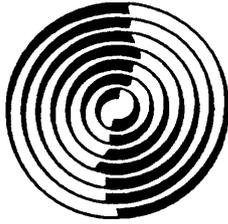


U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

1990 Census of
Population and Housing

CENSUS '90



**Public Use
Microdata
Samples**
United States

TECHNICAL
DOCUMENTATION

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DOCUMENTATION

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The Technical Services Division, **C. Thomas DiNenna**, Chief, designed, developed, deployed, and produced automated technology for census data processing.

1990 Census of
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**Public Use
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DOCUMENTATION**

Issued January 1993



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For additional information concerning purchasing the files, contact Data User Services Division, Customer Services Branch, Bureau of the Census, Washington, DC 20233. Telephone: 301-763-4100.

For additional information concerning the technical documentation or file content, contact Data User Services Division, Microdata Access Branch, Bureau of the Census, Washington, DC 20233. Telephone: 301-763-2005.

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CITATION

Census of Population and Housing, 1990:
 Public Use Microdata Samples [machine-readable data files]
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TYPE OF FILE

Microdata

UNIVERSE DESCRIPTION

All persons and housing units in the United States.

SUBJECT MATTER DESCRIPTION

Public Use Microdata Samples (PUMS) contain records representing 5% or 1% samples of the housing units in the U.S. and the persons in them. Selected group quarters persons are also included. The file contains individual weights for each person and housing unit which, when applied to the individual records, expand the sample to the total population. Most population and housing items are listed below. Please see the Data Dictionary for a complete listing of variables and recodes. Both the 5% and 1% samples have the same subject content and vary only in geographic composition of the Public Use Microdata Area (PUMA). A 3% elderly sample will be available later.

Items on the housing record include:

- Allocation Flags for Housing Items
- Bedrooms
- Condominium Status
- Contract Rent
- Cost of Utilities
- Family Income in 1989
- Family, Subfamily and Relationship Recodes

The user should note that there are limitations to many of these data. Please refer to the technical documentation provided with the Public Use Microdata Samples for a further explanation on the limitations of the data.

- Farm Status and Value
- Fire, Hazard, Flood Insurance
- Fuels Used
- Gross Rent
- House Heating Fuel
- Household Income in 1989
- Household Type
- Housing Unit Weight
- Kitchen Facilities
- Linguistic Isolation
- Meals Included in Rent
- Mortgage Status and Selected Monthly Owner Costs
- Plumbing Facilities
- Presence and Age of Own Children
- Presence of Subfamilies in Household
- Property Value
- Real Estate Taxes
- Rooms
- Sewage Disposal
- Source of Water
- State (Residence)
- Telephone in Housing Unit
- Tenure
- Units in Structure
- Vacancy Status
- Vehicles Available
- Year Householder Moved into Unit
- Year Structure Built

Items on the person record include:

- Ability to Speak English
- Age
- Allocation Flags for Population Items
- Ancestry
- Children Ever Born
- Citizenship
- Class of Worker
- Disability Status
- Educational Attainment
- Hispanic Origin
- Hours Worked
- Income in 1989 by Type
- Industry
- Language Spoken at Home
- Marital Status
- Means of Transportation
- Migration PUMA
- Migration State
- Military Status, Periods of Active Duty Military Service, Veteran Period of Service
- Mobility Status
- Occupation
- Person's Weight
- Personal Care Limitation
- Place of Birth
- Place of Work PUMA
- Place of Work State
- Poverty Status in 1989
- Race
- Relationship

School Enrollment and
Type of School
Time of Departure for Work
Travel Time to Work
Vehicle Occupancy

Weeks Worked in 1989
Work Status in 1989
Work Limitation Status
Year of Entry

the 1990 census. Some tables will be based on the 100-percent tabulations, others on the sample tabulations. [Scheduled for release in 1992-93.]

GEOGRAPHIC COVERAGE

Each PUMS file provides records for States and many of their geographic levels. The hierarchy is shown below: The 5% sample identifies every State and various subdivisions of States called "Public Use Microdata Areas", each with at least 100,000 persons. These PUMAs were primarily based on counties, and may be whole counties, groups of counties, and places. When these entities have more than 200,000 persons, PUMAs can represent parts of counties, places, etc. None of these PUMAs on the 5% sample crosses state lines.

On the other hand, the 1% sample was based primarily on metropolitan/nonmetropolitan areas, and contains PUMAs which were made from whole central cities, whole MSAs or PMSAs, MSA or PMSAs outside the central city, groups of MSAs or PMSAs, and groups of areas outside MSAs or PMSAs. When the areas have more than 200,000 persons, 1% PUMAs can represent parts of central cities, MSA/PMSAs, and so forth. 1% PUMAs may cross State lines and in that case State codes are not shown. See examples of PUMAs in figures 2-4.

RELATED PRINTED REPORTS

Since individual weights are provided on PUMS, most estimates derived from PUMS tabulations can be checked for reasonableness against other 1990 printed reports, STF's or microfiche produced from sample data.

Listed below are the 1990 census printed reports containing sample data from summary tape products STF 3 and STF 4 which may be used to verify estimates provided from PUMS files. These reports will be available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. An order form follows this abstract.

1990 CPH-3, *Population and Housing Characteristics for Census Tracts and Block Numbering Areas.* One report will be published for each metropolitan area (MA) and one for the non-metropolitan balance of each State, Puerto Rico and the U.S. Virgin Islands showing data for most of the population and housing subjects included in

1990 CPH-4, *Population and Housing Characteristics for Congressional Districts of the 103rd Congress.* A report for each State and the District of Columbia which provides both 100-percent and sample data for States, congressional districts, and, within congressional districts, counties, places of 10,000 or more inhabitants, county subdivisions of 10,000 or more inhabitants in 12 States, and American Indian and Alaska Native areas. [Scheduled for release in 1994.]

1990 CPH-5, *Summary Social, Economic, and Housing Characteristics.* These reports, issued for the United States, States, District of Columbia, Puerto Rico and the U.S. Virgin Islands, provide sample population and housing data for states and local government units, (i.e., counties, places, towns, and townships) other county subdivisions and American Indian and Alaska Native areas.

1990 CP-2, *Social and Economic Characteristics.* These reports are issued for the United States, States, District of Columbia, Puerto Rico, and the U.S. Virgin Islands. They focus on the population subjects collected on a sample basis in 1990. Data are shown for States (including summaries such as urban and rural), counties, places of 2,500 or more inhabitants, county subdivisions of 2,500 or more inhabitants in selected States, and the State portions of American Indian and Alaska Native areas. [Scheduled for release in 1993.]

1990 CP-2-1A, *Social and Economic Characteristics for American Indian and Alaska Native Areas.* Data are shown for American Indian and Alaska Native areas. [Scheduled for release in 1993.]

1990 CP-2-1B, *Social and Economic Characteristics for Metropolitan Areas.* Data are shown for MA's. [Scheduled for release in 1993.]

1990 CP-2-1C, *Social and Economic Characteristics for Urbanized Areas.* Data are shown for UAs.

1990 CP-3, *Population Subject Reports.* Thirty reports are planned covering populations subjects and subgroups. These include migration, income, and the older population. Geographic areas generally will include the United States, regions, and divisions; some reports may include data for highly populated area such as States, MA's, counties and large places. Scheduled for release in 1993.

1990 CH-2, *Detailed Housing Characteristics*.

These reports, issued for the United States, States, District of Columbia, Puerto Rico, and the U.S. Virgin Islands focus on the housing subjects collected on a sample basis in 1990. Data are shown for State (including summaries such as urban and rural), counties, places of 2,500 or more inhabitants, MCD's of 2,500 or more inhabitants in selected States, Alaska Native areas and the State portion of American Indian areas. [Scheduled for release in 1993.]

1990 CH-2-1A, *Detailed Housing Characteristics for American Indian and Alaska Native Areas*. Data are shown for American Indian and Alaska Native areas. [Scheduled for release in 1993.]

1990 CH-2-1B, *Detailed Housing Characteristics for Metropolitan Areas*. Data are shown for MA's. [Scheduled for release in 1993.]

1990 CH-2-1C, *Detailed Housing Characteristics for Urbanized Areas*. Data are shown for UA's. [Scheduled for release in 1993.]

1990 CH-3, *Housing Subject Reports*. Ten Housing subject reports are planned covering 1990 census items such as structural characteristics and space utilization. Geographic areas generally include the United States, regions, and divisions; some reports may include data for other highly populated geographic areas such as States, MA's, counties, and large places. [Scheduled for release in 1993.]

RELATED ELECTRONIC MEDIA PRODUCTS

PUMS data on compact disk-read only memory (CD-ROM) are issued after the all tape files are released. CENDATA, the Census Bureau's online system, carries PUMS Technical Documentation. STF 3 data are available also on CD-ROM and magnetic tape. Contact Customer Services (301-763-4100) for additional information on electronic media products.

FILE AVAILABILITY

PUMS files are provided for each State and the District of Columbia and are released on a State-by-State basis. All files and pricing information are available from Customer Services, Data User Services Division, Bureau of the Census, Washington, DC 20233. (See above for phone and FAX information.) A machine-readable data dictionary is included on the tape without charge. Options include 6250

or 1600 bpi, ASCII or EBCDIC, labeled or unlabeled. The files are also available on tape cartridges (IBM3480 or compatible format) for the same price. When ordering, please use the order form at the end of this Chapter.

Files for the individual States are priced according to the number of megabytes of data they contain; each megabyte is priced at \$1.25 regardless of the tape specifications. The minimum charge for a computer tape is \$175 for one or more files. See the enclosed order blank for prices of the various PUMS files.

Although a user can order a single file, we have packaged the files by census division for sale since many users order all of the states or at least states which border their state. Discount prices are available where all files in a group are paid for at the time of ordering. See order blank for specific prices.

RELATED REFERENCE MATERIALS

1990 Census Population and Housing Tabulation and Publication Program. This booklet provides descriptions of the data products available from the 1990 census. Available without charge from Customer Services (see above).

Census '90 Basics. This booklet provides a general overview of census activities and detailed information on census content, geographic areas, and products. Available without charge from Customer Services (see above).

Census ABC's-Applications in Business and Community. This booklet highlights key information about the 1990 census and illustrates a variety of ways the data can be used. Available without charge from Customer Services (see above).

A comprehensive *1990 Census of Population and Housing Guide* is available. It provides detailed information about all aspects of the census, a comprehensive glossary of census terms, and an index to summary tape files. Contact Customer Services for ordering information.

TECHNICAL DESCRIPTION

The file contains two record types a "housing" record and a "person" record each consisting of 231 characters of data. Each housing unit record is followed by a variable number of persons records, one for each occupant. Vacant housing units will have no person record, and selected persons in group quarters will have a dummy housing record and a person record.

The 5% (A) sample includes a separate file for each state. The 1% (B) sample includes a file for each State and a file containing PUMAs which cross State lines. The 3% (O) sample (elderly file) has the same geographic composition as the 5% sample, (but includes housing units with at least one person age 60 and over or group quarters persons age 60 and over.)

The block size for the files varies with each user's specifications, however the standard block size is 32,340 characters for 1990 PUMS.

SOFTWARE CONSIDERATIONS

The 1990 Public Use microdata files are a special type of nonrectangular file-hierarchical. That is, the file contains several record types each with different variables, rather than one gigantic record with all the variables. We release the PUMS in this format because of the tremendous amount of data contained in one record. The file is sorted to maintain the relationship between both record types.

Although these records are extremely large they can be handled by most statistical or report writing software. There are two basic record types: the housing unit record and the person record. For 1990, each of the records contains a serial number which links the persons in the housing unit to the proper housing unit record, so that a user no longer needs to worry about keeping the record sequence as the file was delivered.

In today's information processing environment, most standard statistical software packages are now capable of handling the file in either format: hierarchical or rectangular structure. Most software packages, such as SAS, SPSS, BMDP, and some relational data base systems, will in fact rectangularize hierarchical files. Further, the manuals accompanying most packages contain samples of code showing how to process the files. Several of the packages also have extract procedures already coded into the software.

The 1990 PUMS will be accompanied by electronic data dictionaries in a format which will allow the user to read in ASCII characters and prepare statements transforming the variables and their corresponding descriptions and values to the proper statements required by the software package of choice.

The files will be ASCII, with no special software appended, so as to be compatible with most software packages. But the technical documentation will include a section on "how to use this file", where software concerns

will be addressed. The user must be familiar with the processing system's limitations and the efficiency of the procedures within the software packages.

Users may also write their own code enabling them to perform custom tabulations on their system of choice.

Order Form (Prelim.): 1990 Public Use Microdata Samples on Computer Tape

Product Overview

The 1990 Public Use Microdata Samples (PUMS) contain individual records of responses to questionnaires with unique identifiers (names, addresses, etc.) removed so that the confidentiality of respondents is protected. These files, on computer tape, enable users to produce their own tabulations within the limits of the data provided. For 1990, the Bureau will produce PUMS for the United States and those outlying areas which meet a 100,000 minimum population size threshold. Currently, the standard PUMS products are the 5% and 1% samples for the United States and Puerto Rico, and a special 3% sample dealing specifically with the elderly population. The 5% and 1% samples are similar in content to the "A" and "B" files made available in 1980.

Besides the obvious difference in file size, the 5% and 1% files differ in the geography around which the files are constructed. For example, the Public Use Microdata Area (PUMA) is the lowest level of geography identified on any PUMS file. The 5% sample is basically a county level file; that is the PUMA can be a single county (county equivalent), a group of counties, a place, or county/place parts if that county had more than 200,000 persons. On the other hand, the 1% sample is basically a metropolitan area file. For this, the PUMA will be an MSA, groups of MSAs, parts of MSAs when the MA is larger than 200,000 persons, and groups of nonmetropolitan areas.

The file structure of all PUMS files is hierarchical, with special features to aid in their use with commercial/existing software packages. While no "value-added" user software will be provided by the Census Bureau, the technical documentation will include a section with suggestions and pointers on how to use these files. All PUMS files have two record types; one for housing units, and one for persons. The number of records per file are determined by the sample size.

All 1990 5% and 1% PUMS files on computer tape will be available by the end of 1992. These files will also be released on CD-ROM, at a date to be determined. The Elderly 3% PUMS files will be made available early 1993, on computer tape only.

