public outreach and marketing were:

**Partnerships/targeted community outreach.** The Census Bureau built partnerships with local and tribal governments, businesses, and community groups to get the word out, to endorse the census, and to encourage constituents to respond. Beginning in 1996 and expanding in 1998, the Bureau hired government and community specialists to build relationships with local community and service-based organizations, focusing on groups representing traditionally undercounted populations. The Bureau deployed an extensive outreach program to reach schools, public sector employees, American Indians, and religious organizations. Businesses, nonprofit groups, and labor organizations also were asked to endorse participation and to publicize the census through employee newsletters, inserts with paychecks, and through communications with members and local chapters.

**Direct mail.** The census questionnaire and related materials delivered to individual addresses carried the same themes and messages as the overall campaign.

**Public relations.** The Census Bureau used public meetings and the news media to inform the public about the value of the census and to encourage response. Communications specialists were assigned to each field office to perform media outreach, to respond to media inquiries, and to coordinate the dissemination of the Census 2000 message. In many communities, the Census Bureau established local broadcaster/news director committees to emphasize Census 2000 to television viewers and radio listeners through broadcast segments and editorials in newspapers.

**Paid advertising.** The Census Bureau planned a targeted campaign to reach everyone through ads in newspapers, magazines, billboards, posters, radio, and television. A private advertising firm designed and implemented the Census 2000 advertising campaign. The Census Bureau conducted a first-ever paid advertising campaign, including a national media campaign aimed at increasing mail response. The campaign included advertising directed at raising mail response rates among historically undercounted populations, with special messages targeted to hard-to-enumerate populations. Advertising also focused on encouraging cooperation during the nonresponse follow-up procedures.

**Media public relations.** The Census Bureau assigned media specialists to the regional census centers to cultivate local press contacts and respond to local media inquiries.

**Promotion and special events.** A variety of special events, including parades, athletic events and public services television documentaries were cosponsored by state, local, and tribal governments and by community organizations and businesses to motivate people to respond.

**More ways to respond.** In 2000, in addition to mailing the census questionnaires, the Census Bureau made the forms available in stores and malls, in civic or community centers, in schools, and in other locations frequented by the public. A well-publicized, toll-free telephone number was available for those who wished to respond to the census by telephone. People also had the option to respond to the short form via the Internet.

**Multiple languages.** In 2000, as in all prior decennial censuses, questionnaires were in English (the Census Bureau has made Spanish-language questionnaires available in the past). However, for the first time in a decennial census, households had the option to request and receive questionnaires in five other languages (Spanish, Chinese, Korean, Tagalog, and Vietnamese). In addition, questionnaire assistance booklets were available in 49 languages.

#### 3. Questionnaire Mailout/Mailback

In Census 2000, the questionnaire mailout/mailback system was the primary means of census-taking, as it has been since 1970. The short form was delivered to approximately 83 percent of all housing units. The short form asked only the basic population and housing questions, while the long form included additional questions on the characteristics of each person and of the housing unit. The long form was delivered to a sample of approximately 17 percent of all housing units.

USPS letter carriers delivered questionnaires to the vast majority of housing units that had city-style addresses. In areas without such addresses, enumerators hand delivered addressed census questionnaires to each housing unit. In very remote or sparsely populated areas, enumerators visited each housing unit and picked up or completed unaddressed questionnaires that the USPS previously delivered to each unit.

#### 4. Collecting Data on Populations Living in Nontraditional Households

During a decennial census, the Census Bureau not only counts people living in houses and apartments, but also must count people who live in group quarters and other nontraditional housing units, as well as people with no usual residence. These units include nursing homes, group homes, college dormitories, migrant and seasonal farm worker camps, military barracks or installations, American Indian reservations, and remote areas in Alaska.

Some of the methods that were used for these special populations are listed below:

- The Census Bureau designed an operation for Census 2000 called Service-Based Enumeration (SBE) to improve the count of individuals who might not be included through standard enumeration methods. The SBE operation was conducted in selected service locations, such as shelters and soup kitchens, and at targeted outdoor locations.
- Another special operation counted highly transient individuals living at recreational vehicle campgrounds and parks, commercial or public campgrounds, marinas, and even workers' quarters at fairs and carnivals.
- The Census Bureau worked with tribal officials to select the appropriate data collection methodologies for American Indian reservations.
- Remote areas of Alaska, often accessible only by small airplanes, snowmobiles, four wheel-drive vehicles, or dogsleds, were enumerated beginning in mid-February. This special timing permitted travel to these areas while conditions are most favorable.
- The Census Bureau worked with the Department of Defense and the U.S. Coast Guard to count individuals living on military installations, and with the U.S. Maritime Administration to identify maritime vessels for enumeration.

#### 5. Collecting Long Form Data to Meet Federal Requirements

The census is the only data gathering effort that collects the same information from enough people to get comparable data for every geographic area in the United States. The Census Bureau has used the long form on a sample basis since 1940 to collect more data, while reducing overall respondent burden. The Census 2000 long form asked questions addressing the same 7 subjects that appeared on the short form, plus an additional 27 subjects which were either specifically required by law to be included in the census or were required in order to implement other federal programs.

#### 6. Retrieving and Processing the Data From the Returned Forms

The Census Bureau contracted with the private sector to secure the best available data capture technology. This technology allowed the Census Bureau to control, manage, and process Census 2000 data more efficiently.

The Census 2000 Data Capture System has been a complex network of operational controls and processing routines. The Census Bureau recorded a full electronic image of many of the questionnaires, sorted mail-return questionnaires automatically, used optical mark recognition for all check-box items, and used optical character recognition to capture write-in character based data items. The system allowed the Census Bureau to reduce the logistical burdens associated with handling large volumes of paper questionnaires. Once forms were checked in, prepared, and scanned, all subsequent operations were accomplished using the electronic image and data capture.

#### 7. Matching and Unduplication

One of the main goals of Census 2000 was to make it simpler for people to be counted by having census forms available in public locations and providing multiple language translations. Responses also were accepted over the telephone and, for the short form only, on the Internet. These options made it easier for everyone to be counted, but increased the possibility of multiple responses for a given person and household. Advances in computer technology in the areas of computer storage, retrieval, and matching, along with image capture and recognition, gave the Census Bureau the flexibility to provide multiple response options without incurring undue risk to

the accuracy of the resulting census data. Unduplication of multiple responses in past censuses required massive clerical operations. Modern technology allowed the Census Bureau to spot and eliminate multiple responses from the same household.

#### 8. Geographic Database Development—TIGER®

The Census Bureau's TIGER® (Topologically Integrated Geographic Encoding and Referencing) system provided the geographic structure for the control of the data collection, tabulation, and dissemination operations for Census 2000. The TIGER® system links each living quarter to a spatial location, each location to a specific geographic area, and each geographic area to the correct name or number and attributes. The database constantly changes; for example, when new streets are built and the names and address ranges of existing streets change. To ensure that the TIGER® database is complete and correct, the Census Bureau works with other federal agencies; state, local and tribal governments; and other public and private groups to update both its inventory of geographic features and its depiction of the boundaries, names, and attributes of the various geographic entities for which the Census Bureau tabulates data.

The Census Bureau obtains updates to the features in the TIGER® system, including associated address ranges, from its various address list improvement activities, from partnership efforts like the Local Update of Census Addresses (LUCA) program, from digital files provided by some local and tribal governments, and from local and tribal governments in response to a preview of the census map of their jurisdictions.

As a part of updating the TIGER® system, the Census Bureau conducted boundary surveys in 1998 and 1999 to determine the boundaries that were in effect on January 1, 2000, which were the official Census 2000 boundaries for functioning governments. The Census Bureau also relied on other programs to update the TIGER® boundaries data, including a program that allowed local or tribal officials to review proposed Census 2000 boundaries a program that allowed local and tribal participants the opportunity to delineate Census 2000 participant statistical areas (block groups, census county divisions, census designated places, and census tracts) and additional programs that offered participants the opportunity to identify other areas for which the Census Bureau would tabulate data (for example, traffic analysis zones).

#### 9. Field Offices and Staffing

The Census Bureau opened a national network of temporary offices from which employees collected and processed the data for Census 2000. Establishing the office network required, for most offices, the leasing of office space, purchasing furniture and equipment, purchasing and installing computer hardware and software, and establishing voice and data line connections. The plan for the office structure included:

- 12 Regional Census Centers (RCCs). Through a network of Census Field Offices, the RCCs managed all census field data collections operations, address listings, and address list enhancement for city-style address areas; coordinated the LUCA program; produced maps; updated TIGER®; worked with local participants in the Public Law 94–171 Redistricting Data Program; and recruited temporary staff.
- 402 Census Field Offices (CFOs). Opened in September 1998, these offices helped with address listing; conducted local recruiting; and performed clerical review of completed field address listing work.
- **520 Local Census Offices (LCOs).** These offices produced enumerator maps and assignments; conducted local recruiting; conducted outreach and promotion; conducted group quarters and service-based enumeration activities; conducted update/leave and list/enumerate operations; conducted nonresponse follow-up, coverage improvement follow-up, and address verifications; and performed the block canvass operations.
- 3 New Data Capture Centers (DCCs). These centers checked in mail returns, prepared questionnaires, and conducted data capture.
- 1 National Processing Center (NPC). In addition to performing the functions of a Data Processing Center, it processed address listing data and performed coding of questionnaire data.

To conduct a successful Census 2000, the Census Bureau recruited and tested hundreds of thousands of applicants for a wide range of positions, such as local census office managers, enumerators, partnership specialists, media specialists, and clerks. This required an extraordinary recruiting effort throughout the country. Every job applicant was required to pass a written test and was screened for criminal history. Applicants selected for employment had to take an oath of office and sign an affidavit agreeing not to disclose census information.

Many factors converged to present the Census Bureau with unprecedented challenges in hiring, retraining, and training the necessary employees for Census 2000. To address this challenge, the Census Bureau implemented several new approaches:

- Innovative methods of setting pay and incentives.
- Expanding the potential labor force by working with other federal agencies and state agencies to reduce barriers presented by various income transfer programs, and encouraging recipients of these programs to work for the Census Bureau. Consistent with these efforts, the Census Bureau hired more welfare-to-work employees than any other federal agency.
- Earlier and expanded training for enumerators.

# 10. Data Collection: Basic Enumeration Strategy

To ensure that the Census Bureau obtained a completed questionnaire from every household, or as close to that as possible, the Census Bureau developed a ten-part, integrated enumeration strategy.

- The first part of this strategy ensured that a questionnaire was delivered to every housing unit, by one of three data collection methods:
  - **Mailout/mailback.** U.S. Postal Service delivered questionnaires to every "city style" housing unit with a street name and house number.
  - **Update/leave.** Census enumerators delivered questionnaires to housing units without street names and house numbers to be mailed back, mainly in rural areas, and corrected and updated the address list and maps for any additions or errors.
  - **List/enumerate.** In remote and sparsely populated areas, enumerators visited every housing unit and completed the enumeration as delivered.
- The second part of this strategy provided people with assistance, as needed, to complete and return their questionnaires.
  - **Telephone questionnaire assistance (TQA).** The Census Bureau operated a toll-free TQA system, in English, Spanish, and several other languages, providing automated touch-tone answers to common questions, personal operator answers to those requesting it, and special service for the hearing impaired to assist them in completing a short form. Callers also could request a questionnaire.
  - **Internet.** Respondents were able to access an Internet Web site to both receive assistance and, for short forms, submit their responses.
  - Questionnaire assistance centers. The Census Bureau opened Walk-In Questionnaire Assistance Centers in convenient locations to assist respondents with filling out questionnaires in person. Bilingual staff was available in these centers.
  - **Questionnaire assistance guides.** Questionnaire Assistance Guides were available in 49 languages.
- The third part of this strategy provided a means for people who believed they had not received a questionnaire or were not included on one. Part of this operation was targeted to members of historically undercounted groups. The major element of this operation was the distribution of "Be Counted Questionnaires." The Census Bureau distributed these questionnaires at public locations, such as Walk-In Questionnaire Assistance Centers and some public and private facilities, staffed with bilingual competencies when appropriate. These forms were available in English, Spanish, Korean, Chinese, Vietnamese, and Tagalog.

- The fourth part of this strategy was designed to enumerate people who did not live in traditional housing units, including group quarters situations, such as nursing homes and college dormitories; people living in migrant farm worker camps, on boats, on military installations; and federal employees living overseas. This part of the strategy was expanded further because the Census 2000 Dress Rehearsal results indicated that, compared to 1990, many more people did not live in traditional housing units.
  - **Group quarters enumeration.** This operation identified the location of all group living quarters and made advance visits to each group quarter. Census staff listed all residents in April 2000 and distributed questionnaire packets.
  - **Transient night operation.** Transient Night enumerated people living a mobile lifestyle by visiting and interviewing people at racetracks, commercial or public campgrounds and those for recreational vehicles, fairs and carnivals, and marinas.
  - **Remote Alaska enumeration.** This operation sent out enumerators to deliver and complete questionnaires for people living in outlying or remote settlements in Alaska.
  - **Domestic military/maritime enumeration.** The Census Bureau, in cooperation with the Department of Defense and U.S. Coast Guard, identified living quarters and housing units on military installations and ships assigned to a U.S. home port and used appropriate enumeration methods.
  - **Overseas enumeration.** The Census Bureau, in cooperation with the Department of Defense and other departments, counted federal employees assigned overseas (including members of the armed forces) and their dependents, for apportionment purposes.
- The fifth part of this strategy targeted people with no usual residence or address. This operation was conducted at selective service locations, such as shelters and soup kitchens and non-sheltered outdoor locations.
- The sixth part of this strategy deployed special data collection methods to improve cooperation and enumeration in certain hard-to-enumerate areas.
  - Regional Census Centers used the planning database and their knowledge of local conditions
    to identify appropriate areas for targeted methods. A team of enumerators then went to targeted areas, such as areas with high concentrations of multiunit buildings, safety concerns
    or low enumerator production rates, and conducted team enumerations.
  - Mail response rates and maps were available to local and tribal officials so they could work with Census Bureau staff to identify low-response areas and implement additional outreach and publicity efforts and targeted enumeration efforts.
  - In partnership with local and tribal governments and community-based organizations, local census offices established Walk-In Questionnaire Assistance Centers in locations, such as community centers and large apartment buildings, to provide assistance in English, Spanish, and other and foreign languages.
  - The Be Counted Program made unaddressed questionnaires available in the Walk-In Assistance Centers and other locations.
  - Letters were mailed to managers of large multiunit structures and gated communities informing them of upcoming census operations.
  - In preidentified census blocks, census enumerators canvassed the blocks, updated the address list, and delivered and completed census questionnaires for all housing units.
  - In preidentified blocks originally classified as "Mailout/Mailback" areas, enumerators delivered the questionnaire and updated the address list (Urban Update/Leave).
- The seventh part of this strategy, coverage-edit and telephone follow-up, reviewed completed questionnaires for potential missing, incomplete, or inconsistent data.

- **Coverage edit.** The Census Bureau checked completed questionnaires for discrepancies between the number of persons reported and the number of persons for whom information was provided, forms returned where population count was blank, and forms for certain households that contained complex living arrangements.
- **Follow-up.** Telephone clerks contacted and reinterviewed the households with discrepancies identified after mail returns were data captured; field staff resolved discrepancies found on enumerator returned questionnaires.
- **Content edit.** Computer operations identified missing or incomplete responses to population or housing units and used statistical imputation to complete the information.
- The eighth part of this strategy, nonresponse follow-up (NRFU), was the effort to secure a response in Census 2000 from every housing unit and resident. One hundred percent of nonresponding households were followed up.
  - In the initial period, the Census Bureau used reminder publicity urging people to return their questionnaires.
  - Following the period of mail response, nonresponding households were identified and listed.
  - Enumerators visited all nonresponding addresses to obtain a completed questionnaire for each household.
  - In mailout/mailback areas, enumerators also followed up 100 percent of housing units identified as nonexistent or vacant by the U.S. Postal Service.
  - In update/leave areas, enumerators followed up 100 percent of housing units where the Census Bureau was unable to deliver questionnaires.
  - The Census Bureau conducted quality assurance checks of NRFU to ensure the completeness and accuracy of the operations.
- The ninth part of strategy involved additional operations to improve the coverage of Census 2000.
  - In mailout/mailback areas, enumerators revisited addresses for which questionnaires were returned in NRFU reporting the housing unit as vacant or delete and which were not initially identified by the U.S. Postal Service as undeliverable as addressed.
  - In update/leave areas, enumerators revisited addresses for which a questionnaire was returned as vacant or nonexistent in NRFU, but the questionnaire was not returned as undeliverable during the update/leave operation.
  - In both mailout/mailback and update/leave areas, mail returns checked in but not data captured were rechecked and, if necessary, revisited.
- The tenth part of this strategy was unduplication, which involved reviewing and selecting person information when more than one questionnaire data set was reported for a single address. Dress Rehearsal results showed that the multiple ways in which people could respond to the census increased the possibility of more than one response being submitted for a given person or household. Automated matching technologies allowed the Census Bureau to resolve situations where more than one form was received for an address.

#### 11. Special Populations

# American Indian and Alaska Native Areas and Hawaiian Home Lands

The Census Bureau based its strategy for enumerating the populations in the American Indian and Alaska Native Areas (AlaNAs) and Hawaiian home lands on building partnerships for:

Address list development. The Census Bureau used U.S. Postal Service's Delivery Sequence
Files in AlANAs and Hawaiian home lands where there were city-style addresses. In other areas,
the Census enumerators used the "update/leave" method where a form is left with the
respondent for return by mail. In more remote areas, the census enumerator actually delivered
the

form and conducted the census interview all in one visit. Tribal governments had an opportunity to participate in the LUCA program. The Census Bureau worked with tribal officials to select the appropriate data collection methodology for each area.

- **Geographic programs.** There were many programs available to review and define geographic areas (see Appendix A for more details).
- Marketing. Census Bureau staff and tribal liaisons compiled lists of available media for paid advertising and promotion. The Census Bureau also enlisted the help of tribal liaisons and locally established "Complete Count Committees" to assist with promotional activities.
- **Field operations.** The Census Bureau worked with tribal governments to assist in all levels of field operations, including training local staff in cultural awareness, assisting in recruiting efforts, and identifying locations for census questionnaire assistance centers.
- **Data dissemination.** While most data were processed in the same way as data for rest of the nation, the Census Bureau worked with tribal governments to meet their data needs.

#### **Puerto Rico**

The Census 2000 operations in Puerto Rico were comparable to activities in the 50 states and the District of Columbia. The Census Bureau worked in partnership with the government of Puerto Rico to ensure that Census 2000 data met the federal legal requirements.

- Build partnerships at every stage of the process. The Census Bureau entered a Memorandum of Agreement with the governor of Puerto Rico which outlined mutual roles and responsibilities. In consultation with the government of Puerto Rico, census questionnaire content was developed to meet the legislative and programmatic needs of Puerto Rico. A separate advertisement and promotion campaign was conducted in Puerto Rico to build awareness of the census and boost participation. Address list development allowed Puerto Rico to participate in the LUCA program.
- **Census questionnaires.** Census questionnaires were readily available in Spanish and also in English, if requested. In Puerto Rico, only update/leave method was used to distribute questionnaires. However, questionnaires also were placed in Walk-In Questionnaire Assistance Centers and other locations identified through consultation with local partners.
- **Use of technology.** The Census Bureau made use of the same technological advances that were used in the United States. Many operations performed clerically in 1990 were automated. Data users have access to Census 2000 data products through the Internet using the American FactFinder (AFF) system. The AFF offers a separate user interface utilizing the Spanish language for Census 2000 Puerto Rico data.
- **Special techniques to improve coverage.** The update/leave methodology for census data collection was used for the first time in Puerto Rico. Census enumerators updated the Master Address File for Puerto Rico while delivering questionnaires. Respondents had the opportunity to complete the census questionnaires and return them by mail.

#### **Island Areas**

The Census Bureau conducted the Census 2000 operations in American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands (collectively referred to as the "Island Areas") in partnerships with the government of each area. These partnerships ensured that Census 2000 data met federal legal requirements, as well as the specific needs of each area. The Census 2000 operations in the Island Areas were built around the following:

• **Data collection.** Data collection in the Island Areas used the list/enumerate method. This decision was based on recommendations from Island Area representatives and an analysis of the various data collection methodologies. Unlike stateside list/enumerate procedures, the Census Bureau delivered Advance Census Reports before the list/enumerate operation and asked respondents to complete the form and hold it for enumerator to pick up.

- Build partnerships at every stage of the process. The Census Bureau developed and signed a Memorandum of Agreement with the governor of each Island Area that outlined mutual roles and responsibilities. In consultation with the governments of the Island Areas, census questionnaire content was developed to meet the legislative and programmatic needs of each Island Area. A separate advertisement and promotion campaign was developed for each Island Area to build awareness of the census and boost participation.
- **Census questionnaires.** Census questionnaires and other forms were readily available to respondents in convenient locations identified through consultation with local partners.
- **Use of technology.** The Census Bureau made greater use of the telephone to provide assistance to respondents with questions about Census 2000. Data users have access to Census 2000 data and products through the Internet using the American FactFinder system.

#### 12. Telecommunications Support and Automated Data Processing

Using dedicated links and other secure lines, the Census 2000 telecommunications network linked all census offices including: Census Headquarters in Suitland, Maryland, the 520 Local Census Offices, the 12 Regional Census Offices, the 12 Regional Census Centers, the Puerto Rico Area Office, the Maryland Computer Center in Bowie, the National Processing Center in Jeffersonville, Indiana, and the three contracted Data Capture Centers (Phoenix, AZ, Pomona, CA, and Essex, MD). The Census Bureau also established communication links with planned commercial telephone centers to assist with the Telephone Questionnaire Assistance program and the coverage edit follow-up program.

The use of electronic imaging reduced the logistical and staffing requirements of handling large volumes of paper questionnaires. Some components of data capture were performed by private-sector partners. The Census Bureau used commercially available advanced hardware and software rather than limiting itself to creating in-house solutions.

The most significant features of the Data Capture System included (1) work divided among four centers, (2) full electronic imaging and processing of questionnaires, (3) automated sorting of mailed responses, (4) optical mark recognition for check-box data, (5) optical character recognition for write-in data with automated processes to resolve difficult cases, and (6) quality assurance checks.

#### 13. Quality Assurance

To detect, correct, and minimize performance errors in critical census operations, the Census Bureau developed individual quality assurance plans for all activities that could contribute to errors in outcome, such as misprinted census forms, inaccurate maps or address lists, faulty intelligent character recognition, inadequate training of enumerators, and miskeyed entries.

# 14. The Census 2000 Dress Rehearsal in 1998

A good dress rehearsal is crucial to a successful census, and the key to any dress rehearsal is making it as much like the actual event as possible. The Census Bureau conducted Census 2000 Dress Rehearsal in three sites: Sacramento, California; Columbia, South Carolina along with 11 surrounding counties in north central South Carolina; and the Menominee American Indian Reservation in northeastern Wisconsin.