<p>Customer Typology To enable us to learn more about our customers, <u>Please check one:</u></p> <p><input type="checkbox"/> Private Citizen</p> <p>Governmental Sector</p> <p><input type="checkbox"/> Congressional/Legislative <input type="checkbox"/> Federal Government <input type="checkbox"/> State Government <input type="checkbox"/> Local/County/Regional Gov. <input type="checkbox"/> Tribal Organizations</p> <p>Academic/Research Sector</p> <p><input type="checkbox"/> College/University - Faculty</p>	<p><input type="checkbox"/> College/University - Student <input type="checkbox"/> Other Academic <input type="checkbox"/> Research Organizations</p> <p>Business Sector</p> <p><input type="checkbox"/> Media (radio, television, print) <input type="checkbox"/> Manufacturing Businesses <input type="checkbox"/> Retail, Wholesale, Service Businesses <input type="checkbox"/> Financial, Insurance, Real Estate Organizations <input type="checkbox"/> Market Research, Advertising, Consulting Organizations <input type="checkbox"/> Trade and Professional Orgs.</p>	<p><input type="checkbox"/> Other</p> <p>Public Service Sector</p> <p><input type="checkbox"/> Social Service and Religious Organizations <input type="checkbox"/> Civic Organizations <input type="checkbox"/> National Minority Organizations <input type="checkbox"/> Political Organizations</p> <p>International Sector</p> <p><input type="checkbox"/> Foreign Government <input type="checkbox"/> Other</p> <p>Also, please complete the following:</p>	<p>Is your organization affiliated with the Census Bureau in any way? <u>Please check one:</u></p> <p><input type="checkbox"/> State Data Center/Business and Industry Data Center/Affiliate <input type="checkbox"/> National Services Information Center/Affiliate <input type="checkbox"/> Clearinghouse Organization <input type="checkbox"/> None</p> <p>Do you work in your organization's library?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
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<p>Customer address (please print legibly or type):</p> <hr/> <p>Company or personal name</p> <hr/> <p>Additional address/attention line</p> <hr/> <p>Street Address (No P.O. box numbers please, if this is also the shipping address. The shipping service we use cannot deliver to a P.O. box.)</p> <hr/> <p>City, State, ZIP code</p> <hr/> <p>Telephone: Voice _____ Fax _____</p>	<p>Shipping address: (if different than customer address)</p> <hr/> <p>Company or personal name</p> <hr/> <p>Additional address/attention line</p> <hr/> <p>Street Address (No P.O. box numbers please – the shipping service we use cannot deliver to a post office box.)</p> <hr/> <p>City, State, ZIP code</p> <hr/> <p>Telephone: Voice _____ Fax _____</p>
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<p>To be completed by customer:</p> <p>Total this Order: _____</p>	<p>Method of Payment (Please check one):</p> <p><input type="checkbox"/> Check payable to Commerce-Census <input type="checkbox"/> Census deposit account: [][][][]</p> <p><input type="checkbox"/> VISA or MasterCard Account: [][][][] [][][][] [][][][] [][][][]</p> <p>Expiration date: month: [][] year: [][] Name on card: _____</p>
--	---

Census use only: Order taken by: _____ Date: _____

1990 Public Use Microdata Samples on Computer Tape

Yes, Please send all states for the 5% (\$4000); 1% (\$800); 3% - Elderly (\$2400) PUMS Files.

File Availability

The 1990 Public Use Microdata Sample (PUMS) files on computer tape are provided for each State and the District of Columbia, and are available for purchase State-by-State, by division, or as a complete set.

Tape Format Options

The PUMS files are available in the following formats. Please specify the format of choice when ordering. Remember, the format selection has no bearing on product pricing. Computer tape reels are industry standard 9 track, 2400 foot reels.

Density:

- 6250 BPI
 1600 BPI

Translation coding:

- EBCDIC
 ASCII

Labeling:

- Standard IBM Label
 Unlabeled

or, you may select:

- IBM 3480 Tape Cartridge

A machine-readable data dictionary is included without charge.

Product Pricing

PUMS files on computer tape are priced according to file size. Specific State prices for the 5% sample are shown below. Otherwise, the 1% and 3% (Elderly) samples are priced by Division only. A special discount price is available for those wishing to purchase all States/divisions in a PUMS file at one time. Priority shipping and handling service is available at additional cost. Call for details.

Upon receipt, an acknowledgment letter will be sent noting an approximate shipping date.

Return this Order to:

For regular US Postal delivery, use the following mailing address:

**Customer Services
 Bureau of the Census
 Washington, DC 20233**

or fax it to 301-763-4794.

However, if you are sending your order by **any specialized courier service** (such as Federal Express for example) , please use our special direct delivery address instead:

**Customer Services
 Washington Plaza Bldg.
 Room 326
 8903 Presidential Pkwy
 Upper Marlboro, MD 20772**

Division/State	5%	1%	3% (Elderly)	Division/State	5%	1%	3% (Elderly)
New England Division	\$275	\$175	\$175	<input type="checkbox"/> South Carolina	175		
<input type="checkbox"/> Connecticut	175			<input type="checkbox"/> Florida	275		
<input type="checkbox"/> Maine	175			<input type="checkbox"/> Georgia	175		
<input type="checkbox"/> Massachusetts	175			East South Central Div.	\$300	\$175	\$175
<input type="checkbox"/> New Hampshire	175			<input type="checkbox"/> Alabama	175		
<input type="checkbox"/> Rhode Island	175			<input type="checkbox"/> Kentucky	175		
<input type="checkbox"/> Vermont	175			<input type="checkbox"/> Mississippi	175		
Middle Atlantic Div.	\$750	\$175	\$450	<input type="checkbox"/> Tennessee	175		
<input type="checkbox"/> New York	350			West South Central Div.	\$550	\$175	\$325
<input type="checkbox"/> New Jersey	175			<input type="checkbox"/> Arkansas	175		
<input type="checkbox"/> Pennsylvania	225			<input type="checkbox"/> Louisiana	175		
East North Central Div.	\$825	\$175	\$500	<input type="checkbox"/> Oklahoma	175		
<input type="checkbox"/> Indiana	175			<input type="checkbox"/> Texas	350		
<input type="checkbox"/> Ohio	225			Mountain Division	\$275	\$175	\$175
<input type="checkbox"/> Illinois	225			<input type="checkbox"/> Arizona	175		
<input type="checkbox"/> Michigan	175			<input type="checkbox"/> Colorado	175		
<input type="checkbox"/> Wisconsin	175			<input type="checkbox"/> Idaho	175		
West North Central Div.	\$350	\$175	\$225	<input type="checkbox"/> Montana	175		
<input type="checkbox"/> Minnesota	175			<input type="checkbox"/> Nevada	175		
<input type="checkbox"/> Missouri	175			<input type="checkbox"/> New Mexico	175		
<input type="checkbox"/> South Dakota	175			<input type="checkbox"/> Utah	175		
<input type="checkbox"/> Iowa	175			<input type="checkbox"/> Wyoming	175		
<input type="checkbox"/> Kansas	175			Pacific Division	\$750	\$175	\$450
<input type="checkbox"/> Nebraska	175			<input type="checkbox"/> Alaska	175		
<input type="checkbox"/> North Dakota	175			<input type="checkbox"/> Hawaii	175		
South Atlantic Division	\$925	\$175	\$550	<input type="checkbox"/> Oregon	175		
<input type="checkbox"/> Delaware	175			<input type="checkbox"/> Washington	175		
<input type="checkbox"/> District of Columbia	175			<input type="checkbox"/> California	575		
<input type="checkbox"/> Maryland	175						
<input type="checkbox"/> Virginia	175						
<input type="checkbox"/> West Virginia	175						
<input type="checkbox"/> North Carolina	175						
				Special Package Price	\$4000	\$800	\$2400
				<i>(discounted)</i>			

CHAPTER 1. INTRODUCTION

OVERVIEW

Public-use microdata samples are computer accessible files which contain records for a sample of housing units, with information on the characteristics of each unit and the people in it. We exclude information which would identify a household or an individual in order to protect the confidentiality of respondents. Within the limits of the sample size and geographic detail, these files allow users to prepare virtually any tabulations they require.

Separate public-use microdata samples are available, each representing five percent or one percent of the population and housing of the United States:

- o 5% Sample, identifying all States and various subdivisions within them, including most counties with 100,000 or more inhabitants;
- o 1% Sample, identifying all metropolitan territory and most MAs with 100,000 or more inhabitants individually, and groups of [MAs] elsewhere; A 3% elderly sample will be available also.

WHAT IS MICRODATA?

We provide computer accessible data products in several formats as summary data or as microdata. Summary data are the type of data found in census printed reports, summary tape files, microfiche, and most special tabulations; microdata are the information collected from each person and housing unit on the questionnaire.

In summary data, the basic unit of analysis is a specific geographic area (for example, a census tract, county or State) for which counts of persons or housing units (or aggregated data) in particular categories are provided. In microdata, the basic unit is an individual housing unit and the persons who live in it. Figure 1 illustrates the basic distinctions between summary data and microdata.

Often, there are two types of microdata: Confidential microdata include the census basic record types, computerized versions of the questionnaires collected from households, as coded and edited during census processing. The Census Bureau tabulates these confidential microdata in order to produce the summary data that go into the various reports, summary tape files (STFs), and special tabulations.

Public-use microdata samples are extracts from the confidential microdata taken in a manner that avoids disclosure of information about identifiable households or individuals.

PROTECTING CONFIDENTIAL INFORMATION

All data released (in print or electronic media) by the Bureau of the Census are subject to strict confidentiality measures imposed by the legislation under which our data are collected: Title 13, U.S. Codes which protects the confidentiality of individual respondents. Responses to the questionnaire can be used only for statistical purposes, and Census Bureau employees are sworn to protect respondents' identities.

Records on public-use microdata samples are selected after the confidentiality edit is performed, and contain no names or addresses. Also, the Bureau limits the detail (topcodes, recodes) on place of residence, place of work, high incomes, and other selected items to further protect the confidentiality of the records.

Microdata records identify no geographic area with fewer than 100,000 inhabitants. Microdata samples include only a small fraction of the population, drastically limiting the chance that the record of a given individual is even contained in a public-use microdata file, much less identifiable.

Uses Of Microdata Files

Public-use microdata files essentially make possible "do-it-yourself" special tabulations. Since the 1990 files furnish nearly all of the detail recorded on long-form questionnaires in the census, subject to the limitations of sample size and geographic identification, users can construct an infinite variety of tabulations interrelating any desired set of variables. Users have the same freedom to manipulate the data that they would have if they had collected the data in their own sample survey, yet these files offer the precision of census data collection techniques and sample sizes larger than would be feasible in most independent sample surveys.

Microdata samples will be useful to users (1) who are doing research that does not require the identification of specific small geographic areas or detailed cross tabulations for small populations, and (2) who have access to programming and computer time needed to process the samples. Microdata

users frequently study relationships among census variables not shown in existing census tabulations, or concentrate on the characteristics of certain specially defined populations, such as unemployed homeowners or families with four or more children.

SAMPLE DESIGN AND SIZE

Each microdata file is a stratified sample of the population, actually a subsample of the full census sample (approximately 15.9% of all housing units) that received census long-form questionnaires. Sampling was done housing unit-by-housing unit in order to allow study of family relationships and housing unit characteristics. Sampling of persons in institutions and other group quarters was done on a person-by-person basis. Vacant units were sampled also.

There are two independently drawn samples, designated "5% (A)" and "1% (B)," each featuring a different geographic scheme, as discussed below. Samples from the 1970 and 1960 censuses also employed a 1% sample size, the 5% sample was new for 1980. Nationwide, the 1990 5% Sample gives the user records for over 12 million persons and over 5 million housing units. On the other hand, since processing a smaller sample is less expensive, some users will want to produce extracts using the subsample numbers provided in the housing record. Sample design is discussed more thoroughly in chapter 4.

Unlike 1980, each file contains individual weights for both the housing unit and the persons in the unit. The user can estimate the frequency of a particular characteristic for the entire population by summing the weight variables for records with that characteristic from the microdata file. A section of Chapter 4 discusses the preparation and verification of estimates (see page 4-1).

Reliability improves with increases in sample size, so the choice of sample size must represent a balance between the level of precision desired and the resources available for working with microdata files. By using tables provided in chapter 3 (see page 3-2), one can estimate the degree to which sampling error will affect any specific estimate prepared from a microdata file of a particular sample size.

Many factors affect the user's decision on which file to use. Users of microdata files for State or MSA estimates would normally use a 1% or 5% sample, while users concerned only with national figures can frequently get by with a smaller sample, say a 0.1-percent (one-in-a-thousand) sample. Although we no longer provide the 0.1% file we do provide subsample numbers which allow scientifically

designed extracts of various sizes to be drawn. Even national users may need a 1% or a 5% sample if extremely detailed tabulations are needed, or if users are concerned with very small segments of the population, for example, females 75 years old or over of Italian ancestry.

One of the examples in chapter 3 discusses the selection of the appropriate sample size for a particular study.

SUBJECT CONTENT

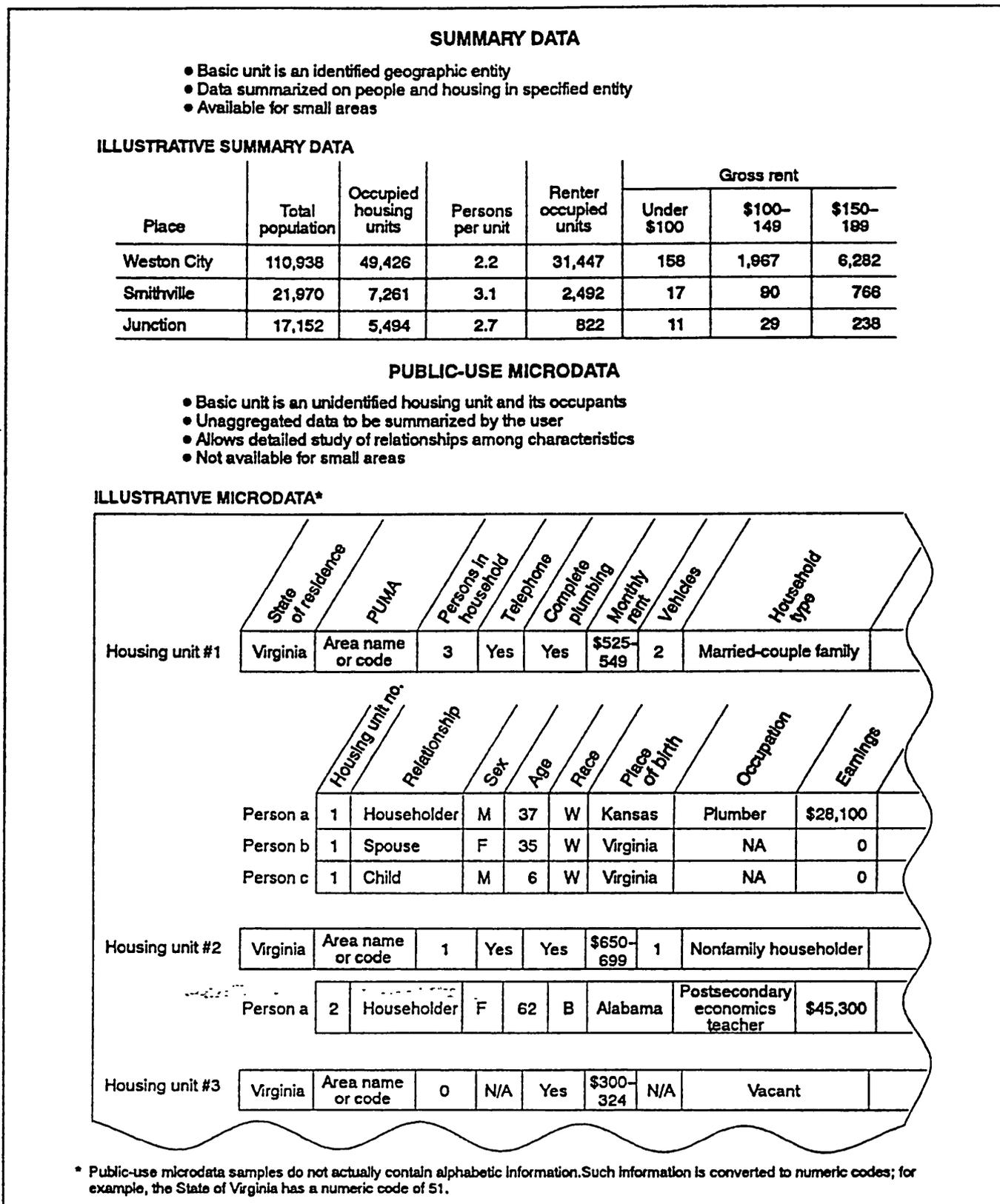
Microdata files contain the full range of population and housing information collected in the 1990 census: 500 occupation categories, age by single years up to 90, wages in dollars up to \$140,000, and so forth. Because the samples provide data for all persons living in a sampled household, users can study how characteristics of household members are interrelated (for example, income and educational attainment of husbands and wives).

Information for each housing unit in the sample appears on a 231-character record with geographic and housing items, followed by a variable number of 231-character records with person's information, one record for each member of the household. Items on the housing record are listed beginning on page 5-1; items on the persons record are listed beginning on page 5-4. Although each of the items as collected is further defined in the glossary (reprinted from the 1990 Census Users' Guide) presented as appendix B to this document, it is important to note that we modified several items on the microdata file to provide protection for individual respondents. We also include many transformed variables (recodes), such as those appearing on the STF 3A files, so that users can analyze many complex relationships between records. Data users will frequently want to generate additional variables or develop recodes to meet their individual needs.

While it is impossible to predict all the transformations (recodes) required by data users, we included many of the more common ones (household income, selected monthly owner costs, poverty status, and so forth). Transformations such as these, as well as corrections that apply to certain subjects, are discussed in appendix C.

We edited the sample questionnaires for completeness and consistency, and made substitutions or allocations for any missing data. Allocation flags appear at the end of each record indicating each item which has been allocated. Thus, a user desiring to tabulate only actually observed values can eliminate variables with allocated values. Editing and allocation flags are discussed beginning on page 3-15.

Figure 1. Comparison of Summary Data With Information on Microdata Files



GEOGRAPHIC IDENTIFICATION

The 5% and 1% Samples each feature a different geographic scheme: We call the geographic areas PUMAs for Public Use Microdata Areas. We use the term to apply to each of the areas identified on these files. A 5-digit number, unique within State, identifies each PUMA. The first three digits is the PUMA code and the last two are the sub-PUMA. The sub-PUMA is used when counties or metropolitan areas are subdivided by groupings of census tracts. For example, the PUMAs for Bronx County, New York consist of several groups of census tracts numbered from 05101 through 05111, whereas the PUMA numbered 03500 is made up of 3 counties: Courtland, Tioga and Tompkins Co.

The State Data Center provided the PUMAs for most states. For the states of Georgia, Indiana, and Oregon, the Census Bureau developed the PUMAs with input from the respective State Data Center.

- o The 5% Sample identifies every State, most individual counties or county equivalents with 100,000 or more inhabitants, many individual cities or groups of places with 100,000 or more inhabitants, and for counties with at least 200,000 inhabitants groupings of Census tracts are also identified.

Areas with populations under 100,000 have been grouped into reasonable analytic units often equivalent to State planning district boundaries. In New England, areas are defined in terms of cities and towns rather than counties.

The 1% Sample identifies MAs of 100,000 or more inhabitants. The remaining MAs are paired together so that metropolitan and nonmetropolitan territory can be separately analyzed.

Many large cities, groups of cities, and counties are identified within large MAs. Outside MAs, counties are grouped according to State planning districts or into other reasonable analytic units with populations of 100,000 or more.

On the 1% sample, when PUMAs cross state boundaries, states are not separately identified. All of these records appear on a separate file where the state is identified as "99". (See Appendix G).

The characteristics of the different geographic schemes are compared in the maps and charts which follow in figures 2, 3, and 4.

Purchasers of the 1% Sample for any of the States which include area in a county group crossing State lines may want to request that the "State Code 99" file be stacked onto a tape being purchased. Estimates of the number of tapes required for specified groups of files at a given density and blocking factor are available on request from Customer Services.

At the time of this printing, we have not produced files for all States, and estimates of the number of tapes required for specified groups of files at a given density and blocking factor are available on request from Customer Services. We will issue a user note updating this information when all files are produced.

CORRESPONDING MICRODATA FROM EARLIER CENSUSES

PUMS files exist for the 1960, 1970 and 1980 censuses. Very little comparability exists between geographic identifiers on each of the previous files, but housing and population characteristics are similar. And because of this similarity, microdata files from the most recent censuses are a rich resource for analysis of trends. Items which were added, dropped, or substantially changed between 1980 and 1990 are listed in figure 5. Appendix B discusses historical comparability of items in greater detail.

FIGURE 2
ALABAMA (5% PUMA BOUNDARIES)



ALABAMA 5% PUMA Boundaries

-  Counties
-  PUMA
-  States

JEFFERSON COUNTY PUMAs: 01801-01806

Miles

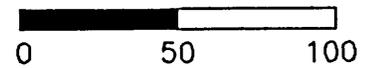


FIGURE 3
ALABAMA (1% PUMA BOUNDARIES)



ALABAMA 1% PUMA Boundaries

-  Counties
-  PUMA
-  States

JEFFERSON COUNTY PUMAs: 00801-00806

MONTGOMERY CITY 01700

MOBILE CITY 02100

Miles

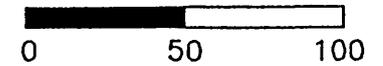


FIGURE: 4

COMPONENTS OF 5% SAMPLE PUMAs

STATE: 06 FUMA: 06901 MSA/PMSA: 6780 TOTAL POPULATION: 193688
 TYPE OF AREA: COUNTY/INDEPENDENT CITY (PART)

NAME	POPULATION	ST	COU	MCD	PLACE	TRACT	MSA/PMSA
CATHEDRAL CITY	30085	06	065		0465		6780
COACHELLA	16896	06	065		0555		6780
DESERT HOT SPRINGS	11668	06	065		0765		6780
INDIAN WELLS	2647	06	065		1327		6780
INDIO	36793	06	065		1330		6780
LA QUINTA	11215	06	065		1482		6780
PALM DESERT	23252	06	065		2080		6780
PALM SPRINGS	40181	06	065		2085		6780
RANCHO MIRAGE	9778	06	065		2281		6780
RIVERSIDE COUNTY (PART)	3869	06	065	010	9999	044903	6780
RIVERSIDE COUNTY (PART)	13	06	065	010	9999	044901	6780
RIVERSIDE COUNTY (PART)	1719	06	065	020	9999	045201	6780
RIVERSIDE COUNTY (PART)	1951	06	065	020	9999	045202	6780
RIVERSIDE COUNTY (PART)	3533	06	065	030	9999	044502	6780
RIVERSIDE COUNTY (PART)	88	06	065	075	9999	044803	6780

STATE: 01 FUMA: 00300 MSA/PMSA: 9999 TOTAL POPULATION: 126433
 TYPE OF AREA: COUNTIES/INDEPENDENT CITIES (2 OR MORE)

NAME	POPULATION	ST	COU	MCD	PLACE	TRACT	MSA/PMSA
BIBB COUNTY	16576	01	007				9999
FAYETTE COUNTY	17962	01	057				9999
GREENE COUNTY	10153	01	063				9999
HALE COUNTY	15498	01	065				9999
LAMAR COUNTY	15715	01	075				9999
MARION COUNTY	29830	01	093				9999
PICKENS COUNTY	20699	01	107				9999

COMPONENTS OF 1% SAMPLE PUMAs

STATE: 06 FUMA: 01802 MSA/PMSA: 5775 TOTAL POPULATION: 122246
 TYPE OF AREA: MSA/PMSA-OUTSIDE CENTRAL CITY (PART)

NAME	POPULATION	ST	COU	MCD	PLACE	TRACT	MSA/PMSA
CLAYTON	7317	06	013		0537		5775
CONCORD	111348	06	013		0595		5775
CONTRA COSTA COUNTY (PART)	1061	06	013	028	9999	315099	5775
CONTRA COSTA COUNTY (PART)	655	06	013	028	9999	333100	5775
CONTRA COSTA COUNTY (PART)	126	06	013	028	9999	338100	5775
CONTRA COSTA COUNTY (PART)	7	06	013	028	9999	355200	5775
CONTRA COSTA COUNTY (PART)	517	06	013	028	9999	315000	5775
CONTRA COSTA COUNTY (PART)	114	06	013	028	9999	355305	5775
CONTRA COSTA COUNTY (PART)	81	06	013	028	9999	355304	5775
CONTRA COSTA COUNTY (PART)	238	06	013	028	9999	355303	5775
CONTRA COSTA COUNTY (PART)	6	06	013	028	9999	355301	5775
CONTRA COSTA COUNTY (PART)	68	06	013	028	9999	355302	5775
CONTRA COSTA COUNTY (PART)	708	06	013	107	9999	355102	5775

CHAPTER 2. HOW TO USE THIS FILE

This chapter serves as a guide for data users to both the tape and the technical documentation. Novice users trying to understand how to use the documentation and the file should read this chapter first.

DOCUMENTATION CHAPTERS

The Abstract chapter in this documentation provides a quick overview of the file, including the formal title, geographic coverage, subject coverage, and file availability. Also shown are citations for related reference materials and printed reports. Their titles and geography are included in this section, along with purchasing information.

Chapter 1 describes microdata, chapter 3 describes accuracy of the data, and chapter 4 describes the sample design and estimation for PUMS.

USER NOTES

Information about file or documentation changes sometimes becomes available after the documentation has been printed. User notes inform the user community about these changes. These are issued in a numbered series. If there are technical documentation changes, revised pages usually accompany them. The revised pages should be inserted in their proper location, but the user note cover sheet should be filed in the User Notes chapter. Technical notes, which contain file errata, are also issued by the Census Bureau. We suggest filing these following appendix I.

DATA DICTIONARY

The data dictionary (code book) describes the file and provides character locations for each variable.

The components include a short mnemonic or field name for use with software packages; field size; starting position; and a description of field contents with possible values.

There also is a machine-readable data dictionary file on the data tape. This dictionary is designed to be converted for use with various software packages.

APPENDIXES

Detailed information on geographic areas is in appendix A followed by subject-matter definitions in

appendix B. Appendix C provides information about the data changes on PUMS while appendix D outlines the data collection and processing procedures. Facsimiles of both the respondent instructions and 1990 census long-form questionnaire are in appendix E.

Appendix F furnishes detailed information on all the data products of the 1990 census, as well as suggested sources of information and assistance. Map information is included in appendix G (to be supplied as user notes). The record layout for the machine-readable data dictionary file that accompanies each tape order is in appendix H.

Appendix I contains the code lists used in processing the data for most sample products. These are especially helpful in determining the components included in categories such as race, and group quarters. On the PUMS, the information on these lists may be changed for disclosure protection purposes. Those changes are indicated in the data dictionary and further explained in appendix C.

INTERNAL FILE LABELS

System Labels

Tape orders which specify labeled tapes will have a standard American National Standards Institute (ANSI) label. The system label consists of 17 characters, but only the first 12 are active. The remaining five characters will be 'x' filled. The 1990 PUMS files have a Data Set Name (DSN) of PUMStXss.Fnnxxxx where t is A, B, or Q depending on the file, ss is the United States Postal Service (USPS) State abbreviation, and nn is a two-digit number with leading zeroes identifying the tape volume sequence. (The "X", "F", and "x" in the DSN remain constant).

User Labels

Each user tape will have two user header labels and two user trailer labels. These labels combine information from the system label and the identification portion of the first and last record. These labels enable the user to quickly identify the beginning and ending records on each tape.

User Header Labels

The user header labels are designated UHL1 and UHL2. UHL1 and UHL2 repeat information from the system label in HDR1 and HDR2.

User Trailer Labels

The user trailer labels are designated UTL1 and UTL2. UTL1 and UTL2 contain information from the system trailer label.

STATE-SPECIFIC FILE INFORMATION

State-specific file information, such as record counts, is not provided in the technical documentation. However, each tape order is accompanied by a tape creation sheet. This sheet provides the file name, file label (HDR1), record size, block size, and record count.

The tape creation sheet received with the tape should be filed in the technical documentation notebook or with other tape information maintained by the user.

File Structure

Each file consists of a series of 231-character logical records of two types; housing and persons. Each housing unit record is followed by a variable number of person records, one for each member of the housing unit or none if vacant, as illustrated in figure 1. Each person in group quarters has two records--a dummy "housing unit" record (most nongeographic fields are not applicable), as well as a person record. For 1990, we made several improvements to the file to aid in processing the data. Two improvements allowing users more processing flexibility are the inclusion of the housing unit serial number on both record types and the inclusion of individual weights on each record. Including the housing unit serial number on both records affords the user an option as to how to process the data--either rectangularly or hierarchically. With the introduction of individual weights, users can more closely approximate published data. Another improvement for 1990 is providing many of the recodes (data transformations) which appear on the summary tape file (STF 3A). While the changes increase the file size, we should see an associative increase in file utility.

In the text of this document, the numeric identification of a particular data item is the same as its character location within a record. Items on the housing record are prefixed with an *H*, items on the person record with a *P*. For instance, Race, item P12-14, is a two-digit code beginning in character 12 of the person record. We continue to provide in the data dictionary, or record layout, mnemonic identifiers, many of which are the same as those used in 1980. Geographic identifiers and subsample identifiers

appear only on the housing unit record. Thus, most tabulations of person characteristics require manipulation of both housing and person records. An item on the housing record indicates the exact number of person records following before the next housing record (PERSONS). This feature allows a program to anticipate what type of record will appear next, if necessary.

In today's data manipulation environment, users have many options for processing data and are limited only by the amount and type of resources. Most statistical software packages (e.g. BMDP, SAS, SPSS, to name a few) are capable of handling the data either hierarchically or rectangularly. Many users may still want to create extract files with any desired household data repeated with each person's record. Users with limited resources (funds, personnel, software/hardware) may want to create or obtain extracts containing only those variables of interest. All fields are numeric, except for the Record Type which are "H" and "P."