Since the summer of 1996, the Census Bureau worked closely with local officials and community-based organizations in each of the three sites to plan and build the various infrastructures needed to ensure a successful dress rehearsal. These joint activities included refining the geographic database, building and refining the address list, and working with community and tribal organizations to plan effective outreach and promotion efforts. Also, the Census Bureau recruited staff in all three sites to complete address list development and verification.

The dress rehearsal allowed for a thorough demonstration of the most critical procedures for Census 2000. These procedures included address list development; marketing and promotion; and data collection, processing, and tabulation. The dress rehearsal plan also demonstrated the use of statistical sampling in four major census operations: nonresponse follow-up, housing units designated as undeliverable as addressed by the U.S. Postal Service, integrated coverage measurement (ICM), and the long form survey.

#### 15. Data Dissemination Through the Internet

The census provides a wealth of data that researchers, businesses, and government agencies are eager to use. Taking advantage of modern computer and Internet capabilities, the Census Bureau planned to make data from Census 2000 more readily available than any previous decennial census data. The Census 2000 data are tabulated using the Data Products Production (DPP) system and disseminated using the American FactFinder (AFF) system on the Internet, in addition to CD-ROMs and DVDs. The AFF provides an interactive electronic system to allow data users to access data products, documents, and online help, as well as to build custom data products.

The Census Bureau solicited the advice and recommendations of data users throughout the planning, design, and testing stages of the AFF system (initially known as the Data Access and Dissemination System (DADS)). The system is accessible to the widest possible array of users through the Internet and all available intermediaries, including the nearly 1,800 data centers and affiliates, the 1,400 Federal Depository libraries and other libraries, universities, and private organizations. It also allows users to create customized products, such as tables, charts, graphs, and maps for census geographic areas of their choice, and access metadata that provide documentation and explanatory information for data subjects and geographic areas.

# 16. Evaluation and Preparation for 2010

After the completion of Census 2000, the Census Bureau plans to conduct a variety of post census evaluation studies, as it has after all the previous censuses. These studies will help data users, both within and outside the Census Bureau, to assess the data and plan for the 2010 Census. The evaluation studies generally rely on demographic analysis, statistical methods, and ethnographic analyses.

#### **GLOSSARY**

#### 100-Percent Data

Information based on a limited number of basic population and housing questions collected from both the short form and the long form for every inhabitant and housing unit in the United States.

#### 100-Percent Edited Detail File (HEDF)

Files composed of individual records of information on people and housing units for the 100-percent census data items from the census questionnaires. Estimation is included in these files. These files are used for tabulation purposes and are not released to the public.

# Accuracy and Coverage Evaluation (A.C.E.)

The Accuracy and Coverage Evaluation (A.C.E.) is a survey designed to measure the undercount/overcount of the census. The A.C.E. was designed to assess the size and characteristics of the population missed or double-counted in Census 2000, similar to the originally planned Integrated Coverage Measurement (ICM) Survey.

# Advance Notice Letter/Reminder Card (ANL/RC)

These are part of the questionnaire mailing strategy. In every area except list/enumerate, the Census Bureau sends an advance notice letter to every mailout address to alert households that the census form will be sent to them soon. Reminder Card is a postcard that is sent to addresses on the decennial Master Address File (see definition below) to remind respondents to return their census questionnaires or to thank them if they already have. All addresses in mailout/mailback areas receive a postcard. The Census Bureau also mails these postcards to postal patrons in update/leave areas.

# American FactFinder (AFF)

An electronic system for access and dissemination of Census Bureau data. The system is available through the Internet and offers prepackaged data products and the ability to build custom products. The system serves as the vehicle for accessing and disseminating data from Census 2000 (as well as economic censuses and the American Community Survey). The system was formerly known as the Data Access and Dissemination System (DADS).

#### **Apportionment**

Apportionment is the process of dividing up the 435 memberships, or seats, in the House of Representatives among the 50 states. The Census Bureau has a dual responsibility in this connection. It conducts the census at 10-year intervals. At the conclusion of each census, the Census Bureau uses the results for calculating the number of House memberships each state is entitled to have. The latter process is the initial use of the basic results of each census.

#### **Be Counted Enumeration and Be Counted Form**

The Be Counted enumeration procedure targets areas that are traditionally undercounted. Unaddressed census questionnaires (Be Counted forms) are placed at selected sites where people who believe they were not counted can pick them up, complete them, and mail them to the Census Bureau. The sites are in targeted areas that local governments and community groups, in conjunction with the Census Bureau, identify as traditionally undercounted.

# Census 2000 Publicity Office (C2PO)

An office at the Census Bureau which developed, implemented, and coordinated an integrated marketing program for Census 2000, including paid advertising, direct mail, public relations, partnerships, and local outreach.

# **Census Address List Improvement Act of 1994**

See Program for Address List Supplementation (PALS) below.

#### **Census Edited File (CEF)**

This file contains the 100-percent edited characteristics/records for all households and people in the census. The edits include consistency edits and imputation for items or persons where the data are insufficient. See descriptions for 100-percent data and census unedited file.

# **Census Information Center (CIC)**

The Census Information Center Program (CIC) is the community-based component of the Census Bureau's data dissemination network. While census data are readily available on CD-ROM, the Census Bureau's Web site on the Internet, in its 12 Regional Offices, 1,400 Federal Depository Libraries, and 1,800 state and local government agencies participating in the State Data Center Program, the CICs provide access to local communities that might not have access through these traditional channels. CIC's goal is to provide efficient access to Census Bureau data and data products to organizations representing populations that have been traditionally undercounted in censuses and surveys.

#### **Census Unedited File (CUF)**

A file created by merging the control file for the decennial master address file with the decennial response file of unedited data after the primary selection algorithm has been applied. This file contains the final housing unit and person counts. It is used to generate apportionment data as well as related "raw" or unedited census data.

# **Computer-Assisted Personal Interview (CAPI)**

A method of data collection consisting of the interviewer asking questions displayed on a laptop computer screen and entering the answers directly into the computer.

# **Computer-Assisted Telephone Interviewing (CATI)**

A method of data collection using telephone interviews in which the questions to be asked are displayed on a computer screen and responses are entered directly into the computer.

# Confidentiality

The guarantee made by law (Title 13, United States Code) to individuals who provide census information regarding nondisclosure of that information to others.

# **Confidentiality Edit**

The name for the Census 2000 disclosure avoidance procedure.

#### Coverage Edit/Coverage Edit Follow-Up (CEFU)

An edit performed on the mailback census response universe. Census staff make telephone calls to resolve forms that are incomplete or have other coverage discrepancies, such as a difference between the number of people reported in that household and the number of people for whom census information was provided on the form. This edit includes the large household follow-up.

# **Coverage Improvement Adjustment**

This phrase was included in the table outlines and the technical documentation before the review, analysis, and recommendation on whether to adjust Census 2000 data for coverage improvement was completed. As the data are not adjusted, a zero (0) will appear. This phrase does not refer to any other outreach or collection operations which were introduced to improve coverage in Census 2000.

# Coverage Improvement Follow-Up (CIFU)

A procedure for the traditional census in which housing units with conflicting status information are followed up.

#### Data Access and Dissemination System (DADS)

The system is now known as the American FactFinder (AFF).

# **Data Capture Center (DCC)**

A decentralized facility that checks in questionnaires returned by mail, creates images of all questionnaire pages, and converts data to computer readable format. The DCCs also perform other computer processing activities, including automated questionnaire edits, work flow management, and data storage. There is one permanent DCC, the National Processing Center in Jeffersonville, Indiana. For Census 2000, the Census Bureau set up three temporary DCCs. The temporary facilities were provided and operated by a private contractor through the Data Capture Services contract.

# Data Capture System 2000 (DCS 2000)

The DCS 2000 is a data capture system that is used to capture information from census forms. For Census 2000, this system processed more than 150 million incoming forms, digitally captured and processed billions of bits of information on the forms, converted automatically the image of the form to text-based data, and edited/repaired data that the system was unable to decipher automatically.

#### **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 10 years for the purpose of reapportioning the U.S. House of Representatives.

#### **Decennial Master Address File (DMAF)**

The decennial version of the Master Address File has features for controlling and tracking the long- and short-term operations and programs of the Census 2000. The DMAF contains the processing status information to support document mailouts; data capture progress control, tracking, and reporting; and field enumeration processes (notably follow-ups). The DMAF is limited to addresses that the Census Bureau has successfully linked to the TIGER® database. See Master Address File.

#### Decennial Response File (DRF)

Contains every response to the census from all sources. The primary selection algorithm is applied to this file to unduplicate people between multiple returns for a housing unit and to determine the housing unit record and the people to include at the housing unit. The DRF is then combined with the Decennial Master Address File to create the census unedited file (CUF).

# **Delivery Sequence File (DSF)**

A computerized file containing all delivery point addresses serviced by the U.S. Postal Service (USPS). The USPS updates the DSF continuously as its letter carriers identify addresses for new delivery points or changes in the status of existing addresses.

Demographic Analysis (DA)

A method the Census Bureau uses to measure coverage at the national level. It differs from survey coverage estimates, such as Post-Enumeration Survey, Integrated Coverage Measurement, or Accuracy and Coverage Evaluation, in that it does not rely on case-by-case matching of census records. To produce an estimate of the total population, DA relies on administrative records to provide estimates of births, deaths, immigration, and emigration. DA provides estimates on the national level only.

#### **Derived Measures**

Census data products include various derived measures, such as medians, means, and percentages, as well as certain rates and ratios. Derived measures that round to less than 0.1 are normally indicated as 0.

#### Disclosure Avoidance (DA)

Statistical methods used in the tabulation of data prior to releasing data products to ensure the confidentiality of responses.

# **Dual-System Estimation (DSE)**

The estimation methodology used for the Accuracy and Coverage Evaluation (A.C.E.). This operation uses a geographic sample of block clusters to find people missed by the census or A.C.E. and any errors from the census. The information is then processed using computer matching, clerical matching, and field follow-up to resolve discrepancies.

#### **Family**

A group of two or more people who reside together and who are related by birth, marriage, or adoption.

# Geocoding

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 Earth.

#### **Group Quarters**

A facility where people live that is not a typical household-type living arrangement. The Census Bureau classifies all individuals not living in households as living in group quarters. There are two types of group quarters: institutional (for example, correctional facilities, nursing homes, and mental hospitals) and noninstitutional (for example, college dormitories, military bases and ships, hotels, motels, rooming houses, group homes, missions, shelters, and flophouses).

# Heterogeneity

Heterogeneity occurs when blocks of housing units assigned to sampling strata or groupings are not similar in terms of the likelihood of being included or missed by the census. Heterogeneity creates difficulty for the small area estimation process because the correction factor gets applied to all people with the specified characteristic in that sampling poststratum, even through some of them do not actually have the coverage characteristics.

#### Homogeneity

The assumption of homogeneity expects that all people in a particular sampling stratum or grouping will be very much alike in terms of their likelihood of being included or missed by the census. The grouping of people in a particular stratum is called poststratum, such as all White, non-Hispanic male renters ages 18-22 in a rural area. A lack of homogeneity in a particular sample block is not an error, but it does create difficulty for the small area estimation process. This happens because the correction factor gets applied to all people with the specified characteristic in that poststratum, even though some of them do not exhibit the same coverage characteristics.

#### Household

Household refers to all of the people who occupy a housing unit.