File Size

Every file purchased from the Census Bureau includes a printout showing the total record count. Estimated file sizes are not shown now, but in a future user note record counts for each state will be identified.

Record Sequence

We release these files on a state-by-state basis. Records on these files are sorted by geographic area within state. On the 5% and 1% Samples, all households sampled within a particular PUMA appear together. PUMAs are sequenced in ascending order within State. On the 1% Sample, this means that all PUMAs with State code suppressed (i.e., shown as 99) appear on a separate file. In order to provide an extra measure of protection from disclosure of individual households within each geographic area, we scramble the records to avoid any implication of geographic information beyond that which meets Census Bureau disclosure rules for the 1990 PUMS. Person records within household are sequenced by relationship code (P2). The householder record always immediately follows the housing unit record for an occupied unit. This feature simplifies tabulation of households or families by race of householder, ancestry of householder, and even poverty status--since the desired indicators are always on the first person record. Where the household contains more than one person of a given relationship, person records appear in sequence of decreasing age (P8-9).

Persons sampled from within the same group quarters are not identifiable as such, since each has an independent dummy housing unit record.

Machine-Readable Documentation

Every file includes a machine readable "data dictionary" or record layout. Irrespective of the PUMS sample used, the record layout is the same. A user can produce hard copy documentation for extract files or labels for tabulations created; or with minor modifications, can use the data dictionary file with software packages or user programs to automatically specify the layout of the microdata files.

Also available in machine-readable form is the PUMA Equivalency File, which lists the geographic components (counties or MCDs, places, tracts where available) and their assigned PUMA codes for the 5% and 1% samples.

Handling Invalid Codes

The data dictionary shows each category as having a unique representation. Although we reviewed test files for several states, we may have a small number of cases outside the specified range for a variable. We will correct these errors when found, but users may follow the standard census practice to assign invalid codes to the next lower numbered valid category. For example, on an allocation flag with valid codes 0, 2 and 3, a 1 would be counted with code 0, and a code of 4 or more would be counted with 3. Exceptions to this rule occur in occupation and industry codes, where invalid codes are assigned to the next higher valid category.

Preparing and Verifying Tabulations

Estimation of totals - Estimates of complete-count census figures may be made from tabulations of public use microdata samples by using a simple inflation estimate - that is, summing the weights associated with that variable; (e.g. for housing characteristics, use the housing unit weight; for persons characteristics, use the person weight.) Those users using subsample numbers to vary the sample size must apply an appropriate factor, or, otherwise adjust the weights to derive an appropriate estimation of totals. We further explain the use of weights and subsample numbers in Chapter 4.

Estimation of percentages - a user can estimate percentages by simply dividing the weighted estimate of persons or housing units with a given characteristic by the weighted sample estimate for the base. Normally, this yields the same as would be obtained if one made the computation using sample tallies rather than weighted estimates. For example,

the percentage of housing units with air conditioning in a one-in-one-hundred sample can be obtained by simply dividing the tally of sample housing units with air conditioning by the total number of sample housing units.

Verifying tabulations - Producing desired estimates from the public-use microdata samples is relatively easy. File structure and coding of items is straightforward. There are no missing data (see the section on allocations, page 3-38). Records not applicable for each item are assigned to specific "NA" categories, and it is frequently not necessary to determine in a separate operation whether a record is in the universe or not. PUMS "universe" and "variable" definitions may differ from other products produced from sample data primarily because of concerns about disclosure risks (e.g. PUMS files may have different topcodes from STF 3A, or the recodes may vary because the components were topcoded). A user must, however, anticipate the possibility of errors in his or her own processing. Thus, user tabulations should be verified against other available tallies. Two ways for the user to verify estimates follow:

1. Using control tabulations from the samples. As each public-use microdata sample was produced, counts of persons, housing units, vacant housing units, and group quarters persons selected into the sample were tallied within each identified geographic area. These control counts will be published as a supplement to this documentation. (In the interim, counts for specific areas may be requested from Customer Services.) If users cannot replicate these exact counts, review of the user's programs, and the shipping advices accompanying the files are in order.
2. Using published data from the 1990 censuses. Tabulations from the 1990 census data base are available in the printed census publications and on summary tape files. Users may check the reasonableness of statistics derived from public-use microdata samples against these sources. A familiarity with summary data already available may also facilitate planning of tabulations to be made from microdata. Those publications series likely to be of greatest use for this purpose are listed in Figure 5. In comparing sample tabulations with published data one must carefully note the universe of the published tabulation.

For instance, on microdata records, Industry (P87-89) is reported for the civilian labor force and for persons not in the labor force who reported having worked in 1985 or later. Industry tabulations in 1990 census publications are presented only for the employed population or the experienced civilian labor force. Thus, a tally of Industry for all persons from whom industry is reported in microdata records would not correspond directly to any published tabulation. "A user should always pay particular attention to concept definitions as presented in the glossary." One cannot, of course, expect exact agreement between census publications which are based on the complete census count, full sample estimates, or a subsample of the census sample and user estimates based on tallies of a 5-percent or smaller sample. They will inevitably differ to some extent due to chance in selection of actual cases for Public Use Microdata Samples. Since the amount of likely chance variation for a given statistic can be measured, any discrepancy beyond a certain level can be identified as a likely error in programming. Chapter 3 discusses sampling variability and its measurement. User experience has indicated that careful verification of sample tabulations is essential -- so important that it may frequently be advisable to include additional cells in a tabulation for no other reason than to provide counts or to yield marginal totals, not otherwise available, which may be verified against available tabulations.

#0980

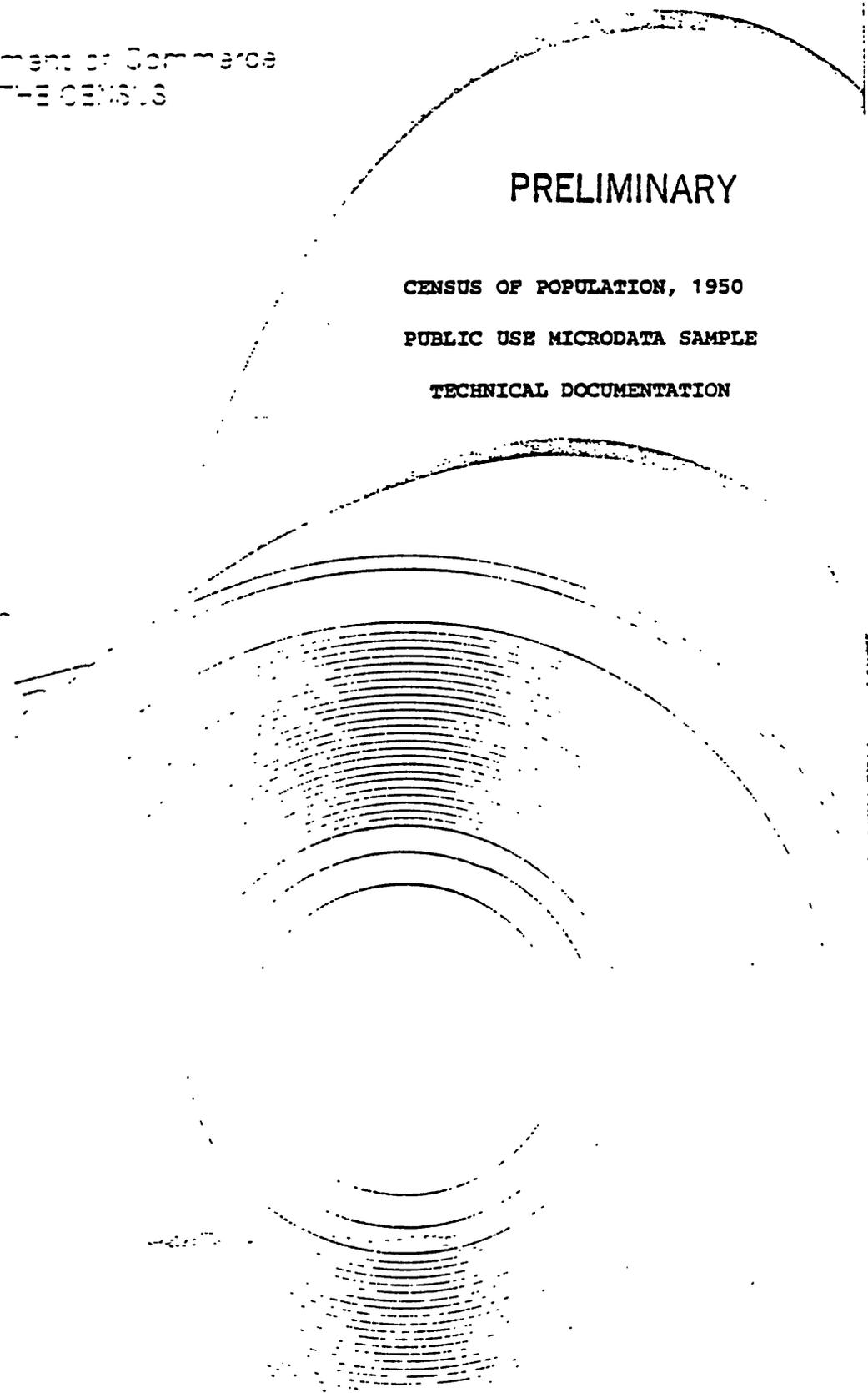
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BUREAU OF THE CENSUS

PRELIMINARY

CENSUS OF POPULATION, 1950

PUBLIC USE MICRODATA SAMPLE

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Figure 5. 1980-1990 Subject Comparability

Most of the items for 1990 are comparable to 1980. Several items found in 1980 PUMS are not in the 1990 file primarily because the inquiries were not asked or because we are providing a measure of protection for respondents. Full descriptions of item comparability are given in appendix B. However, users should read appendix C for differences in PUMS definitions and those of other census products.

1990 Items not on 1980 Files

Condominium fees
 Employment status of parents recode
 Flag indicating all 100% person's data substituted
 Flag indication all 100% housing unit data substituted
 Gross rent as a percentage of 1989 Household Income
 Household language recode
 Housing unit/GQ person serial number
 Housing unit weight
 Time of departure for work
 Linguistic isolation recode
 Married, spouse present/absent recode
 Mobile home costs
 Number of related children in household recode
 Number of stepchildren in household recode
 Number of persons in family recode
 Person's weight
 Presence of subfamilies in household
 Presence of person under 65 years in household
 Presence of person under 60 years in household
 Presence of nonrelatives in household
 Presence of person under 18 years in household
 Rental unit recode
 Selected monthly owner costs as a percentage of 1989 household income
 Value unit recode
 Workers in family recode
 Years of active military duty

1980 Items Not on 1990 Files

Access to unit
 Age at first marriage
 Bathrooms
 Cooking Fuel
 Heating equipment
 Passenger elevator
 Place of work SMSA recode
 Place of work place size recode
 Place of work central city recode
 Quarter of birth
 Spanish surname
 Stories in structure

Concepts Substantially changed

Grade & Finished Highest Grade - now combined and grouped to show highest level completed
 Race - Several categories added including 25 American Indian tribes
 Spanish origin - Now Hispanic origin showing an expanded list of countries

CHAPTER 3 - ACCURACY OF THE MICRODATA SAMPLE ESTIMATES

INTRODUCTION

The tabulations prepared from a public use microdata sample are based on a subset of the 1990 Census sample. The data summarized from this file are estimates of the actual figures that would have been obtained from a 100-percent enumeration. Estimates derived from this sample are expected to be different from the 100-percent figures because they are subject to sampling and nonsampling errors. Sampling error in data arises from the selection of persons and housing units to be included in the sample. Nonsampling error affects both sample and 100 percent data. Errors are introduced during the collection and processing phases of the census. A more detailed discussion of both sampling and nonsampling error is given below.

In microdata samples, the basic unit is an individual housing unit and the persons who live in occupied housing units or group quarters. However, microdata records in these samples do not contain names or addresses. A more detailed discussion of methods to protect confidentiality of individual responses follows.

CONFIDENTIALITY OF THE DATA

To maintain the confidentiality required by law (Title 13, United States Code), the Bureau of the Census applies a confidentiality edit to the 1990 census data to assure that published data do not disclose information about specific individuals, households, or housing units. As a result, a small amount of uncertainty is introduced into the estimates of census characteristics. The sample itself provides adequate protection for most areas for which sample data are published since the resulting data are estimates of the actual counts; however, small areas require more protection. The edit is controlled so that the basic structure of the data are preserved.

The confidentiality edit is implemented by selecting a small subset of individual households from the internal sample data files and blanking a subset of the data items on these household records. Responses to those data items were then imputed using the same imputation procedures that were used for nonresponse. A larger subset of households is

selected for the confidentiality edit for small areas to provide greater protection for these areas. The editing process is implemented in such a way that the quality and usefulness of the data were preserved.

Since microdata records are the actual housing unit and person records, the Bureau of the Census takes further steps to prevent the identification of specific individuals, households, or housing units.

The main disclosure avoidance method used is to limit the geographic detail shown in the files. A geographic area must have a minimum of 100,000 population to be fully identified. Furthermore, certain variables are topcoded, or the actual value of the characteristics is replaced by a descriptive statistic, such as the median.

SOURCES OF ERRORS IN THE DATA

Since the estimates that users produce are based on a sample, they may differ somewhat from 100-percent figures that would have been obtained if all housing units, persons within those housing units, and persons living in group quarters had been enumerated using the same questionnaires, instructions, enumerators, and so forth. The sample estimate also would differ from other samples of housing units, persons within those housing units, and persons living in group quarters. The deviation of a sample estimate from the average of all possible samples is called the sampling error. The standard error of a sample estimate is a measure of the variation among the estimates from all the possible samples, and thus, is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. The sample estimate and its estimated standard error permit the construction of interval estimates with prescribed confidence that the interval includes the average result of all samples. The method of calculating standard errors and confidence intervals for the data in the microdata samples, is described in the next section.

In addition to the variability which arises from the sampling procedures, both sample data and 100-percent data are subject to nonsampling error.

Nonsampling error may be introduced during any of the various complex operations used to collect and process census data. For example, operations such as editing, reviewing, or handling questionnaires may introduce error into the data.

A detailed discussion of the sources of nonsampling error is given in the section on "Control of Nonsampling Error" in this chapter.

Nonsampling error may affect the data in two ways. Errors that are introduced randomly will increase the variability of the data and should, therefore, be reflected in the standard error. Errors that tend to be consistent in one direction will make both sample and 100-percent data biased in that direction. For example, if respondents consistently tend to under report their income, then the resulting counts of households or families by income category will tend to be understated for the higher income categories and overstated for the lower income categories. Such biases are not reflected in the standard error.