# **Housing Unit**

A housing unit is a house, an apartment, a mobile home or trailer, a group of rooms, or a single room occupied as a separate living quarters, or if vacant, intended for occupancy as a separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building and which have direct access from outside the building or through a common hall. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible.

# **Imputation**

When information is missing or inconsistent, the Census Bureau uses a method called imputation to assign values. Imputation relies on the statistical principle of "homogeneity," or the tendency of households within a small geographic area to be similar in most characteristics. For example, the value of "rented" is likely to be imputed for a housing unit not reporting on owner/renter status in a neighborhood with multiunits or apartments where other respondents reported "rented" on the census questionnaire. In past censuses, when the occupancy status or the number of residents was not known for a housing unit, this information was imputed.

**Internet Questionnaire Assistance (IQA)** An operation which allows respondents to use the Census Bureau's Internet site to (1) ask questions and receive answers about the census form, job opportunities, or the purpose of the census and (2) provide responses to the short form.

**Interpolation** Interpolation frequently is used in calculating medians or quartiles based on interval data and in approximating standard errors from tables. Linear interpolation is used to estimate values of a function between two known values. Pareto interpolation is an alternative to linear interpolation. In Pareto interpolation, the median is derived by interpolating between the logarithms of the upper and lower income limits of the median category. It is used by the Census Bureau in calculating median income within intervals wider than \$2,500.

## List/Enumerate

A method of data collection in which temporary field staff, called enumerators, list each residential address, spot the location of each on a census map, and interview the residents of the household during a single visit. This completes the census address list for these areas and provides the information needed to update the TIGER® database and Master Address File (see definitions below).

#### Local Update of Census Addresses (LUCA)

A Census 2000 program, established in response to requirements of P. L. 103-430. It provided an opportunity for state, local, and tribal governments to review and update individual address information in the Master Address File and associated geographic information in the TIGER® database before using the addresses for questionnaire delivery. This improved the completeness and accuracy of both computer files and the census.

#### **Long Form**

The decennial census questionnaire, sent to approximately one in six households, contains all questions on the short form, as well as additional 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.

# Mailout/Mailback (MO/MB)

A method of data collection in which the U.S. Postal Service delivers addressed questionnaires to residents who are asked to complete and mail back the questionnaire to the appropriate Census Bureau office. This method is used for more than 80 percent of all households (usually with city-style addresses).

# Master Address File (MAF)

A computer file based on a combination of the addresses in the 1990 census address file and current versions, supplemented by address information provided by state, local, and tribal governments. The MAF is continually updated to provide a basis for creating the Census 2000 address list, the address list for the American Community Survey, and the address list for the Census Bureau's other demographic surveys.

#### Metadata

Information about the content, quality, condition, and other characteristics of data.

#### **Microdata**

Nonaggregated data about the units sampled. For surveys of individuals, microdata contain records for each individual interviewed; for surveys of organizations, the microdata contain records for each organization.

#### **Nongovernment Organization**

The partnerships developed during Census 2000 planning include national and local organizations and community groups that are not governmental entities.

#### Nonresponse Follow-up

A census follow-up operation in which temporary field staff, known as enumerators, visit addresses from which no response was received.

#### **Nonsampling Error**

Errors that occur during the measuring or data collection process. Nonsampling errors can be the most serious types of errors because they yield biased results when most of the errors distort the results in the same direction. Unfortunately, the full extent of nonsampling error is unknown. Decennial censuses traditionally have experienced nonsampling errors, most notably undercount, resulting from people being missed in the enumeration processes.

# **Optical Character Recognition (OCR)**

Technology that uses an optical scanner and computer software to "read" human handwriting.

#### **Optical Mark Recognition (OMR)**

Technology that uses an optical scanner and computer software to scan a page, recognize the presence of marks in predesignated areas, and assign a value to the mark depending on its specific location and intensity on a page.

#### **Poststratum**

Information about the current occupants of each housing unit in the Accuracy and Coverage Evaluation (A.C.E.) survey found during the A.C.E. interview is used to form groupings called "poststrata." This information, including the age of respondent, current owner/renter status, etc., is used to form homogeneous groupings and improve the estimation process. By contrast, the initial A.C.E. strata are formed using aggregate information about each block as of the 1990 census.

#### Primary Selection Algorithm (PSA)

Computer program applied to the decennial response file (DRF) to eliminate duplicate responses and to determine the housing unit record and the people to include at the housing unit. After this procedure, the DRF is merged with the Decennial Master Address File to create the census unedited file.

#### **Program for Address List Supplementation (PALS)**

A program providing all governmental units and regional and metropolitan agencies the opportunity to submit lists of individual addresses for their community to the Census Bureau for use in building the MAF. Ongoing submissions and feedback between the Census Bureau and local governments on this program, enabled by the Census Address List Improvement Act of 1994 (P.L. 103-430) help ensure the completeness and accuracy of the Master Address File and the TIGER® database.

#### Public Law (P.L.) 94-171

Public Law (P.L.) 94-171, enacted in 1975, directs the Census Bureau to make special preparations to provide redistricting data needed by the 50 states. Within a year following Census Day, the Census Bureau must send the data agreed upon to redraw districts for the state legislature to each state's governor and majority and minority legislative leaders.

To meet this legal requirement, the Census Bureau set up a voluntary program that enables participating states to receive data for voting districts (e.g., election precincts, wards, state house, and senate districts) in addition to standard census geographic areas, such as counties, cities, census tracts, and blocks.

# Public Law (P.L.) 103-430

Public Law (P.L.) 103-430, enacted in 1994, amends Title 13, United States Code, to allow designated local and tribal officials access to the address information in the Master Address File to verify its accuracy and completeness. This law also requires the U.S. Postal Service to provide its address information to the Census Bureau to improve the Master Address File.

# Public Law (P.L.) 105-119

Public Law (P.L.) 105-119, enacted in 1997, directs the Census Bureau to make publicly available a second version of Census 2000 data that does not include the corrections for overcounts and undercounts measured in the Accuracy and Coverage Evaluation (A.C.E.). The format, timing, geographic levels, and price of the P.L. 94-171 and these data are identical.

#### Public Use Microdata Area (PUMA)

An area that defines the extent of territory for which the Census Bureau tabulates public use microdata sample (PUMS) data.

## Public Use Microdata Sample (PUMS)

Hierarchical files containing small samples (5% and 1%) of individual records from the census long form showing characteristics of the housing units and people included on those forms.

#### **Quality Assurance (QA)**

Quality assurance represents a broad philosophy and specific procedures that are designed to build quality into the system, constantly improve the system, and integrate responsibility for quality with production.

# **Questionnaire Mailing Strategy**

For Census 2000, an advance notice letter, a questionnaire, and a reminder/thank you postcard were sent to every mailout address.

# Reapportionment

The redistribution of seats in the U.S. House of Representatives among several states on the basis of the most recent decennial census as required by Article 1, Section 2 of the Constitution. See apportionment and redistricting.

#### Redistricting

The process of revising the geographic boundaries of areas from which people elect representatives to the U.S. Congress, a state legislature, a county or city council, a school board, and the like to meet the legal requirement that such areas be as equal in population as possible following a census. See apportionment and reapportionment.

# Sample Census Edited File (SCEF)

A file containing 100-percent and sample characteristics for housing units and people in the long form sample. Processing for the SCEF includes merging the results of industry and occupation coding and place of work and migration coding, coding several other items, and weighting the long forms.

#### Sample Edited Detail File (SEDF)

A file containing 100-percent and sample characteristics for housing units and people in the long form sample. The file is used for tabulation purposes only and is not released to the public.

# **Sampling Error**

Errors that occur because only a part of the population is being contacted directly. With any sample, differences are likely to exist between the characteristics of the sampled population and the larger group from which the sample was chosen. However, sampling error, unlike nonsampling error, is readily measured.

# Sampling Stratum

A sampling stratum, as used in the A.C.E., is a grouping or classification that has a similar set of characteristics, based on the 1990 census. For example, one might define a stratum as all blocks in large central cities with a 1990 census population that was 30 percent or more Black renters.

#### Scanner

Equipment used to capture images from documents for the purpose of entering the information into an electronic format. For Census 2000, scanners replaced some keying operations.

#### Seasonal/Recreational/Occasional Use

A housing unit held for occupancy only during limited portions of the year, such as a beach cottage, ski cabin, or time-share condominium.

#### **Separate Living Quarters**

Those living quarters in which the occupants live separately from any other individual in the building and which have direct access from outside the building or through a common hall. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible.

# **Service-Based Enumeration (SBE)**

An operation designed to enumerate people at facilities where they might receive services, such as shelters, soup kitchens, healthcare facilities, and other selected locations. This operation targets the types of services that primarily serve people who have no usual residence.

#### **Service Locations**

Locations where clients are enumerated during the service-based enumeration operation, such as emergency or transitional shelters, soup kitchens, regularly scheduled mobile food vans, and targeted nonsheltered outdoor locations.

#### **Short Form**

The decennial census questionnaire, sent to approximately 5 of 6 households, that contains population questions related to household relationship, age, sex, relationship, race, Hispanic origin, and tenure (i.e., whether home is owned or rented). The questions contained on the short form also are asked, along with additional questions, on the long form.

# Simplified Enumerator Questionnaire (SEQ)

A questionnaire that enumerators use for transient, or T-night, enumeration and when conducting the nonresponse follow-up after the decennial census.

# **Soup Kitchens**

Includes soup kitchens, food lines, and programs distributing prepared breakfasts, lunches, or dinners. These programs may be organized as food service lines, bag or box lunches, or tables where people are seated, then served by program personnel. These programs may or may not have a place for clients to sit and eat the meal. These are service locations.

# **Special Place**

An institution that includes facilities where people live or stay other than the usual house, apartment, or mobile home. Examples are colleges and universities, nursing homes, hospitals, and prisons. Often the facilities that house people are group quarters, but they may include standard houses or apartments as well.

# Special Place Facility Questionnaire (SPFQ)

A questionnaire used to interview an official at a special place for the purpose of collecting/updating address information for the special place and any associated group quarters and housing units, determining the type of special place/group quarters, and collecting additional administrative information about each group quarters at the special place.

# **State Data Center (SDC)**

A state agency or university facility identified by the governor of each state and state equivalent to participate in the Census Bureau's cooperative network for the dissemination of census data. SDCs also provide demographic data to local agencies participating in the Census Bureau's statistical areas programs and assist the Census Bureau in the delineation and identification of statistical areas.

#### **Summary File (SF)**

A series of census summary tabulations of 100-percent and sample population and housing data available for public use on CD-ROM and the Internet. In 1990, these files were available on computer tapes and, as a result, were known as summary tape files (STF).

#### **Summary Table**

A collection of one or more data elements that are classified into some logical structure either as dimensions or data points.

#### **Tabulation Block**

A physical block that does not have any legal or statistical boundaries passing through it; or each portion of a physical block after the Census Bureau recognizes any legal or statistical boundaries that pass through it.

#### **Targeted Nonsheltered Outdoor Location (TNSOL)**

A geographically identifiable outdoor location open to the elements where there is evidence that people might be living without paying and who also do not usually receive services at soup kitchens, shelters, and mobile food vans. These sites must have a specific location description that allows a census enumeration team to physically locate the site and excludes pay-for-use campgrounds, drop-in centers, post offices, hospital emergency rooms, and commercial sites (including all-night theaters and all-night diners).

# **Telephone Questionnaire Assistance (TQA)**

A toll-free service that was provided by a commercial phone center to answer questions about Census 2000 and the Census 2000 questionnaire and to take interviews from people who prefer to be interviewed over the telephone.

# **Thematic Map**

A map that reveals the geographic patterns in statistical data.

# Title 13 (United States Code)

The law under which the Census Bureau operates and that guarantees the confidentiality of census information and establishes penalties for disclosing this information.

# Topologically Integrated Geographic Encoding and Referencing (TIGER®)

A computer database that contains a digital representation of all census-required map features (streets, roads, rivers, railroads, lakes, and so forth), the related attributes for each (street names, address ranges, etc.), and the geographic identification codes for all entities used by the Census Bureau to tabulate data for the United States, Puerto Rico, and the Island Areas. The TIGER® database records the interrelationships among these features, attributes, and geographic codes and provides a resource for the production of maps, entity headers for data tabulations, and automated assignment of addresses to a geographic location in a process known as "geocoding."

#### Transient Night (T-Night)/T-Night Enumeration (TNE)

A method of enumeration in which Census Bureau staff enumerate people at transient locations, such as campgrounds at race tracks, recreational vehicle campgrounds or parks, commercial or public campgrounds, fairs and carnivals, and marinas. Enumerators conduct a personal interview using Simplified Enumerator Questionnaire. No vacant units are generated by this operation.

#### Type of Enumeration Area (TEA)

A classification identifying how the Census Bureau takes the decennial census of a geographic area. Examples of TEAs include (1) the area inside the "blue line" - this is the mailout/mailback and urban update/leave operations area, (2) address listing areas, (3) list/enumerate areas, and (4) remote areas of Alaska.

# **Urban Update/Leave (UU/L)**

Update/leave procedures are used in targeted urban areas where mail delivery may be a problem, such as an apartment building where the mail carrier may leave the forms in a common area. Enumerators deliver census questionnaires for residents to complete and mail back, update the address register, and update the census maps.

# **Usual Home Elsewhere (UHE)**

A housing unit that is temporarily occupied by a person(s) who has a usual home elsewhere.

# **Usual Residence**

The living quarters where a person spends more nights during a year than any other place.

# **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.

# Whole Household Usual Home Elsewhere (WHUHE)

See Usual Home Elsewhere.



U.S. Department of Commerce • Bureau of the Census



easy, and your answer	for all the people at this address. It is quick and s are protected by law. Complete the Census and get what it needs — today and in the future!	
Start Here Please use a black or blue pen  1. How many people were living or staying in this house, apartment, or mobile home on April 1, 2000?  Number of people	Area Code + Number	
INCLUDE in this number:  • foster children, roomers, or housemates  • people staying here on April 1, 2000 who have no other permanent place to stay  • people living here most of the time while working, even if they have another place to live	Male Female  6. What is Person 1's age and what is Person 1's date of birth Age on April 1, 2000	?
DO NOT INCLUDE in this number:  college students living away while attending college people in a correctional facility, nursing home, or mental hospital on April 1, 2000 Armed Forces personnel living somewhere else people who live or stay at another place most of the time	Print numbers in boxes.  Month Day Year of birth	
2. Is this house, apartment, or mobile home —  Mark ▼ ONE box.  Owned by you or someone in this household with a mortgage or loan?  Owned by you or someone in this household free and clear (without a mortgage or loan)?  Rented for cash rent?  Occupied without payment of cash rent?	7. Is Person 1 Spanish/Hispanic/Latino? Mark  the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano Yes, Cuban Yes, other Spanish/Hispanic/Latino — Print group.	
3. Please answer the following questions for each person living in this house, apartment, or mobile home. Start with the name of one of the people living here who owns, is buying, or rents this house, apartment, or mobile home. If there is no such person, start with any adult living or staying here. We will refer to this person as Person 1.	8. What is Person 1's race? Mark 🗵 one or more races to indicate what this person considers himself/herself to be.  White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe.	<b>₹</b>
What is this person's name? Print name below.  Last Name	☐ Asian Indian ☐ Japanese ☐ Native Hawaiian ☐ Chinese ☐ Korean ☐ Guamanian or Chamorro ☐ Filipino ☐ Vietnamese ☐ Samoan ☐ Other Asian — Print race.  ☐ Other Pacific Islander — Print race.	. <sub>₹</sub>
OMB No. 0607-0856: Approval Expires 12/31/2000	Some other race — <i>Print race.</i>	
OIVID INO. 0007-0856: Approval Expires 12/31/2000	In more people live here, continue with Person 2.	

Questionnaire D-1

	Your answers are important!  Person 2  Every person in the Census counts.	Person 3  Census information helps your community get financial assistance for roads, hospitals, schools, and more.	
1.	What is Person 2's name? Print name below. Last Name	1. What is Person 3's name? Print name below.  Last Name	
	First Name MI	First Name MI	
2	How is this person related to Person 1? Mark X ONE box.	2. How is this person related to Person 1? Mark X ONE box.	
	Husband/wife	Husband/wife If NOT RELATED to Person 1:  Natural-born son/daughter Roomer, boarder  Adopted son/daughter Housemate, roommate  Stepson/stepdaughter Unmarried partner  Brother/sister Foster child  Father/mother Other nonrelative  Grandchild  Parent-in-law  Son-in-law/daughter-in-law  Other relative — Print exact relationship.	
3.	What is this person's sex? Mark 🗷 ONE box.	3. What is this person's sex? Mark 🗵 ONE box.	
4	<ul><li>✓ Male</li><li>✓ Female</li><li>What is this person's age and what is this person's date</li></ul>	<ul><li>Male  ☐ Female</li><li>What is this person's age and what is this person's date</li></ul>	
Τ.	of birth?  Print numbers in boxes.  Age on April 1, 2000  Month Day Year of birth	of birth? Print numbers in boxes.  Age and what is imperson a date.  Age on April 1, 2000 Month Day Year of birth	
	NOTE: Disease and DOTH Occasions Family	NOTE Disease POTH Ossetions Found C	
-	NOTE: Please answer BOTH Questions 5 and 6.	NOTE: Please answer BOTH Questions 5 and 6.  5. Is this person Spanish / Hispanic / Latino? Mark   X   the	
-	NOTE: Please answer BOTH Questions 5 and 6.  Is this person Spanish/Hispanic/Latino? Mark  the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano Yes, Cuban Yes, other Spanish/Hispanic/Latino — Print group.	NOTE: Please answer BOTH Questions 5 and 6.  5. Is this person Spanish / Hispanic / Latino? Mark (*) the "No" box if not Spanish / Hispanic / Latino.  No, not Spanish / Hispanic / Latino (*) Yes, Puerto Rican (*) Yes, Mexican, Mexican Am., Chicano (*) Yes, Cuban (*) Yes, other Spanish / Hispanic / Latino (*) Print group.	
-	Is this person Spanish/Hispanic/Latino? Mark (**) the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano Yes, Cuban	5. Is this person Spanish/Hispanic/Latino? Mark 🗷 the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano Yes, Cuban	
5.	Is this person Spanish / Hispanic / Latino? Mark  the "No" box if not Spanish / Hispanic / Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano  Yes, Cuban Yes, other Spanish / Hispanic / Latino  Print group.  What is this person's race? Mark one or more races to indicate what this person considers himself/herself to be.  White Black, African Am., or Negro  American Indian or Alaska Native — Print name of enrolled or principal tribe.	5. Is this person Spanish/Hispanic/Latino? Mark \( \) the "No" box if not Spanish/Hispanic/Latino.  \[ \] No, not Spanish/Hispanic/Latino \[ \] Yes, Puerto Rican \[ \] Yes, Mexican, Mexican Am., Chicano \[ \] Yes, Cuban \[ \] Yes, other Spanish/Hispanic/Latino \[ \] Print group. \[ \]  6. What is this person's race? Mark \( \) one or more races to indicate what this person considers himself/herself to be. \[ \] White \[ \] Black, African Am., or Negro \[ \] American Indian or Alaska Native \( \) Print name of enrolled or principal tribe. \[ \]  Asian Indian \[ \] Japanese \[ \] Native Hawaiian	
5.	Is this person Spanish / Hispanic / Latino? Mark  the "No" box if not Spanish / Hispanic / Latino.  No, not Spanish / Hispanic / Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano  Yes, Cuban Yes, other Spanish / Hispanic / Latino — Print group.  What is this person's race? Mark one or more races to indicate what this person considers himself/herself to be.  White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe.	<ul> <li>5. Is this person Spanish/Hispanic/Latino? Mark ☑ the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino ☐ Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano ☐ Yes, Cuban Yes, other Spanish/Hispanic/Latino — Print group. ☑</li> <li>6. What is this person's race? Mark ☒ one or more races to indicate what this person considers himself/herself to be. White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe. ☑</li> </ul>	
5.	Is this person Spanish / Hispanic / Latino? Mark  the "No" box if not Spanish / Hispanic / Latino.  No, not Spanish / Hispanic / Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano  Yes, Cuban Yes, other Spanish / Hispanic / Latino — Print group.  What is this person's race? Mark one or more races to indicate what this person considers himself / herself to be.  White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe.  Asian Indian Japanese Native Hawaiian Guamanian or Chamorro Filipino Vietnamese Samoan	5. Is this person Spanish/Hispanic/Latino? Mark \( \) the "No" box if not Spanish/Hispanic/Latino.  \[ \] No, not Spanish/Hispanic/Latino  Yes, Puerto Rican  Yes, Mexican, Mexican Am., Chicano  Yes, Cuban  Yes, other Spanish/Hispanic/Latino  Print group. \( \) \[ \] \[	
5.	Is this person Spanish / Hispanic / Latino? Mark  the "No" box if not Spanish / Hispanic / Latino.  No, not Spanish / Hispanic / Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano  Yes, Cuban Yes, other Spanish / Hispanic / Latino — Print group.  What is this person's race? Mark one or more races to indicate what this person considers himself / herself to be.  White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe.  Asian Indian Japanese Native Hawaiian Guamanian or Chamorro Filipino Vietnamese Samoan	5. Is this person Spanish/Hispanic/Latino? Mark \( \) the "No" box if not Spanish/Hispanic/Latino.  \[ \] No, not Spanish/Hispanic/Latino  Yes, Puerto Rican  Yes, Mexican, Mexican Am., Chicano  Yes, Cuban  Yes, other Spanish/Hispanic/Latino  Print group. \( \) \[ \] \[	
5.	Is this person Spanish / Hispanic / Latino? Mark  the "No" box if not Spanish / Hispanic / Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano  Yes, Cuban Yes, other Spanish / Hispanic / Latino  Print group.   What is this person's race? Mark one or more races to indicate what this person considers himself / herself to be.  White Black, African Am., or Negro  American Indian or Alaska Native — Print name of enrolled or principal tribe.  Asian Indian Japanese  Native Hawaiian  Guamanian or Chamorro  Guamanian or Chamorro  Hilipino  Vietnamese  Samoan  Other Asian — Print race.  Other Pacific Islander — Print race.	5. Is this person Spanish/Hispanic/Latino? Mark  the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano  Yes, Cuban Yes, other Spanish/Hispanic/Latino — Print group.  6. What is this person's race? Mark  one or more races to indicate what this person considers himself/herself to be. White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe. Asian Indian Japanese  Native Hawaiian Chinese  Korean  Guamanian or Chamorro Filipino Vietnamese  Samoan Other Asian — Print race.  Other Pacific Islander — Print race.	