CALCULATIONS OF STANDARD ERRORS USING TABLES

A standard sampling theory text should be helpful if the user needs more information about confidence intervals and nonsampling errors.

Two methods for estimating standard errors of estimated totals and percentages are described in this section. The first method is very simple. This method uses already calculated standard errors for specific sizes of estimated totals and percentages given in tables A through F, shown later in this section. The estimated standard errors shown in tables A through F were calculated assuming simple random sampling while the microdata sample (and the census sample) were selected using a systematic sampling procedure. The numbers shown in table G, referred to as design factors, are defined as the ratio of the standard error from the actual sample design to the standard error from a simple random sample.

The standard errors in tables A through F used in conjunction with the appropriate design factors from table G produce a reasonable measure of reliability for microdata sample estimates. Public use microdata sample data users will receive table G, the Table of Design Factors, as a supplement to the technical documentation. An alternative methodology by which more precise standard errors can be

obtained requires additional data processing and file manipulation. The trade off is more precision for more data processing. However, with the technology available today, the second method is preferable and strongly recommended. However, the standard error tables could be very useful. For instance, they would be useful when one is trying to determine, prior to purchase, whether a 1-percent sample will yield estimates of adequate precision for a given study, or whether it is necessary to use the 5-percent sample instead. For these purposes the method described in this section should produce an acceptable approximation. On the other hand, for many statistics, particularly from detailed cross-tabulations, standard errors using the second method are also applicable to a wider variety of statistics, e.g., means and ratios.

To produce standard error estimates, one obtains (1) the unadjusted standard error for the characteristic that would result from a simple random sample design (of persons, families, or housing units) and estimation technique; and (2) a design factor, which partially reflects the effects of the actual sample design and estimation procedure used for the 1990 census public use microdata sample, for the particular characteristic estimated. The design factors provided in this chapter are based on computations from the full census sample and, as such, do not reflect the additional stratification used in the selection of the public use microdata samples (see Chapter 4). In general, these factors will provide conservative estimates of the standard error. In addition, these factors only pertain to individual data items (e.g., educational attainment, employment status) and are not entirely appropriate for use with detailed cross-tabulated data. To calculate the approximate standard error of a 5-percent or 1-percent sample estimate follow the steps given below.

1. Obtain the unadjusted standard error for the sampling rate to be used from table A, C, or E, for estimated totals or from tables B, D, or F for estimated percentages. Alternately, the formula given at the bottom of each table may be used to calculate the unadjusted standard error (for sample sizes other than 5 or 1-percent see the subsampling section).

In using tables A, C, or E, or corresponding formulas for estimated totals, use weighted figures rather than unweighted sample counts

to select the appropriate row. To select the applicable column for person characteristics, use the total population in the area being tabulated (not just the total of the universe being examined), or use the total count of housing units if the estimated total is a housing unit characteristic. Similarly in using table B, D, or F, or the corresponding formula for estimated percentages, use weighted figures to select the appropriate column.

- Use table G to obtain the design factor for the characteristic (e.g., place of work or educational attainment). If the estimate is a cross-tabulation of more than one characteristic, scan table G for each appropriate factor and use the largest factor. Multiply the unadjusted standard error from step 1 by the factor obtained in step 2.

Example 1: Standard Error of a Total - Suppose we tally a 5-percent public use microdata sample for state A. Further, suppose that for county A, the sum of the PUMS weights for all persons is 131,220. The sum of the PUMS weights for those persons who are age 16 years and over and in the civilian labor force is 59,948.

The basic standard error for the estimated total is obtained from table A or from the formula given below table A. To avoid interpolation, the use of the formula will be demonstrated here. The formula for the basic standard error, SE, is:

$$SE(59,948) = \sqrt{19(59,948) (1-59,948/131,220)}$$

$$= 787 \text{ persons}$$

The standard error of the estimated 59,948 persons 16 years and over who were in the civilian labor force is found by multiplying the basic standard error 787 by the appropriate design factor (Employment Status) from table G. Suppose the design factor for Employment Status is 1.2, then the standard error is

$$SE(59,948) = 787(1.2) = 945 \text{ persons}$$

Note that in this example the total weighted count of persons in county A of 131,220 was used.

Example 2: Standard Error of a Percent - Suppose there are 95,763 persons in county A in state A aged 16 years and over. The estimated percent of persons 16 years and over who were in the civilian labor force is 62.6. Using the formula given in table B, the unadjusted standard error is found to be approximately 0.68 percent. The standard error for the estimated 62.6 percent of persons 16 years and over who were in the civilian labor force is $0.68 (1.2) = 0.82$ percentage points. Note that in this example the base is defined as the weighted count of persons 16 years old and over.

A note of caution concerning numerical values is necessary. Standard errors of percentages derived in this manner are approximate. Calculations can be expressed to several decimal places, but to do so would indicate more precision in the data than is justifiable. Final results should contain no more than two decimal places.

Sums and Differences - The standard errors estimated from these tables are not directly applicable to sums of and differences between two sample estimates. To estimate the standard error of a sum or difference, the tables are to be used somewhat differently in the following three situations:

- For the sum of or difference between a sample estimate and a 100-percent value, use the standard error of the sample estimate. The complete count value is not subject to sampling error.
- For the sum of or difference between two sample estimates, the appropriate standard error is approximately the square root of the sum of the two individual standard errors squared, that is, for standard errors:

SE_x and SE_y of estimates \bar{X} and \bar{Y}

$$SE_{(\bar{x} - \bar{y})} = SE_{(\bar{x} + \bar{y})} = \sqrt{(SE_x)^2 + (SE_y)^2}$$

This method, however, will underestimate (overestimate) the standard error if the two

items in a sum are highly positively (negatively) correlated or if the two items in a difference are highly negatively (positively) correlated. This method may also be used for the difference between (or sum of) sample estimates from two censuses or from a census sample and another survey. The standard error for estimates not based on the 1990 census sample must be obtained from an appropriate source outside of this appendix.

3. For the differences between two estimates, one of which is a subclass of the other, use the tables directly where the calculated difference is the estimate of interest.

For example, to determine the estimate of non-Black teachers, one may subtract the estimate of Black teachers from the estimate of total teachers. To determine the standard error of the estimate of non-Black teachers apply the above formula directly.

Ratios - Frequently, the statistic of interest is the ratio of two variables, where the numerator is not a subset of the denominator. For example, the ratio of teachers to students in public elementary schools. The standard error of the ratio between two sample estimates is estimated as follows:

1. If the ratio is a proportion, then follow the procedure outlined for "Totals and Percentages."
2. If the ratio is not a proportion, then approximate the standard error using the formula below.

$$SE_{(X/Y)} = \frac{X}{Y} \sqrt{\frac{(SE_X)^2}{X^2} + \frac{(SE_Y)^2}{Y^2}}$$

Medians - For the standard error of the median of a characteristic, it is necessary to examine the distribution from which the median is derived, as the size of the base and the distribution itself affect the standard error. An approximate method is given here. As the first step, compute one-half of the number on which the median is based (refer to this result as N/2). Treat N/2 as if it were an ordinary estimate

and obtain its standard error as instructed above. Compute the desired confidence interval about N/2. Starting with the lowest value of the characteristic, compute the frequencies in each category of the characteristic until the sum equals or first exceeds the lower limit of the confidence interval about N/2. By linear interpolation, obtain a value of the characteristic corresponding to this sum. This is the lower limit of the confidence interval of the median. In a similar manner, continue cumulating frequencies until the sum equals or exceeds the count in excess of the upper limit of the interval about N/2. Interpolate as before to obtain the upper limit of the confidence interval for the estimated median.

When interpolation is required in the upper open-ended interval of a distribution to obtain a confidence bound, use 1.5 times the lower limit of the open-ended confidence interval as the upper limit of the open-ended interval.

CONFIDENCE INTERVALS AND INFERENCES BASED ON THE SAMPLE

A sample estimate and its estimated standard error may be used to construct confidence intervals about the estimate. These intervals are ranges that will contain the average value of the estimated characteristic that results over all possible samples, with a known probability. For example, if all possible samples that could result under the 1990 census sample design were independently selected and surveyed under the same conditions, and if the estimate and its estimated standard error were calculated for each of these samples, then:

1. Approximately 68 percent of the intervals from one estimated standard error below the estimate to one estimated standard error above the estimate would contain the average result from all possible samples.
2. Approximately 90 percent of the intervals from 1.645 times the estimated standard error below the estimate to 1.645 times the estimated standard error above the estimate would contain the average result from all possible samples.
3. Approximately 95 percent of the intervals from two estimated standard errors below the estimate to two estimated standard errors

Table A: Unadjusted Standard Errors for Estimated Totals, 5 Percent Sample

Estimated Total ¹	Size of Geographic area Tabulated ²							
	100,000	250,000	500,000	750,000	1 M	5 M	10 M	25 M
1,000	140	140	140	140	140	140	140	140
2,500	220	220	220	220	220	220	220	220
5,000	300	310	310	310	310	310	310	310
10,000	410	430	430	430	430	440	440	440
15,000	490	520	530	530	530	530	530	530
25,000	600	650	670	680	680	690	690	690
75,000	600	1,000	1,100	1,130	1,150	1,180	1,190	1,190
100,000	-	1,070	1,230	1,280	1,310	1,360	1,370	1,380
250,000	-	-	-	1,280	1,890	2,120	2,150	2,170
500,000	-	-	-	1,780	2,180	2,920	3,000	3,050
750,000	-	-	-	-	968	3,480	3,630	3,717
1,000,000	-	-	-	-	-	3,900	4,140	4,270
5,000,000	-	-	-	-	-	-	6,980	8,720
10,000,000	-	-	-	-	-	-	-	10,680

¹For estimated totals larger than 10,000,000, the standard error is somewhat large than the table values. The formula given below should be used to calculate the standard error.

$$SE(\hat{Y}) = \sqrt{19\hat{Y} \left(1 - \frac{\hat{Y}}{N}\right)}$$

Where: N = Size of area
 \hat{Y} = Estimate of characteristic total

²Total count of persons, housing units, or families in area if the estimated total is a person, housing unit, or family characteristic, respectively.

Table B: Unadjusted Standard Error for Estimated Percentages, 5 Percent Sample (Standard errors expressed in percentage points)

Estimated Percent	Base (weighted total) of percentage ¹										
	1000	1500	2500	5000	7500	10000	25000	50000	100000	250000	500000
2 or 98	1.9	1.6	1.2	0.9	0.7	0.6	0.4	0.3	0.2	0.1	0.1
5 or 95	3.0	2.4	1.9	1.3	1.1	1.0	0.6	0.4	0.3	0.2	0.1
10 or 90	4.1	3.4	2.6	1.8	1.5	1.3	0.8	0.6	0.4	0.3	0.2
15 or 85	4.9	4.0	3.1	2.2	1.8	1.6	1.0	0.7	0.5	0.3	0.2
20 or 80	5.5	4.5	3.5	2.5	2.0	1.7	1.1	0.8	0.6	0.3	0.2
25 or 75	6.0	4.9	3.8	2.7	2.2	1.9	1.2	0.8	0.6	0.4	0.3
30 or 70	6.3	5.2	4.0	2.8	2.3	2.0	1.3	0.9	0.6	0.4	0.3
35 or 65	6.6	5.4	4.2	2.9	2.4	2.1	1.3	0.9	0.7	0.4	0.3
50	6.9	5.6	4.4	3.1	2.5	2.2	1.4	1.0	0.7	0.4	0.3

¹For a percentage and/or base of percent age not shown in the table, the formula given below may be used to calculate the standard error.

$$SE(\hat{p}) = \sqrt{\frac{19}{B} \hat{p}(100 - \hat{p})}$$

Where: B = Base of estimated percentage (weighted total)
 \hat{p} = Estimated percentage

Table C: Unadjusted Standard Errors for Estimated Totals, 1 Percent Sample

Estimated Total ¹	Size of Geographic area Tabulated ²							
	100,000	250,000	500,000	750,000	1 M	5 M	10 M	25 M
1,000	310	310	310	310	310	310	310	310
2,500	490	500	500	500	500	500	500	500
5,000	690	700	700	700	700	700	700	700
10,000	940	970	980	990	990	990	990	990
15,000	1,120	1,180	1,200	1,210	1,210	1,220	1,220	1,220
25,000	1,360	1,490	1,530	1,550	1,550	1,570	1,570	1,570
75,000	1,360	2,280	2,510	2,590	2,620	2,700	2,710	2,720
100,000	-	2,440	2,810	2,930	2,980	3,110	3,130	3,140
250,000	-	-	3,520	4,060	4,310	4,850	4,910	4,950
500,000	-	-	-	4,060	4,970	6,670	6,860	6,960
750,000	-	-	-	-	7,462	7,944	8,287	8,787
1,000,000	-	-	-	-	-	8,900	9,440	9,750
5,000,000	-	-	-	-	-	-	15,730	19,900
10,000,000	-	-	-	-	-	-	-	24,370

¹For estimated totals larger than 10,000,000, the standard error is somewhat larger than the table values. The formula given below should be used to calculate the standard error.

$$SE(\hat{Y}) = \sqrt{99\hat{Y} \left(1 - \frac{\hat{Y}}{N}\right)}$$

Where: N = Size of area
 \hat{Y} = Estimate of characteristic total

²Total count of persons, housing units, or families in area if the estimated total is a person, housing unit, or family characteristic, respectively.