D-2 Questionnaire

1.	Person 4  Information about children helps your community plan for child care, education, and recreation.  What is Person 4's name? Print name below.  Last Name	1.	Person 5  Knowing about age, race, and sex helps your community better meet the needs of everyone.  What is Person 5's name? Print name below.  Last Name
2.	How is this person related to Person 1? Mark  ONE box.  Husband/wife	2.	How is this person related to Person 1? Mark  ONE box.    Husband/wife
3.	What is this person's sex? Mark 🗵 ONE box.	3.	What is this person's sex? Mark X ONE box.
4.	Male Female  What is this person's age and what is this person's date of birth?  Print numbers in boxes.  Age on April 1, 2000 Month Day Year of birth	4.	Male Female  What is this person's age and what is this person's date of birth?  Print numbers in boxes.  Age on April 1, 2000 Month Day Year of birth
→	NOTE: Please answer BOTH Questions 5 and 6.	→	NOTE: Please answer BOTH Questions 5 and 6.
5.	Is this person Spanish/Hispanic/Latino? Mark  the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano Yes, Cuban Yes, other Spanish/Hispanic/Latino — Print group.	5.	Is this person Spanish/Hispanic/Latino? Mark  the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano Yes, Cuban Yes, other Spanish/Hispanic/Latino — Print group.
6.	What is this person's race? Mark ☒ one or more races to indicate what this person considers himself/herself to be.  White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe. ▼  Asian Indian	6.	What is this person's race? Mark ☑ one or more races to indicate what this person considers himself/herself to be.  ☐ White ☐ Black, African Am., or Negro ☐ American Indian or Alaska Native — Print name of enrolled or principal tribe.  ☐ Asian Indian ☐ Japanese ☐ Native Hawaiian ☐ Chinese ☐ Korean ☐ Guamanian or Chamorro ☐ Filipino ☐ Vietnamese ☐ Samoan ☐ Other Asian — Print race.  ☐ Other Pacific Islander — Print race.  ☐ Some other race — Print race.  ☐ Some other race — Print race.
7	If more people live here, continue with Person 5.	7	If more people live here, continue with Person 6.
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Questionnaire D-3

	Person 6  Your answers help your community plan for the future.
1.	What is Person 6's name? Print name below.  Last Name
	First Name MI
	_
2.	How is this person related to Person 1? Mark ☑ ONE box.  ☐ Husband/wife ☐ If NOT RELATED to Person 1:  ☐ Natural-born son/daughter ☐ Roomer, boarder ☐ Adopted son/daughter ☐ Housemate, roommate ☐ Stepson/stepdaughter ☐ Unmarried partner ☐ Brother/sister ☐ Foster child ☐ Father/mother ☐ Other nonrelative ☐ Grandchild ☐ Parent-in-law ☐ Son-in-law/daughter-in-law
	Other relative — Print
3.	what is this person's sex? Mark 🗷 ONE box.
٥.	Male Female
4.	What is this person's age and what is this person's date of birth?  Age on April 1, 2000  Month  Day  Year of birth
<b>→</b> 5.	NOTE: Please answer BOTH Questions 5 and 6.  Is this person Spanish/Hispanic/Latino? Mark  the "No" box if not Spanish/Hispanic/Latino.  No, not Spanish/Hispanic/Latino  Yes, Puerto Rican Yes, Mexican, Mexican Am., Chicano Yes, Cuban Yes, other Spanish/Hispanic/Latino — Print group.
6.	What is this person's race? Mark ✓ one or more races to indicate what this person considers himself/herself to be.  White Black, African Am., or Negro American Indian or Alaska Native — Print name of enrolled or principal tribe.   ▼
	Asian Indian       ☐ Japanese       ☐ Native Hawaiian         ☐ Chinese       ☐ Korean       ☐ Guamanian or Chamorro         ☐ Filipino       ☐ Vietnamese       ☐ Samoan         ☐ Other Asian       — Print race.  ☐         ☐ Other Pacific Islander       — Print race.  ☐
	☐ Some other race — Print race.   ✓
<b>→</b>	If more people live here, list their names on the

Please turn to go to last page.

Form D-1

lives in this house or apartment, please list the others below. You may be contacted by the Census Bureau for the same information about these people.	10 minutes to complete, including the time for reviewing the instructions and answers.  Comments about the estimate should be directed to the Associate Director for Finance and Administration, Attn: Paperwork Reduction Project
Person 7 — Last Name	0607-0856, Room 3104, Federal Building 3,
	Bureau of the Census, Washington, DC 20233.
First Name MI	Respondents are not required to respond to any information collection unless it displays a valid
	approval number from the Office of Management and Budget.
Person 8 — Last Name	
First Name MI	Thank you for
	completing your official
Person 9 — Last Name	U.S. Census 2000 form.
First Name MI	
Person 10 — Last Name	
First Name MI	
First Name MI	
First Name MI	
Person 11 — Last Name	FOR OFFICE USE ONLY

Questionnaire D-5



**If you need help completing this form,** call 1-800-471-9424 between 8:00 a.m. and 9:00 p.m., 7 days a week. The telephone call is free.

**TDD** — Telephone display device for the hearing impaired. Call 1-800-582-8330 between 8:00 a.m. and 9:00 p.m., 7 days a week. The telephone call is free.

**¿NECESITA AYUDA?** Si usted necesita ayuda para completar este cuestionario llame al 1-800-471-8642 entre las 8:00 a.m. y las 9:00 p.m., 7 días a la semana. La llamada telefónica es gratis.

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D–6 Questionnaire

# Appendix E. Data Products and User Assistance

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Census 2000 Data Products	E-1
Census 2000 Maps and Geographic Products	E-3
Reference Materials	E-4
Sources of Assistance	E-4

#### **CENSUS 2000 DATA PRODUCTS**

The decennial census yields a wealth of data, which have virtually unlimited applications. A comprehensive data program offers census information on the Internet, in electronic media (CD-ROM/DVD), and in print. A complete list of Census 2000 data products, with their release status, is available at http://www.census.gov/population/www/censusdata/c2kproducts.html.

Detailed results of Census 2000 are contained in a series of five summary files. These are available on the Internet and on CD-ROM or DVD. In addition, three series of reports derived from these files are available in print and in Portable Document Format (PDF) on the Internet.

#### **Internet and CD-ROM/DVD Products**

Census 2000 data are available at several locations on the Census Bureau's Web site. The Census 2000 Gateway page provides links to Census 2000 data, information, and reference materials. It is accessed from the Census Bureau's home page (www.census.gov) or at http://www.census.gov/main/www/cen2000.html. Links from the Gateway page include American FactFinder®; State and County QuickFacts; other prepared Census 2000 tables, including rankings and comparisons; reference materials; user updates; and Census in the Schools.

American Factfinder (factfinder.census.gov) is the most comprehensive source of Census 2000 data, providing all summary file tables for all levels of census geography. Quick tables (single geography tables) and geographic comparison tables (data for more than one geographic area) are also available on American FactFinder.

Most Census 2000 tabulations are also available on CD-ROM and/or DVD. Software is included on the DVDs and most CDs. These may be ordered by phone through the Census Bureau's Customer Services Center on 301-763-4636, or via e-commerce by selecting Catalog from the Census Bureau's home page. For more information on the products and ordering options, access the Census Catalog's product order form at https://catalog.mso.census.gov.

Census 2000 Redistricting Data (Public Law 94-171) Summary File. The first Census 2000 data files released provide the data required for local redistricting. The data include tabulations of 63 race categories, cross-tabulated by Hispanic or Latino and not Hispanic or Latino for the total population and the population 18 years old and over. These tabulations are presented for areas as small as blocks, census tracts, and voting districts. They are available through the Internet (American FactFinder) and as a CD-ROM series (state files). In American FactFinder (factfinder.census.gov), all redistricting data tables are available by selecting Data Sets on the FactFinder main page. FactFinder also has one quick table and one geographic comparison table based on this file.

**Summary File 1 (SF 1).** This file presents counts and basic cross-tabulations of information collected from all people and housing units. This information includes age, sex, race, Hispanic or Latino origin, household relationship, and whether the residence is owned or rented. Data are available down to the block level for many tabulations, but only to the census-tract level for others. Summaries are included for other geographic areas, such as ZIP Code® Tabulation Areas

(ZCTAs<sup>™</sup>) and Congressional Districts (106th Congress). There are individual state files and two national files in this series. The final national file provides the first available urban and rural data. The complete Summary File 1 is available on the Internet (American FactFinder) and on CD-ROM/DVD.

Additional tables derived from this summary file are also available on the Census Bureau's Internet site. These can be located through the Census 2000 Gateway page at http://www.census.gov/main/www/cen2000.html. Related products include a demographic profile that provides a snapshot of the geographic area, quick tables, geographic comparison tables, and two printed report series, Summary Population and Housing Characteristics (PHC-1) and Population and Housing Unit Counts (PHC-3).

**Summary File 2 (SF 2).** This file presents data similar to the information included in Summary File 1, but the tables in this file are iterated for a selected list of race and Hispanic or Latino categories and for American Indian and Alaska Native tribes. These data are shown down to the census tract level for up to 250 race and ethnic categories that meet a specified minimum population size threshold of 100 in a geographic area. The complete SF 2 is available on the Internet (American FactFinder) and on CD-ROM/DVD. American FactFinder also offers various quick tables and geographic comparison tables derived from SF 2.

**Summary File 3 (SF 3).** This file is the first release of the information collected on a sample basis. It includes data on income, educational attainment, poverty status, home value, and population totals for foreign born and ancestry groups. Data are provided down to the block group level for many tabulations but only to the census tract level for others. SF 3 also includes data by ZCTAs and Congressional Districts (106th Congress).

Data for each state and a national file are available on the American Factfinder and on CD-ROM/DVD. Related products include a three-page demographic profile available on the Internet, various quick tables and geographic comparison tables available through American Factfinder, and a printed report series, Summary Social, Economic, and Housing Characteristics (PHC-2).

**Summary File 4 (SF 4).** This file includes tabulations of the population and housing data collected from a sample of the population. Just as in Summary File 2, the tables in SF 4 are iterated for a selected list of race and Hispanic or Latino origin groups and for American Indian and Alaska Native tribes. Tables are also iterated for 86 ancestry groups. The file is available on the Internet (American FactFinder) and on CD-ROM/DVD. American FactFinder also offers various quick tables and geographic comparison tables derived from Summary File 4.

**Microdata.** Microdata products allow users to prepare their own customized tabulations and cross tabulations of most population and housing subjects, using specially prepared microdata files. These files are the actual responses to census questionnaires, but with names or addresses removed and the geography sufficiently broad to protect confidentiality. Microdata are available on CD-ROM/DVD and may be available for query via the Internet.

*Public Use Microdata Sample (PUMS) Files.* There are two PUMS files: a 1-percent sample for developing tabulations for metropolitan areas and a 5-percent sample that provides tabulations for state and substate areas. Both files are available on CD-ROM/DVD.

Advanced Query Function. Tabulations can be prepared online using the full database of individual responses, subject to restrictions and filters required to protect the confidentiality of individual responses. The Internet availability of this function is subject to policy decisions on access and confidentiality.

#### **Printed Reports and Profiles**

There are three series of printed reports with one report per state and a national summary volume. These reports are sold through the U.S. Government Printing Office. Much of the information in these series is available earlier in other data products. For release and ordering information, see the Census Catalog (https://catalog.mso.census.gov/).

Profiles and other data tables are generally available on the Internet. Printed copies of the profiles are offered as a print-on-demand product. Contact the Customer Services Center (301-763-4636) for pricing and availability.

**Summary Population and Housing Characteristics (PHC-1).** This publication series includes information on the 100-percent population and housing subjects. The data are available for the United States, regions, divisions, states, counties, county subdivisions, places, metropolitan areas, urbanized areas, American Indian and Alaska Native areas, and Hawaiian home lands. This series is comparable to the 1990 CPH-1 report series, Summary Population and Housing Characteristics. The series is also available in PDF format on the Internet.

**Summary Social, Economic, and Housing Characteristics (PHC-2).** This publication series includes information on the sample population and housing subjects. Data are shown for the same geographic areas as Summary Population and Housing Characteristics (PHC-1) described above. This series is comparable to the 1990 CPH-5 report series, Summary Social, Economic, and Housing Characteristics. The series is available in PDF format on the Internet.

**Population and Housing Unit Counts (PHC-3).** This publication series includes population and housing unit counts for Census 2000 as well as the 1990 and earlier censuses. Information on area measurements and population density is included. There is one printed report for each state, the District of Columbia, and Puerto Rico plus a national report. The series is available in PDF format on the Internet.

**Profiles and Other Data Tables.** Demographic profiles, quick tables, and geographic comparison tables include predefined sets of data to meet the needs of the majority of data users. They are convenient and readily available sources when moderate subject and geographic detail is needed. Demographic profiles (PDF) are available on the Census Bureau's Web site. Demographic profiles as well as quick tables and geographic comparison tables are available through American FactFinder.

#### **CENSUS 2000 MAPS AND GEOGRAPHIC PRODUCTS**

A variety of maps, boundary files, and other geographic products are available to help users locate and identify geographic areas. These products are available in various media, such as the Internet, CD-ROM, DVD, and, for maps, as print-on-demand products. A complete description of Census 2000 geographic products and resources is available at www.census.gov/geo/www/.

**TIGER/Line Files.** These files contain geographic boundaries and codes, streets, address ranges, and coordinates for use with commercially available geographic information systems (GIS) for mapping and other applications.

**Census Block Maps.** These maps show the boundaries, names, and codes for American Indian and Alaska Native areas and Hawaiian home lands, states, counties, county subdivisions, places, census tracts, and census blocks. This map series is also produced by specified governmental units (e.g., American Indian/Alaska Native areas, Hawaiian home lands, counties, incorporated places, and functioning minor civil divisions).

**Census Tract Outline Maps.** These county maps provide the boundaries and numbers of census tracts and names of features underlying the boundaries. They also show the boundaries, names, and codes for American Indian/Alaska Native areas, counties, county subdivisions, and places.

**Reference Maps.** This series shows the boundaries for tabulation areas including states, counties, American Indian reservations, county subdivisions (minor civil divisions (MCDs)/census county divisions (CCDs)), incorporated places, and census designated places. This series includes the state and county subdivision outline maps, urbanized area maps, and metropolitan area maps. These maps vary from page size to wall size.

**Generalized Boundary Files.** These files are designed for use in a geographic information system (GIS) or similar computer mapping software. Boundary files are available for most levels of census geography.

**Thematic Maps.** These colorful maps display Census 2000 data on such topics as population density and population distribution.

# REFERENCE MATERIALS

The reference materials for Census 2000 are available at the Census Bureau's Internet site (www.census.gov) or, in the case of CD-ROMs/DVD, on the product itself.

**Census 2000 Gateway.** This page provides descriptions and links to Internet tables and reference materials relating to Census 2000. It is available at http://www.census.gov/main/ www/cen2000.html or by selecting the Census 2000 logo on the Census Bureau's home page (www.census.gov).

**Census Online Catalog.** Census 2000 data products, their availability, and their prices are described in the Catalog portion of the Web site. The catalog can be reached from the Census Bureau home page by selecting Catalog from the side bar or at https://catalog.mso.census.gov.

**American FactFinder®.** American FactFinder (AFF) is the system that presents, via the Internet, comprehensive data from Census 2000 and other Census Bureau data programs. Reference materials about the data, including subject and geographic glossaries, are included. In addition, AFF presents reference maps, which provide boundaries and features for the requested geography, and thematic maps, which offer data in a map presentation.

All data and all geography available in the Census 2000 Summary Files are accessible through AFF. FactFinder is available through the Census Bureau's home page (www.census.gov) or from factfinder.census.gov.

**Technical Documentation.** Technical documentation includes an abstract, a how-to-use chapter, the table layouts, the summary level sequence chart, the subject and geographic glossaries, accuracy of the data, and the data dictionary. CD-ROM and DVD products include the relevant technical documentation file on the disc. Technical documentation for files released on CD-ROM/DVD is also available on the Web site at http://www.census.gov/prod/cen2000/.

# **SOURCES OF ASSISTANCE**

**U.S. Census Bureau.** Census 2000 CD-ROM and DVD products are available through the Census Bureau's Customer Services Center. These can be ordered via e-commerce from the Census Catalog at https://catalog.mso.census.gov/ or by telephoning Customer Services at 301-763-4636.

The Census Bureau also has an active customer information program in each of its 12 regions. This program, called the Partnership and Data Services (PDS) program, provides information about Census Bureau statistics and offers training and assistance to data users. The Partnership and Data Services specialists in the Census Bureau's 12 Regional Offices answer thousands of questions each year. State coverage for each region as well as contact information is available at http://www.census.gov/contacts/www/c-regoff.html.

**Superintendent of Documents, U.S. Government Printing Office (GPO).** The GPO (www.gpo.gov) handles the sale of most of the federal government's publications, including Census 2000 reports. For the current information on ordering publications from GPO, see http://bookstore.gpo.gov/prf/ordinfo.html.

**State Data Centers.** The Census Bureau furnishes data products, training in data access and use, technical assistance, and consultation to all states, the District of Columbia, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands. State Data Centers (SDCs) offer publications for reference, specially prepared reports, maps, other

products, and assistance to data users. A component of the program is the Business and Industry Data Center (BIDC) Program, which supports the business community by expanding SDC services to government, academic, and nonprofit organizations that directly serve businesses. For a list of SDC/BIDCs, including their services and their Web sites, access http://www.census.gov/sdc/www/.

**Census Information Centers.** The Census Information Center (CIC) program is a cooperative activity between the Census Bureau and national nonprofit organizations representing interests of racial and ethnic communities. The program objective is to make census information and data available to the participating organizations for analysis, policy planning, and for further dissemination through a network of regional and local affiliates. For a listing of the organizations and the contacts, access http://www.census.gov/clo/www/cic.html.

The Census Bureau's Customer Liaison Office administers both the SDC and CIC programs. For more information on programs of that office, access http://www.census.gov/clo/www/clo.html.

# Appendix F. Maps

See the separate *Population and Housing Unit Counts* reports.

# Appendix G. Accuracy of the Data

#### MASTER ADDRESS FILE AND ENUMERATION PROCEDURES

The majority of addresses in the United States are in what is known for census purposes as the mailout/mailback area, which in general consists of areas with predominantly city-style mailing addresses. The original source of addresses on the Master Address File (MAF) for the mailout/mailback areas was the 1990 Census address file, the Address Control File (ACF). The first update to the ACF addresses is a U.S. Postal Service (USPS) Delivery Sequence File (DSF) of addresses. The November 1997, September 1998, November 1999, and April 2000 DSFs were incorporated into the MAF.

Until shortly before the census, the ACF addresses and the November 1997 and September 1998 residential DSF addresses constituted the MAF. These addresses were tested against Census Bureau geographic information to determine their location at the census block level. The geographic information is maintained in the Census Bureau's Topologically Integrated Geographic Encoding Referencing (TIGER®) system. When an address on the MAF can be uniquely matched to the address range in TIGER® for a street segment that forms one of the boundaries of a particular block, the address is said to be geocoded to that block. Valid and geocoded addresses appeared on each address list used for a field operation.

The Block Canvass operation was the next major address list operation in the mailout/mailback areas for Census 2000, taking place in January through May 1999. There was a 100-percent canvass of every block. Every geocoded address was printed in a block-by-block address register, and Block Canvassing listers identified the addresses as verified as a housing unit (with possible corrections to the address); a delete (no such address); a duplicate, implying the unit exists elsewhere on the list with a different, unmatchable designation, such as a different street name or building name; uninhabitable; or nonresidential.

Occurring in approximately the same time frame as Block Canvassing was a cooperative address list check with local governmental units throughout the country, called Local Update of Census Addresses (LUCA) 98. In LUCA 98, the participating governmental units received an address list and were asked for input mostly on added units but also on deleted units and corrected street names or directionals. The outcome of this operation was similar to that of Block Canvassing; units were added to and deleted from blocks, and address corrections were made.

The Decennial Master Address File (DMAF) was created in July 1999. This was the file used for printing most of the Census 2000 questionnaires. In the mailout/mailback areas, the operations that had yielded housing units and their status before this initial printing stage were the ACF, the November 1997 DSF, the September 1998 DSF, LUCA 98, and Block Canvassing.

Following the creation of the initial DMAF, there were updates to the DMAF. Addresses were added by the November 1999, February 2000, and April 2000 DSFs. Address update operations that occurred subsequent to the creation of the initial DMAF were the LUCA 98 field verification and appeal processes. Units receiving a conflicting status from the Block Canvassing and the LUCA 98 operation were sent for field verification by the Census Bureau; the results of the field verification were sent to the governmental units. At this stage the governmental unit could appeal the Census Bureau's findings for particular units. At an appeal, the Census Bureau and the governmental unit submitted their evidence of the status of a housing unit for independent review, and a ruling was issued. Both the field verification and the appeal process had the potential to change the status of a housing unit.

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A final operation in mailout/mailback areas that added addresses before Census Day was the New Construction operation, another cooperative effort with participating governmental units. This operation used governmental units' local knowledge to identify new housing units in February and March of 2000.

After mailout/mailback, the second most common method of questionnaire delivery was update/leave. The address list for update/leave areas was constructed during a Census Bureau field operation called Address Listing rather than from the ACF and DSF, because the addresses are primarily noncity-style. Census employees were sent to the field with maps of their assignment areas and were instructed to record the city-style address, noncity-style address or location description, or possibly some combination of the above, for every housing unit. In addition, the location of the unit was noted on the census map with what is known as a map spot. This operation took place in the fall of 1998.

At the completion of the processing of the address listing data, it was possible to tabulate the number of housing units in each block. Because the housing units in these areas may have non-standard mailing addresses and may be recorded in census files solely with a location description, the governmental units participating in the local review operation in these areas were sent lists of housing unit counts by block. This operation was called LUCA 99. When the LUCA 99 participant disagreed with a Census block count, that block was sent out for LUCA 99 recanvassing, in which census employees were redeployed to make updates to the address list. There was also a LUCA 99 appeal process for settling housing unit status discrepancies, which has the potential to add units to the address list. The LUCA 99 recanvassing and LUCA 99 appeal process took place at various times during the updating of the DMAF. Most of the LUCA 99 entities had their recanvassing results processed before creation of the initial DMAF, but many did not. There were DMAF updates designed specifically for getting late recanvassing and appeal results added into the census files in time for USPS delivery of a questionnaire.

The last address list-building operation in the update/leave areas was the Update/Leave operation itself. This operation was responsible for having a census questionnaire hand-delivered at every housing unit. In the process the MAF and the maps were updated.

In the most remote areas of the United States, the housing units were listed at the time of Census 2000 as the persons within them were enumerated. These operations were called List/Enumerate and Remote Alaska enumeration. This was the only source of addresses in these areas. All housing units were map spotted at the time of enumeration.