Table D: Unadjusted Standard Error for Estimated Percentages, 1 Percent Sample (Standard errors expressed in percentage points)

Estimated Percent	Base (weighted total) of percentage ¹										
	1000	1500	2500	5000	7500	10000	25000	50000	100000	250000	500000
2 or 98	4.4	3.6	2.8	2.0	1.6	1.4	0.9	0.6	0.4	0.3	0.2
5 or 95	6.9	5.6	4.3	3.1	2.5	2.2	1.4	1.0	0.7	0.4	0.3
10 or 90	9.4	7.7	6.0	4.2	3.4	3.0	1.9	1.3	0.9	0.6	0.4
15 or 85	11.2	9.2	7.1	5.0	4.1	3.6	2.2	1.6	1.1	0.7	0.5
20 or 80	12.6	10.3	8.0	5.6	4.6	4.0	2.5	1.8	1.3	0.8	0.6
25 or 75	13.6	11.1	8.6	6.1	5.0	4.3	2.7	1.9	1.4	0.9	0.6
30 or 70	14.4	11.8	9.1	6.4	5.3	4.6	2.9	2.0	1.4	0.9	0.6
35 or 65	15.0	12.8	9.5	6.7	5.5	4.7	3.0	2.1	1.5	0.9	0.7
50	15.8	12.8	9.9	7.0	5.7	5.0	3.1	2.2	1.6	1.0	0.7

¹For a percentage and/or base of percentage not shown in the table, the formula given below may be used to calculate the standard error.

$$SE(\hat{p}) = \sqrt{\frac{99}{B} \hat{p}(100 - \hat{p})}$$

Where: B = Base of estimated percentage (weighted total)
 \hat{p} = Estimated percentage

Table E: Unadjusted Standard Errors for Estimated Totals, 3 Percent Sample

Estimated Total ^f	Size of Geographic area Tabulated ²							
	50K	100K	250K	500K	1,000K	5,000K	10,000K	25,000K
1,000	180	180	180	180	180	180	180	180
2,500	280	280	290	290	290	290	290	290
5,000	390	390	400	400	410	410	410	410
10,000	510	540	560	570	570	570	570	570
15,000	590	650	680	690	700	700	700	700
25,000	640	780	860	880	890	900	900	900
75,000	-	780	1,310	1,440	1,500	1,550	1,560	1,560
100,000	-	-	1,400	1,610	1,710	1,780	1,790	1,800
250,000	-	-	-	2,010	2,470	2,780	2,810	2,830
500,000	-	-	-	-	2,850	3,820	3,920	3,980
750,000	-	-	-	-	2,460	4,540	4,736	4,850
1,000,000	-	-	-	-	-	5,090	5,400	5,580
5,000,000	-	-	-	-	-	-	8,990	11,380
10,000,000	-	-	-	-	-	-	-	13,930

^fFor estimated totals larger than 10,000,000, the standard error is somewhat larger than the table values. The formula given below should be used to calculate the standard error.

$$SE(\hat{Y}) = \sqrt{\frac{97}{3} \hat{Y} \left(1 - \frac{\hat{Y}}{N}\right)}$$

Where: N = Size of area
 \hat{Y} = Estimate of characteristic total

Table F: Unadjusted Standard Error for Estimated Percentages, 3 Percent Sample (Standard errors expressed in percentage points)

Estimated Percent	Base (weighted total) of percentage ¹										
	1000	1500	2500	5000	7500	10000	25000	50000	100000	250000	500000
2 or 98	2.5	2.0	1.6	1.1	.9	.8	.5	.6	.2	.1	.1
5 or 95	3.9	3.2	2.4	1.7	1.4	1.2	.8	.0	.4	.2	.2
10 or 90	5.4	4.4	3.4	2.4	2.0	1.7	1.1	.3	.5	.3	.2
15 or 85	6.4	5.2	4.1	2.9	2.3	2.1	1.3	.6	.6	.4	.3
20 or 80	7.2	5.9	4.5	3.2	2.6	2.3	1.4	1.0	.7	.5	.3
25 or 75	7.8	6.4	4.9	3.5	2.8	2.5	1.6	1.1	.8	.5	.3
30 or 70	8.2	6.7	5.2	3.7	3.0	2.6	1.6	1.1	.8	.5	.3
35 or 65	8.6	7.0	5.4	3.8	3.1	2.7	1.7	1.2	.9	.5	.4
50	9.0	7.3	5.7	4.0	3.3	2.8	1.8	1.3	.9	.6	.4

¹For a percentage and/or base of percentage not shown in the table, the formula given below may be used to calculate the standard error.

$$SE(p) = \sqrt{\frac{97}{3B} p(100 - p)}$$

Where: B = Base (Weighted total) of estimated percentage
p = Estimated percentage.

Table G. Standard Error Design Factors-United States
 [Percent of persons or housing units in sample]

Characteristic	Design factors
POPULATION	
Age.....	1.2
Sex.....	1.2
Race.....	1.2
Hispanic origin (of any race).....	1.2
Marital status.....	1.2
Household type and relationship.....	1.3
Children ever born.....	2.6
Work disability and mobility limitation status.....	1.2
Ancestry.....	2.1
Place of birth.....	2.2
Citizenship.....	1.8
Migration (Residence in 1985).....	2.1
Year of entry.....	1.5
Language spoken at home and ability to speak English.....	1.7
Educational attainment.....	1.3
School enrollment.....	1.8
Type of residence (urban/rural).....	2.2
Household type.....	1.3
Family type.....	1.2
Group quarters.....	1.0
Subfamily type and presence of children.....	1.2
Employment status.....	1.2
Industry.....	1.3
Occupation.....	1.2
Class of worker.....	1.5
Hours per week and weeks worked in 1989.....	1.2
Number of workers in family.....	1.3
Place of work.....	1.5
Means of transportation to work.....	1.5
Travel time to work.....	1.3
Vehicle occupancy.....	1.5
Time of departure for work.....	1.3
Type of income in 1989.....	1.4
Household Income in 1989.....	1.2
Family income in 1989.....	1.2
Poverty status in 1989 (persons).....	1.6
Poverty status in 1989 families.....	1.2
Armed Forces and veteran status.....	1.5

Table G Con't.

HOUSING

Age of householder.....	1.2
Race of householder.....	1.2
Hispanic origin of householder.....	1.2
Type of residence (urban/rural.....)	1.1
Condominium status.....	1.2
Units in structure.....	1.2
Tenure.....	1.2
Occupancy status.....	1.2
Value.....	1.2
Gross rent.....	1.2
Household income in 1989.....	1.2
Year structure built.....	1.2
Rooms, bedrooms.....	1.2
Kitchen facilities.....	1.3
Source of water, plumbing facilities.....	1.3
Sewage disposal.....	1.2
House heating fuel.....	1.3
Telephone in housing unit.....	1.2
Vehicles available.....	1.3
Year householder moved into structure.....	1.2
Mortgage status and monthly mortgage costs.....	1.2
Mortgage status and selected monthly owner costs.....	1.2
Gross rent as a percentage of household income in 1989.....	1.3
Household income in 1989 by selected owner costs as a percentage of household income.....	1.2

above the estimate would contain the average result from all possible samples.

The intervals are referred to as 68 percent, 90 percent, and 95 percent confidence intervals, respectively.

The average value of the estimated characteristic that could be derived from all possible samples is or is not contained in any particular computed interval. Thus, we cannot make the statement that the average value has a certain probability of falling between the limits of the calculated confidence interval. Rather, one can say with a specified probability of confidence, that the calculated confidence interval includes the average estimate from all possible samples (approximately the 100-percent value).

Confidence intervals also may be constructed for the ratio, sum of, or difference between two sample figures. This is done by first computing the ratio, sum, or difference, then obtaining the standard error of the ratio, sum, or difference (using the formulas given earlier), and finally forming a confidence interval for this estimated ratio, sum, or difference as above. One can then say with specified confidence that this interval includes the ratio, sum, or difference that would have been obtained by averaging the results from all possible samples.

The estimated standard errors given in this chapter do not include all portions of the variability due to nonsampling error that may be present in the data. The standard errors reflect the effect of simple response variance, but not the effect of correlated errors introduced by enumerators, coders, or other field or processing personnel. Thus, the standard errors calculated represent a lower bound of that total error. As a result, confidence intervals formed using these estimated standard errors may not meet the stated levels of confidence (i.e., 68, 90, or 95 percent).

Thus, some care must be exercised in the interpretation of the data in this data product based on the estimated standard errors.

In example 1, the standard error of the 59,948 persons 16 years and over in county A in state A who were in the civilian labor force was found to be 945. Thus, a 90 percent confidence interval for this estimated total is found to be:

$$[59,948 - 1.645(945)] \text{ to } [59,948 + 1.645(945)]$$

or

$$58,393 \text{ to } 61,502$$

One can say, with about 90 percent confidence, that this interval includes the value that would have been obtained by averaging the results from all possible samples.

The following is an illustration of the calculation of standard errors and confidence intervals when a difference between two sample estimates is obtained. For example, suppose the number of persons in county B age 16 years and over who were in the civilian labor force was 69,314 and the total number of persons 16 years and over was 116,666. Further, suppose the population of county B was 225,225. Thus, the estimated percentage of persons 16 years and over who were in the civilian labor force is 59.4 percent. The unadjusted standard error from table B is 0.63 percentage points. The design factors table (table G) shows the design factor to be 1.1 for "Employment Status." Thus, the approximate standard error of the percentage (59.4 percent) is $0.63 \times 1.2 = 0.76$ percentage points.

Now suppose that one wished to obtain the standard error of the difference between county A and county B of the percentage of persons who were 16 years and over and who were in the civilian labor force. The difference in the percentages of interest for the two cities is:

$$62.6 - 59.4 = 3.2 \text{ percent.}$$

Using the results of the previous example:

$$SE(3.2) = \sqrt{(SE(62.6))^2 + (SE(59.4))^2} = \sqrt{(0.82)^2 + (.76)^2}$$

$$= 1.12 \text{ percentage points}$$

The 90 percent confidence interval for the difference is formed as before:

$$[3.20 - 1.645(1.12)] \text{ to } [3.20 + 1.645(1.12)]$$

or

$$1.36 \text{ to } 5.04$$

One can say with 90 percent confidence that the interval includes the difference that would have been obtained by averaging the results from all possible samples. When, as in this example, the interval does not include zero, one can conclude, again with 90 percent confidence, that the difference observed between the two counties on this characteristic is greater than can be attributed to sampling error.

For reasonably large samples, ratio estimates are normally distributed, particularly for the census population. Therefore, if we can calculate the standard error of a ratio estimate, then we can form a confidence interval around the ratio. Suppose that one wished to obtain the standard error of the ratio of the estimate of persons who were 16 years and over and who were in the civilian labor force in county A to the estimate of persons who were 16 years and over and who were in the civilian labor force in county B. The ratio of the two estimates of interest is:

$$59,948 / 69,314 = .86$$

$$SE(.86) = \left(\frac{59948}{69314} \right) \sqrt{\frac{945^2}{(59948)^2} + \frac{1145^2}{(69314)^2}}$$

$$= .02$$

Using the results above, the 90 percent confidence interval for this ratio would be:

$$[.86 - 1.645(.02)] \text{ to } [.86 + 1.645(.02)]$$

or

$$.83 \text{ to } .89$$

Selecting an Appropriate Sample Size - One virtue in the use of the tables A through F for calculating standard errors and confidence intervals is that this method can be employed prior to making any sample tabulation, and thus, can help the user decide prior to purchase whether a 5-percent or 1-percent sample size is most appropriate for a proposed study.

Suppose that in the foregoing example, the 59,948 figure was a guess, perhaps based on published data. The confidence interval could be calculated as above. In this case, tabulating a 5-percent sample for this particular characteristic would result in a 90 percent confidence interval 58,393 to 61,502. The width of this interval is 3,109. Tabulating from a 1-percent sample

for the same characteristic would result in a confidence interval of 56,403 to 63,492. The width of the interval from the 1-percent sample is 7,089 (over two times the width of the confidence interval from the 5-percent sample). Another criterion used in making this type of decision is the coefficient of variation (CV). The CV is a measure of reliability and is defined as the ratio of the standard error of the estimate and the absolute value of the expected value of the estimate. To get an estimate of the CV, substitute the estimate itself for the expected value in the CV formula. In this example, if the 59,948 estimate is obtained from the 5-percent sample, the CV would be 1.4 percent. If the 1-percent sample is tallied to get the estimate then the CV would be 3 percent. The smaller the CV, the more reliable the estimate. There is no particular rule of thumb that dictates how large a confidence interval or CV is acceptable. This depends on the relative precision necessary for a particular application as balanced against the relative cost of tabulating microdata samples of the various sizes.

USING TABLE A THROUGH F FOR OTHER SAMPLE SIZES

Tables A through F may also be used to approximate the unadjusted standard errors for other sample sizes by adjusting for the sample size desired. The adjustment for sample size is obtained as follows:

Let

f_1 be the sampling rate in any of the tables A through F, and

f_2 be the sampling rate for the sample size to be used. The adjustment for sample size can be read from the following table:

f_2	Sample Size Adjustment Factor
.11	.65 Multiply the standard errors in tables A or B (where $f_1 = .05$) by this factor.
.10	
.06	
.04	
.03	
.02	
.009	1.05 Multiply the standard errors in table C or D (where $f_1 = .01$) by this factor.
.007	
.005	
.003	
.002	

For example, if the user were to select a subsample of one half of a 1-percent sample, i.e., $f_2 = .005$, then the standard errors shown in tables C or D for a 1-percent sample must be multiplied by 1.42 to obtain the standard errors for a .005 sample. The factor of 1.42 shows that the standard errors increase by 42 percent when the sample size is halved.

The principle is also applicable when combining microdata samples to achieve a sample size larger than 5 percent. If, for example, all three samples are combined for the same area to obtain an estimate of a characteristic for the elderly population, the standard errors for this sample size (i.e., 11 percent) can be obtained by multiplying those shown in tables A and B by .65. Thus, the increase from a 5-percent to a 11-percent sample reduces the standard error by 35 percent.

Alternatively, the user may wish to use the following formulas to directly calculate the unadjusted standard errors. For estimated totals, calculate as

$$s_e(\hat{Y})$$

$$s_e(\hat{Y}) = \sqrt{\left(\frac{1}{f_2} - 1\right) \hat{Y}(1 - \hat{Y})/N}$$

where

N = size of area tabulated

\hat{Y} = estimate (weighted) of characteristic total.

Example 1 shows the unadjusted standard error for the figure 59,948 to be 787. Using the above formula with $f_2 = .11$ yields an unadjusted standard error $SE(\hat{Y}) = 513$ for a 35 percent reduction in the standard error as shown in the above table.

For an estimated percentage, calculate

$$s_e(\hat{P}) = \sqrt{\left(\frac{1}{f_2} - 1\right) \frac{\hat{P}(100 - \hat{P})}{B}}$$

where \hat{P} = estimated percentage and

B = base of estimated percentage (weighted estimate)

ESTIMATION OF STANDARD ERRORS DIRECTLY FROM THE MICRODATA SAMPLES

Use of tables or formulas to derive approximate standard error as discussed above is simple and does not complicate processing. Nonetheless, a more accurate estimate of the standard error can be obtained from the samples themselves, using the random group method. Using this method it is also possible to compute standard errors for mean ratios, indexes, correlation coefficients, or other statistics for which the tables or formulas presented earlier do not apply.

The random group method does increase processing time somewhat since it requires that the statistic of interest, for example a total, be computed separately for each of up to 100 random groups. The variability of that statistic for the sample as a whole is estimated from the variability of the statistic among the various random groups within the sample. The procedure for calculating a standard error by the random group method for various statistics is given below.

Totals - to obtain the standard errors of estimated totals the following method should be used. The random groups estimate of variance of X is given by

$$\text{var}(\hat{X}) = \left(\frac{t}{t-1} \right) \sum_{g=1}^t \left[x_g - \frac{1}{t} \left(\sum_{g=1}^t x_g \right) \right]^2$$

or the computational formula

$$\text{var}(\hat{X}) = \left(\frac{t}{t-1} \right) \sum_{g=1}^t x_g^2 - t \bar{x}_g^2$$

where

t = number of random groups

X_g = the weighted microdata sample total of the characteristic of interest from the g -th random group.

$$\bar{x}_g = \sum_{g=1}^t x_g / t, \text{ the average random group total}$$

The standard error of the estimated total is the square root of $\text{var}(\hat{X})$.

It is suggested that $t=100$ for estimating the standard error of a total since, as it is discussed in the next chapter, each of the sample records was assigned a two-digit subsample number sequentially from 00 to 99. The two-digit number can be used to form 100 random groups.

For example, a sample case with 01 as the two-digit number will be in random group 1. All sample cases with 02 as the two digit number will be in random group 2, etc., up to 00 as the one-hundredth random group. The reliability of the random group variance estimator is a function of both the kurtosis of the estimator and the number of groups t . If t is small, the coefficient of variation (CV) will be large, and therefore, the variance estimator will be of low precision. In general, the larger t is, the more reliable the variance estimator will be.¹

Percentages, Ratios, and Means - To obtain the estimated standard error of a percent, ratio, or mean,

the following method should be used. Let $f = \frac{\hat{x}}{\hat{y}}$ be

the estimated percent, ratio, or mean

where

and \hat{y} = the estimated totals as defined above for the X and Y characteristics.

For the case where both numerator and denominator are obtained from the full microdata sample then the variance of f is given by

$$\text{var}(f) = \left(\frac{t}{t-1} \right) \left(\frac{1}{\hat{y}} \right)^2 \sum_{g=1}^t (x_g - f y_g)^2$$

where t and x_g are defined above,

\hat{y} = the weighted full microdata sample total for the y characteristic, and

y_g = the corresponding weighted total for the g -th random group.

Correlation Coefficients, and Regression Coefficients and Complex Statistics - The random group method for computing the variance of correlation coefficients, regression coefficients, and other complex nonlinear statistics may be expressed as:

$$\text{var}(\hat{\theta}) = \frac{t}{(t-1)} \sum_{g=1}^t (\theta_g - \hat{\theta})^2$$

where

- $\hat{\theta}_g$ = the weighted estimate (at the tabulation area level) of the statistic of interest computed from the g-th random group, and
 $\hat{\theta}$ = corresponding weighted estimate computed from the full microdata sample.

Care must be exercised when using this variance estimator for complex nonlinear statistics as its properties have not been fully explored for such statistics. In particular, the choice of the number of random groups must be considered more carefully. When using the 5-percent sample, use of $t=100$ for all areas tabulated is recommended. When using the 1-percent sample or samples having a smaller sampling fraction, the user should consider using a smaller number of random groups to insure that each random group contains at least 25 records. Fewer than 100 random groups can be formed by appropriate combination of the two-digit subsample numbers. For example, to construct 50 random groups assign all records in which the subsample number is 01 or 50 to the first random group; all records in which the subsample number is 02 or 52 to the second random group, etc. Finally, assign all records in which the subsample number is 00 or 50 to random group 50. Ten random groups can be constructed by including all records having subsample numbers with the same "units" digit in a particular random group. For example, subsample numbers 00,10,...,90 would form one random group; subsample numbers 01,11,...,91 would form a second random group, etc.

STANDARD ERRORS FOR SMALL ESTIMATES

Percentage estimates of zero and estimated totals of zero are subject to both sampling and nonsampling error. While the magnitude of the error is difficult to quantify, users should be aware that such estimates are nevertheless subject to both sampling and nonsampling error even though in the case of zero estimates the corresponding random groups estimate of variance will be zero.

A second point concerning standard errors, the standard error estimates obtained using the random groups method do not include all components of the variability due to nonsampling error that may be present in the data. Therefore, the standard error calculated using the methods described in this section

represent a lower bound for the total error. Data users should be aware that in general confidence intervals formed using these estimated standard errors do not meet the stated levels of confidence. Data users are advised to be conservative when making inferences from the data provided in this data product.

CONTROL OF NONSAMPLING ERROR

As mentioned earlier, both sample and 100-percent data are subject to nonsampling error. This component of error could introduce serious bias into the data, and the total error could increase dramatically over that which would result purely from sampling. While it is impossible to eliminate completely nonsampling error from an operation as large and complex as the decennial census, the Bureau of the Census attempted 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 for control of this error. The success of these programs, however, was contingent upon how well the instructions actually were carried out during the census. As part of the 1990 census evaluation program, both the effects of these programs and the amount of error remaining after their application will be evaluated.

Undercoverage--It is possible for some households or persons to be missed entirely by the census. The undercoverage of persons and housing units can introduce biases into the data. 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 1980 census and results from the 1990 census testing cycle. In developing and updating the census address list, the Census Bureau used a variety of specialized procedures in different parts of the country.

- In the large urban areas, the Census Bureau purchased and geocoded address lists. Concurrent with geocoding, the United States Postal Service (USPS) reviewed and updated this list. After the postal check, census enumerators conducted a dependent canvass and update operation. Prior to mailout, in the fall of 1989, local officials were given the opportunity to examine block counts of address listings (local review) and identify possible errors, and the USPS conducted a final review.

- In small cities, suburban areas, and selected rural parts of the country, the Census Bureau created the address list through a listing operation. The USPS reviewed and updated this list, and the Census Bureau reconciled USPS corrections and updated through a field operation. In the fall of 1989, local officials participated in reviewing block counts of address listings. Prior to mailout, the USPS conducted a final review.
- The Census Bureau (rather than the USPS) conducted a listing operation in the fall of 1989 and delivered census questionnaires in selected rural and seasonal housing areas in March of 1990. In some inner-city public housing developments, whose addresses had been obtained via the purchased address list noted above, census questionnaires were also delivered by Census Bureau enumerators.

Coverage improvement programs continued during and after mailout. A recheck of units initially classified as vacant or nonexistent further improved the coverage of persons and housing units. All local officials were given the opportunity to participate in a post-census local review, and census enumerators conducted an additional recanvass. In addition, efforts were made to improve the coverage of unique population groups, such as the homeless and parolees/probationers. Computer and clerical edits and telephone and personal visit followup also contributed to improved coverage.

More extensive discussion of the programs implemented to improve coverage will be published by the Census Bureau when the evaluation of the coverage improvement program is completed.

Respondent and Enumerator Error--The persons answering the questionnaire or responding to the questions posed by an enumerator could serve as a source of error, although the questions were phrased as clearly as possible based on precensus tests, and detailed instructions for completing the questionnaire were provided to each household. In addition, respondents' answers were edited for completeness and consistency, and problems were followed up as necessary.

The enumerator may 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 these problems, 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 enumerators for nonresponse were reinterviewed to control for the possibility of data for fabricated persons being submitted by enumerators. Also, the estimation procedure was designed to control for biases that would result from the collection of data from households not designated for the sample.

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 includes the field editing, followup, and transmittal of completed questionnaires; the manual coding of write-in responses; and the electronic data processing. The various field, coding and computer operations undergo a number of quality control checks to insure their accurate application.

Nonresponse--Nonresponse to particular questions on the census questionnaire allows for the introduction of bias into the data, since 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 this difference 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. In the census, nonresponse was reduced substantially during the field operations by the various edit and followup operations aimed at obtaining a response for every question. Characteristics for the nonresponses remaining after this operation were imputed by the computer by using reported data for a person or housing unit with similar characteristics.

EDITING OF UNACCEPTABLE DATA

The objective of the processing operation is to produce a set of data that describes the population as accurately and clearly as possible. To meet this objective, questionnaires were edited during field data collection operations for consistency, completeness, and acceptability. Questionnaires also were reviewed by census clerks for omissions, certain specific inconsistencies, and population coverage. For example, write-in entries such as "Don't know" or "NA" were considered unacceptable. For some district offices, the initial edit was automated; however, for

the majority of the district offices, it was performed by clerks. As a result of this operation, a telephone or personal visit followup was made to obtain missing information. Potential coverage errors were included in the followup, as well as a sample of questionnaires with omissions and/or inconsistencies.

Subsequent to field operations, remaining incomplete or inconsistent information on the questionnaire was assigned 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 or housing unit on that item is inconsistent with other information for that same person or housing unit. As in previous censuses, the general procedure for changing unacceptable entries was to assign an entry for a person or housing unit that was consistent with entries for persons or housing units with similar characteristics. The assignment of acceptable codes in place of blanks or unacceptable entries enhances the usefulness of the data.

Another way in which corrections were made during the computer editing process was through substitution; that is, the assignment of a full set of characteristics for a person or housing unit. When there was an indication that a housing unit was occupied 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 was selected as a substitute, and the full set of characteristics for the substitute was duplicated. The assignment of the full set of housing characteristics occurred when there was no housing information available. If the housing unit was determined to be occupied, the housing characteristics were assigned from a previously processed occupied unit. If the housing unit was vacant, the housing characteristics were assigned from a previously processed vacant unit.

USE OF ALLOCATION FLAGS IN THESE FILES

As a result of the editing there are no blank fields or missing data in public use microdata sample files. Each field contains a data value or a "not applicable" indicator, except for the few items where allocation was not appropriate and a "not reported" indicator is included. For every subject item it is possible for the user to differentiate between entries which were allocated, by means of "allocation flags" in items H161 through H198, and P186 through P233 in

the microdata files. For all items it is possible to compute the allocation rate and, if the rate is appreciable, compute the distribution of actually observed values (with allocated data omitted) and compare it with the overall distribution including allocated values. The flags indicate the changes in values between input and output.

These flags may indicate up to four possible types of allocations:

- A. Pre-edit - When the original entry was rejected because it fell outside the range of acceptable values.
- B. Consistency - Imputed missing characteristics based on other information recorded for the person or housing unit.
- C. Hot Deck - Supplied the missing information from the record of another person or housing unit.
- D. Cold Deck - Supplied missing information from a predetermined distribution.

In general, the allocation procedures provide better data than could be obtained by simply weighting up the observed distribution to account for missing values. The procedures reflect local variations in characteristics as well as variations among the strata used in imputation. There are, however, certain circumstances where allocated data may introduce undesirable bias. It may be particularly important to analyze allocations of data in detailed studies of subpopulations or in statistics derived from cross-classification of variables, such as correlation coefficients or measures of regression. The degree of editing required was greater for some subjects than for others. While the allocation procedure was designed to yield appropriate statistics for the overall distribution or for specific subpopulations (the strata used in the allocation process), allocated characteristics will not necessarily observe a valid relationship with other observed variables for the same individual. For example, consider a tabulation of persons 80 years old and over by income. Income allocations were made separately for different age groupings, including the category 65 years old and over, but not separately for persons 80 years old and over.

Since persons 65 to 70 or 75 are more likely to have significant earnings than persons 80 or over, allocated income data for the latter group might be

biased upward. Thus, if the rate of allocations for the group is appreciably large, and a bias in the allocated value is evident, it may be desirable to exclude allocated data from the analysis.

It should also be apparent from this illustration that knowledge of the specific allocation procedures is valuable in detailed subject analysis. Descriptions of the editing and allocation procedures for each item are being incorporated in the History of the 1990 Census of Population and Housing to be published later. A user may contact either the Population Division or Housing and Households Economic Statistics Division, Bureau of the Census, if more information is desired on the allocation scheme for a specific subject item.

CHAPTER 4 - SAMPLE DESIGN AND ESTIMATION

SAMPLE DESIGN AND ESTIMATION FOR THE PUBLIC USE MICRODATA SAMPLES

This chapter discusses the selection procedure for the public use microdata samples in terms of four major operations, (1) the selection of the full 1990 census sample, (2) the estimation procedure for the full census sample, and (3) the selection of the public use microdata samples from the persons and housing units included in the full 1990 census sample, and (4) estimation for the PUMS samples.

PRODUCING ESTIMATES OR TABULATIONS

Estimation of totals and percentages - The 1980 Public Use Microdata Samples (PUMS) were self-weighted. It is very important to note that the 1990 PUMS samples are not self-weighted. To produce estimates on tabulations of 100 percent characteristics from the PUMS files simply add the weights of all persons or housing units that possess the characteristic of interest. For instance, if the characteristic of interest is total number of Hispanic males aged 5-17, simply determine the sex, age, and Hispanic origin of all persons and cumulate the weights of those who match the characteristic of interest. The PUMS weight is a function of the full census sample weight and the PUMS sample design.

To get estimates of proportions simply divide the weighted estimate of persons or housing units with a given characteristic by the base sample estimate. For example, the proportion of owner occupied housing units with plumbing facilities is obtained by dividing the PUMS estimate of owner occupied housing units with plumbing facilities by the PUMS estimates of total housing units.

To get estimates of characteristics such as the total number of related children in households for (housing unit level aggregates), simply multiply the PUMS weight by the value of the characteristic and sum across all household records. If the desired estimate is the number of households with at least one related child in household add the PUMS householder weight for all households with a value not equal to zero for the characteristic.

SAMPLE DESIGN

Every person and housing unit in the United States was asked certain basic demographic questions (for example, race, age, relationship, housing value, or rent). A sample of

these persons and housing units was asked more detailed questions about such items as income, occupation, and housing costs in addition to the basic demographic and housing information. The primary sampling unit for the 1990 census was the housing unit, including all occupants. For persons living in group quarters, the sampling unit was the person. Persons in group quarters were sampled at a 1-in-6 rate.

The sample designation method depended on the data collection procedures. Approximately 95 percent of the population was enumerated by the mailback procedure. In these areas, the Bureau of the Census either purchased a commercial mailing list, which was updated by the United States Postal Service and Census Bureau field staff, or prepared a mailing by canvassing and listing each address in the area prior to Census Day. These lists were computerized and the appropriate units were electronically designated as sample units. The questionnaires were either mailed or hand delivered to the addresses with instructions on how to complete and mail back the form. Housing units in governmental units with a precensus (1988) estimated population of fewer than 2,500 persons were sampled at 1-in-2. Governmental units were defined for sampling purposes as all incorporated places, all counties, all county equivalents such as parishes in Louisiana, and all minor civil divisions in Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin. Housing units in tracts and block numbering areas (BNAs) with a precensus housing unit count below 2,000 housing units were sampled at 1-in-6 for those portions not in small governmental units. Housing units within census tracts and BNAs with 2,000 or more housing units were sampled at 1-in-8 for those portions not in small governmental units.

In list/enumerate areas (about 5 percent of the population) each enumerator was given a blank address register with designated sample lines. Beginning about Census Day, the enumerator systematically canvassed the area and listed all housing units in the address register in the order they were encountered. Completed questionnaires, including sample information for any housing unit listed on a designated sample line, were collected. For all governmental units with fewer than 2,500 persons in list/enumerate areas, a 1-in-2 sampling rate was used. All other list/enumerate areas were sampled at 1-in-6.

Housing units in American Indian reservations, Tribal Jurisdiction Statistical areas, and Alaska Native villages were sampled according to the same criteria as other governmental units, except the sampling rates were based on the size of the American Indian and Alaska native population in those areas as measured in the 1980 census. Trust lands were sampled at the same rate as their associated American Indian reservations. Census designated places in Hawaii were sampled at the same rate as governmental units because the Census Bureau does not recognize incorporated places in Hawaii.