For some other regions of the country, where the address list had already been created, it was thought that an enumeration of the population would be more successful than mailback of the forms. Here an update/enumerate operation was instituted. There are two types of update/enumerate areas. The urban areas had passed through all the mailout/mailback operations up through the point of the creation of the initial DMAF, and the rural areas had passed through Address Listing, and sometimes LUCA 99, by the time of the creation of the initial DMAF. Because of these separate paths taken, it was necessary to distinguish between the urban and rural update/enumerate areas.

Another special enumeration is urban update/leave, which took place in areas where mail delivery was considered to be problematic. The addresses had passed through all the operations of the mailout/mailback areas up through the creation of the initial DMAF, but the area was visited by enumerators during the census, and, therefore, additions, deletions, and corrections to the address list were made.

People who did not receive a questionnaire at their house could submit a Be Counted Form, or they could call Telephone Questionnaire Assistance and have their information collected over the phone. Addresses from these operations that did not match those already on the DMAF were visited in a Field Verification operation to determine if they exist. Verified addresses were added to the address list.

One more source of information about housing units listed on the DMAF is the Nonresponse Follow-up (NRFU) operation. During NRFU, enumerators follow up on units that had not returned a

preaddressed census form. Units in NRFU can possibly be deleted or deemed vacant. At the same time, units that do not appear on the address list or maps could be added and enumerated concurrently. This operation occurs in mailout/mailback, update/leave, and urban update/leave areas.

#### **SERVICE-BASED ENUMERATION**

Service-Based Enumeration (SBE) was designed to account for persons without usual residence that use service facilities (i.e., shelters, soup kitchens, and mobile food vans). Only people using the service facility on the interview day were enumerated. In addition, people enumerated in targeted nonshelter outdoor locations and persons without usual residence that filed Be-Counted Forms (BCF) augmented the SBE count. The final total was included in the total population. This component of the enumeration should *not* be interpreted as a complete count of the homeless population.

#### CONFIDENTIALITY OF THE DATA

The Census Bureau has modified some data in this data release to protect confidentiality. Title 13, United States Code, Section 9, prohibits the Census Bureau from publishing results in which an individual's data can be identified.

The Census Bureau's internal Disclosure Review Board sets the confidentiality rules for all data releases. A checklist approach is used to ensure that all potential risks to the confidentiality of the data are considered and addressed. Questions about confidentiality may be addressed to: webmaster@census.gov Attention Policy.

#### Title 13, United States Code

Title 13 of the United States Code authorizes the Census Bureau to conduct censuses and surveys. Section 9 of the same Title requires that any information collected from the public under the authority of Title 13 be maintained as confidential. Section 214 of Title 13 and Sections 3559 and 3571 of Title 18 of the United States Code provide for the imposition of penalties of up to 5 years in prison and up to \$250,000 in fines for wrongful disclosure of confidential census information.

#### **Disclosure Limitation**

Disclosure limitation is the process for protecting the confidentiality of data. A disclosure of data occurs when someone can use published statistical information to identify an individual that has provided information under a pledge of confidentiality. Using disclosure limitation procedures, the Census Bureau modifies or removes the characteristics that put confidential information at risk for disclosure. Although it may appear that a table shows information about a specific individual, the Census Bureau has taken steps to disguise the original data while making sure the results are still useful.

# **Data Swapping**

Data swapping is a method of disclosure limitation designed to protect confidentiality in tables of frequency data (the number or percentage of the population with certain characteristics). Data swapping is done by editing the source data or exchanging records for a sample of cases when creating a table. A sample of households is selected and matched on a set of selected key variables with households in neighboring geographic areas that have similar characteristics (such as the same number of adults and same number of children). Because the swap often occurs within a neighboring area, there is no effect on the marginal totals for the area or for totals that include data from multiple areas. Because of data swapping, users should not assume that tables with cells having a value of one or two reveal information about specific individuals.

#### **NONSAMPLING ERROR**

In any large-scale statistical operation, such as Census 2000, human- and computer-related errors occur. These errors are commonly referred to as nonsampling errors. Such errors include not enumerating every household or every person in the population, not obtaining all required information from the respondents, obtaining incorrect or inconsistent information, and recording information incorrectly. In addition, errors can occur during the field review of the enumerators' work, during clerical handling of the census questionnaires, or during the electronic processing of the questionnaires.

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While it is impossible to completely eliminate nonsampling error from an operation as large and complex as the decennial census, the Census Bureau attempts to control the sources of such error during the collection and processing operations. Described below are the primary sources of nonsampling error and the programs instituted to control this error in Census 2000. The success of these programs, however, was contingent upon how well the instructions actually were carried out during the census. As part of the Census 2000 evaluation program, both the effects of these programs and the amount of error remaining after their application will be evaluated.

# **Types of Nonsampling Error**

**Nonresponse.** Nonresponse to particular questions on the census questionnaire or the failure to obtain any information for a housing unit allows for the introduction of bias into the data because the characteristics of the nonrespondents have not been observed and may differ from those reported by respondents. As a result, any imputation procedure using respondent data may not completely reflect these differences either at the elemental level (individual person or housing unit) or on the average. Some protection against the introduction of large biases is afforded by minimizing nonresponse. Characteristics for the nonresponses were imputed by using reported data for a person or housing unit with similar characteristics.

**Respondent and enumerator error.** The person answering the mail questionnaire for a household or responding to the questions posed by an enumerator could serve as a source of error. Although the question wording was extensively tested in several experimental studies prior to the census, the mail respondent may overlook or misunderstand a question, or answer a question in a way that cannot be interpreted correctly by the data capture system. The enumerator may also misinterpret or otherwise incorrectly record information given by a respondent, may fail to collect some of the information for a person or household, or may collect data for households that were not designated as part of the sample. To control problems such as these with the field enumeration, the work of enumerators was monitored carefully. Field staff were prepared for their tasks by using standardized training packages that included hands-on experience in using census materials. A sample of the households interviewed by each enumerator was reinterviewed to control for the possibility of fabricated data being submitted by an enumerator.

**Processing error.** The many phases involved in processing the census data represent potential sources for the introduction of nonsampling error. The processing of the census questionnaires completed by enumerators included field review by the crew leader, check-in, and transmittal of completed questionnaires. No field reviews were done on the mail return questionnaires for this census. Error may also be introduced by the misinterpretation of data by the data capture system or the failure to capture all the information that the respondents or enumerators provided on the forms. Write-in entries go through coding operations, which may also be a source of processing error in the data. Many of the various field, coding, and computer operations undergo a number of quality assurance and quality control checks to help ensure their accurate application.

# **Reduction of Nonsampling Error**

To reduce various types of nonsampling errors, a number of techniques were implemented during the planning, development of the mailing address list, data collection, and data processing activities. Quality assurance methods were used throughout the data collection and processing phases of the census to improve the quality of the data. A reinterview program was implemented to minimize the errors in the data collection phase for enumerator-filled questionnaires.

Several coverage improvement programs were implemented during the development of the census address list and census enumeration and processing to minimize undercoverage of the population and housing units. These programs were developed based on experience from the 1990 census and results from the Census 2000 testing cycle.

Be Counted questionnaires, unaddressed forms requesting all short form items, plus a few additional items were available in public locations for people who believed they were not otherwise counted.

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- An introductory letter was sent to all mailout/mailback addresses and many addresses in update/leave areas prior to the mailing of the census form. A reminder postcard was also sent to these addresses.
- Forms in Spanish or other languages were mailed to those who requested them by returning the introductory letter.
- A well-publicized, toll-free telephone number was available to answer questions about the forms. Also, responses of households who had received a short form could be taken over the phone.
- Under the Local Update of Census Addresses (LUCA) program, many local governments had the opportunity to address specific concerns about the accuracy and completeness of the Master Address File before mailings began.

# **Resolving Multiple Responses**

With multiple ways for people to initiate their enumeration, as well as the field follow-up operations, it was very likely that some people would be enumerated more than once. A special computer process was implemented to control the extent of this type of nonsampling error by resolving situations where more than one form was received from an address. The process consisted of several steps. Addresses that had more than one viable return were analyzed. Housing data from one form were chosen as the housing data to use in subsequent census processing. Within each of these addresses, comparisons of the person records on each return were made against the person records on the other returns at the same address. People found to have been included on two or more different returns were marked as such, and only one of the person records was used in subsequent processing.

#### **IMPUTING HOUSING UNIT STATUS AND POPULATION COUNTS**

Following the completion of all data collection activities for Census 2000, a computer file of census housing units was created. For some housing units, information about whether the housing unit was occupied, vacant, or nonexistent was not available. These housing units were defined as "unclassified." Unclassified housing units were assigned a housing unit status of occupied, vacant, or nonexistent by assigning the status of a nearby housing unit to the unclassified unit. Additionally, the number of persons living in some housing units known to be occupied was unknown. Housing units with unknown population were assigned the population count of a nearby occupied housing unit. All other data for these housing units was assigned via substitution or allocation during the editing of unacceptable data described in the next section.

#### **EDITING OF UNACCEPTABLE DATA**

The objective of the processing operation was to produce a set of data that describes the population as accurately and clearly as possible. In a major change from past practice, the information on Census 2000 questionnaires generally was not edited during field data collection nor during data capture operations for consistency, completeness, and acceptability. Enumerator-filled questionnaires were reviewed by census crew leaders and local office clerks for adherence to specified procedures. No clerical review of mail return questionnaires was done to ensure that the information on the form could be data captured, nor were households contacted as in previous censuses to collect data that were missing from census returns.

Most census questionnaires received by mail from respondents as well as those filled by enumerators were processed through a new contractor-built image scanning system that used optical mark and character recognition to convert the responses into computer files. The optical character recognition, or OCR, process used several pattern and context checks to estimate accuracy thresholds for each write-in field. The system also used "soft edits" on most interpreted numeric write-in responses to decide whether the field values read by the machine interpretation were acceptable. If the value read had a lower than acceptable accuracy threshold or was outside of the soft edit range, the image of the item was displayed to a keyer, who then entered the response.

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To control the creation of possibly erroneous people from questionnaires completed incorrectly or containing stray marks, an edit on the number of people indicated on each mail return and enumerator-filled questionnaire was implemented as part of the data capture system. Failure of this edit resulted in the review of the questionnaire image at a workstation by an operator, that identified erroneous person records and corrected OCR interpretation errors in the population count field.

At Census Bureau headquarters, the mail response data records were subjected to a computer edit that identified households exhibiting a possible coverage problem and those with more than six household members—the maximum number of persons who could be enumerated on a mail questionnaire. Attempts were made to contact these households on the telephone to correct the count inconsistency and to collect the census data for those people for whom there was no room on the questionnaire.

Incomplete or inconsistent information on the questionnaire data records was assigned acceptable values using imputation procedures during the final automated edit of the collected data. Imputations, or computer assignments of acceptable codes in place of unacceptable entries or blanks, are needed most often when an entry for a given item is lacking or when the information reported for a person on that item is inconsistent with other information for that person. This process is known as allocation. As in previous censuses, the general procedure for changing unacceptable entries was to assign an entry for a person that was consistent with entries for persons with similar characteristics. The assignment of acceptable codes in place of blanks or unacceptable entries enhances the usefulness of the data. Allocation rates for census items are made available with the published census data.

Another way corrections were made during the computer editing process was through substitution; that is, the assignment of a full set of characteristics for people in a household. When there was an indication that a household was occupied by a specified number of people, but the questionnaire contained no information for the people within the household or the occupants were not listed on the questionnaire, a previously accepted household of the same size was selected as a substitute, and the full set of characteristics for the substitute was duplicated. Housing characteristics are not substituted. Table H18 in Summary File 1, Occupied Housing Units Substituted, represents a count of occupied housing units into which all persons have been substituted.

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