The purpose of using variable sampling rates was to provide relatively more reliable estimates for small areas and decrease respondent burden in more densely populated areas while maintaining data reliability. When all sampling rates were taken into account across the nation, approximately one out of every six housing units in the nation was included in the 1990 census sample.

ESTIMATION PROCEDURE

Estimates from the census sample were obtained from an iterative ratio estimation procedure (iterative proportional fitting) resulting in the assignment of a weight to each sample person or housing unit record. For any given tabulation area, a characteristic total was estimated by summing the weights assigned to the persons or housing units possessing the characteristic in the tabulation area. Estimates of family or household characteristics were based on the weight assigned to the person designated as householder. Each sample person or housing unit record was assigned exactly one weight to be used to produce estimates of all characteristics. For example, if the weight given to a sample person or housing unit had the value 6, all characteristics of that person or housing unit would be tabulated with the weight of 6. The estimation procedure, however, did assign weights varying from person to person or housing unit to housing unit. The estimation procedure used to assign the weight was performed in geographically defined "weighting areas". Weighting areas were generally formed of contiguous portions of geography which closely agreed with census tabulation areas within counties. Weighting areas were never allowed to cross state or county boundaries. In small counties with a sample unit below 400 persons, the minimum required sample condition was relaxed to permit the entire county to become a weighting area.

Within a weighting area, the ratio estimation procedure for persons was performed in four stages. For persons, the first stage applied 17 household-type groups. The second stage used two groups: sampling rate of 1-in-2

and sampling rate below 1-in-2. The third stage used the dichotomy householder/nonhouseholders. The fourth stage applied 180 aggregate age/sex/Hispanic origin/race categories.

The stages were as follows:

Stage I: Type of Household

Group Persons in Housing Units With a Family With Own Children Under 18

- 1 2 persons in housing unit
- 2 3 persons in housing unit
- 3 4 persons in housing unit
- 4 5 to 7 persons in housing unit
- 5 8 or more in housing unit

Persons in Housing Units With a Family Without Own Children Under 18

- 6-10 2 through 8 or more persons in housing unit

Persons in All Other Housing Units

- 11 1 person in housing unit
- 12-16 2 through 8 or more persons in housing unit

Persons in Group Quarters

- 17 Persons in Group Quarters

Stage II: Sampling Rates

- 1 Sampling rate of 1-in-2
- 2 Sampling rate less than 1-in-2

Stage III: Householder/Nonhouseholder

- 1 Householder
- 2 Nonhouseholder

Stage IV:	Age/Sex/Hispanic origin/Race
	White
	Persons of Hispanic origin
	Male
1	0 to 4 years of age
2	5 to 14 years of age
3	15 to 19 years of age
4	20 to 24 years of age
5	25 to 34 years of age
6	35 to 54 years of age
7	55 to 64 years of age
8	65 to 74 years of age
9	75 years of age or older
	Female
10-18	Same age categories as groups 1 through 9.
	Persons Not of Hispanic origin
19-36	Same age and sex categories as groups 1 through 18. Black
37-72	Same age/sex/Hispanic origin categories as groups 1 through 36 Asian or Pacific Islander
73-108	Same age/sex/Hispanic origin categories as groups 1 through 36 American Indian, Eskimo or Aleut
109-144	Same age/sex/Hispanic origin categories as groups 1 through 36 Other Race (includes those races not listed above)
145-180	Same age/sex/Hispanic origin categories as groups 1 through 36

Within a weighting area, the first step in the estimation procedure was to assign an initial weight to each sample person record. This weight was approximately equal to the inverse of the probability of selecting a person for the census sample.

The next step in the estimation procedure, prior to iterative proportional fitting, was to combine categories in each of the four estimation stages, when needed, to increase the reliability of the ratio estimation procedure. For each

stage, any group that did not meet certain criteria for the unweighted sample count or for the ratio of the 100 percent to the initially weighted sample count, was combined, or collapsed, with another group in the same stage according to a specified collapsing pattern. At the fourth stage, an additional criterion concerning the number of 100-percent persons in each race/Hispanic origin category was applied.

As the final step, the initial weights underwent four stages of ratio adjustment applying the grouping procedures described above. At the first stage, the ratio of the 100-percent to the sum of the initial weights for each sample person was computed for each stage I group. The initial weight assigned to each person in a group was then multiplied by the stage I group ratio to produce an adjusted weight.

In stage II, the stage I adjusted weights were again adjusted by the ratio of the 100-percent to the sum of the stage I weights for sample persons in each stage II group. Next, at stage III, the stage II weights were adjusted by the ratio of the 100-percent to the sum of the stage II weights for sample persons in each stage III group. Finally, at stage IV, the stage III weights were adjusted by the ratio of the 100-percent to the sum of the stage III weights for sample persons in each stage IV group. The four stages of ratio adjustment were performed two times (two iterations) in the order given above. The weights obtained from the second iteration for stage IV were assigned to the sample person records. However, to avoid complications in rounding for tabulated data, only whole number weights were assigned. For example, if the final weight of the persons in a particular group was 7.25 then 1/4 of the sample persons in this group were randomly assigned a weight of 8, while the remaining 3/4 received a weight of 7.

The ratio estimation procedure for housing units was essentially the same as that for persons, except that vacant units were treated differently. The occupied housing unit ratio estimation procedure was done in four stages, and the vacant housing unit ratio estimation procedure was done in a single stage. The first stage for occupied housing units applied 16 household type categories, while the second stage used the two sampling categories described above for persons. The third stage applied three units-in-building categories, i.e. single units, multiunit less than 10 and multiunit 10 or more. The fourth stage could potentially use 200 tenure/race/Hispanic origin/rent value groups. The stages for ratio estimation for housing units were as follows:

OCCUPIED HOUSING UNITS		4	\$60,000 to \$79,999
		5	\$80,000 to \$99,999
Stage I: Type of Household		6	\$100,000 to \$149,999
		7	\$150,000 to \$249,999
Group Housing Units With a Family With Own Children Under 18.		8	\$250,000 to \$299,999
		9	\$300,000+
		10	Other
1	2 persons in housing unit		
2	3 persons in housing unit		Householder Not of Hispanic origin
3	4 persons in housing unit		
4	5 to 7 persons in housing unit	11-20	Same value categories as groups 1 through 10
5	9 or more persons in housing unit		Black Householder
Housing Units With a Family Without Own Children Under 18.		21-40	Same Hispanic origin/value categories as groups 1 through 20
6-10	2 through 8 or more persons in housing unit		Asian or Pacific Islander Householder
All Other Housing Units		41-60	Same Hispanic origin/value categories as groups 1 through 20
11	1 person in housing unit		American Indian, Eskimo, or Aleut Householder
12-16	2 persons in housing unit through 8 or more persons in housing unit		
Stage II: Sampling Rate Category		61-80	Same Hispanic origin/value categories as groups 1 through 20
1	Sampling rate of 1-in-2		
2	Sampling rate less than 1-in-2		Other Race Householder
Stage III: Units in Building		81-100	Same Hispanic origin/value categories as groups 1 through 20
			Renter
1	Single unit structure		White Householder
2	Multiunit consisting of fewer than 10 individual units		Householder of Hispanic origin
3	Multiunit consisting of 10 or more individual units	Group	Rent categories
Stage IV: Tenure/Race and origin of Householder/ Value of Rent		101	Less than \$100
		102	\$100 to \$199
		103	\$200 to \$299
		104	\$300 to \$399
Group Owner		105	\$400 to \$499
White Householder		106	\$500 to \$599
Hispanic origin (Householder)		107	\$600 to \$749
Value of Housing Unit		108	\$750 to \$999
1	Less than \$20,000	109	\$1000+
2	\$20,000 to \$39,999	110	No cash rent
3	\$40,000 to \$59,999		

	Householder Not of Hispanic origin
111-120	Same rent categories as groups 101 through 112
	Black Householder
121-140	Same Hispanic origin/rent categories as groups 101 through 120
	Asian or Pacific Islander Householder
141-160	Same Hispanic origin/rent origin categories as groups 101 through 120
	American Indian, Eskimo, or Aleut Householder
161-180	Same Hispanic origin/rent categories as groups 101 through 120
	Other Race Householder
181-200	Same Hispanic origin/rent categories as groups 101 through 120

VACANT HOUSING UNIT

Group	
1	Vacant for Rent
2	Vacant for Sale
3	Other Vacant

The estimates produced by this procedure realize some of the gains in sampling efficiency that would have resulted if the population had been stratified into the ratio-estimation group before sampling, and the sampling rate had been applied independently to each group. The net effect is a reduction in both the standard error and the possible bias of most estimated characteristic to levels below what would have resulted from simply using the initial (unadjusted) weight. A by-product of this estimation procedure is that the estimates from the sample will for the most part be consistent with the 100-percent figures for the population and housing unit groups used in the estimation procedure.

SELECTION OF THE PUBLIC USE MICRODATA SAMPLES

A stratified systematic selection procedure with equal probability was used to select each of the public use

microdata samples. The sampling universe was defined as all occupied housing units including all occupants, vacant housing units, and GQ persons in the census sample. The sample units were stratified during the selection process. The stratification was intended to improve the reliability of estimates derived from the public use microdata samples by defining strata within which there is a high degree of homogeneity among the census sample households with respect to characteristics of major interest.

A total of 1,049 strata were defined; 936 household strata, 104 strata for GQ persons, and 9 strata for vacant housing units. First, the units were divided into three major groups; households, vacant housing units, and GQ population. The household universe was stratified by family type and non-family, race/Hispanic origin of the householder, tenure, and age within sampling stratum. For the census sample selection the population was stratified by geographic size into three sampling strata, i.e., units in small governmental units were sampled at 1-in-2, units in small tract/BNAs were sampled at 1-in-6, and the remainder of the units were sampled at 1-in-8.

The vacant housing units universe was stratified by vacancy status and sampling rate. Finally, the GQ population was stratified by GQ type (institutions, non-institutions), race, Hispanic origin, and age. The stratification matrices are defined in tables A, B, and C.

SUBSAMPLING THE PUMS FILES

The sample selection procedures were as follows. The number of 1-percent public use microdata samples for a given state was determined by the full census sample size for that state. For instance, if the full census sample for a state was 20 percent, then the census sample was divided into 20 subsamples of equal size. The 1-percent public use microdata sample was designated at random from the 20 subsamples. From the remaining 19 subsamples, five 1 percent subsamples were designated at random and merged to produce the 5-percent public use microdata sample. The 3-percent elderly public use microdata sample was produced in the same way as the 5-percent but required an extra step. The 3 subsamples were merged and the elderly household and person records, households with at least one person age 60 years or more, or GQ persons 60 years and older, were selected and designated as the elderly PUMS file.

During the sample selection operation, consecutive two-digit subsample numbers from 00 to 99 were assigned to each sample case in the 5-percent and 1-percent samples to allow for the designation of various size subsamples and, as

discussed in the preceding chapter, to allow for the calculation of standard error. As an example, for a 1-percent public use microdata sample, the choice of records having subsample numbers with the same "units" digit (e.g., the two "units" digit includes subsample numbers (2,12,22,....,92) will provide a 1-in-1000 subsample.

Samples of any size between 1/20 and 1/10000 may be selected in a similar manner by using appropriate two-digit subsample numbers assigned to either of the microdata samples. Care must be exercised when selecting such samples. If only one "units" digit is required, the units digit should be randomly selected. If two "units" digits are required, the first should be randomly selected and the second should be either 5 more or 5 less than the first. Failure to use this procedure, e.g., selection of records with the same "tens" digit instead of records with the same "units" digit, would provide a 1-in-10 subsample but one that would be somewhat more clustered and as a result subject to larger sampling error.

¹Wolter, Kirk M., Introduction to Variance Estimation, 1985, pp. 55-71.

²Value of units in this category results from other factors besides housing value alone, for example, inclusion of more than 10 acres of land, or presence of a business establishment on the premises.

Table A POMS Stratification Matrix - Households

Household Type	Age	White/Other				CH		FI		HA		KO		VI		JA		AI		SA		GU		OT		Black/American Indian, Eskimo or Alut				
		Hispanic Origin		Non-Hispanic Origin		O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	O	R	
		O	R	O	R																									
Family with own children under 18	0-59																													
	60-74																													
	75-89																													
	90-+																													
Family without children under 18																														
Other household (non-family)																														

Repeat for 1-in-6 and 1-in-8

CH - Chinese
 FI - Filipino
 HA - Hawaiian
 KO - Korean
 VI - Vietnamese
 JA - Japanese
 AI - Asian Indian
 SA - Samoan
 GU - Guamanian
 OT - Other, Asian and Pacific Islander
 O - Owner
 R - Renter

Table B: POMS Stratification Matrix - Vacant Housing Units

Sampling Rate	1-in-2	1-in-6	1-in-8
Vacant, for sale			
Vacant, for rent			
Vacant, Other			

Table C: POMS Stratification Matrix - Group Quarters

GQ Type/ Race/ Hispanic Origin/ Age	Institutional/Military														Non-Inst./Non-Military
	White/Other		Black/American Indian/Eskimo or Alut	CH	FI	HA	KO	VI	JA	AI	SA	GU	OT	Repeat Race/Origin Group	
	Hispanic	Non-Hispanic													
0-59															
60-74															
75-89															
90-+															

CH - Chinese
 FI - Filipino
 HA - Hawaiian
 KO - Korean
 VI - Vietnamese
 JA - Japanese
 AI - Asian Indian
 SA - Samoan
 GU - Guamanian
 OT - Other, Asian and Pacific Islander

CHAPTER 5: RECORD CONTENTS

This chapter, in conjunction with several appendices, defines the record layout and applicable codes for the public-use microdata samples. The detailed data dictionary begins on page 5-10 for the housing record and page 5-18 for the person record, with explanatory notes on page C-1 in appendix C.

For user convenience, we are providing several indexes which can be used for either PUMS file. Again, the only difference between the files is the PUMA. Note the variable PSA is only applicable to the 3% elderly file--a file which was sponsored by agencies outside the Census Bureau. It contains "Planning Services Areas" identified by the states' health planning agencies. Purchasers of that file will receive a geographic database which equates PSAs to 5% PUMAs if and only if the PSAs match the PUMAs. There is no additional geography.

Below is an index to the basic data items. The index by character location of the items on the housing and person records follows. In these introductory pages, data fields are specified in the form "H9" or "P12-14," where the letter indicates the Housing or Person record and the numbers indicate the character positions occupied on that record. For example, "P12-14" is a three-character field beginning in character 12 of the person record. In the data dictionary, itself, the "P" or "H" designation appears only at the top of the page, and location is expressed in terms of two separate elements, the beginning location and the size for each mnemonic. The mnemonic is a name for a variable or item.

INDEX TO HOUSING ITEMS (BY DESCRIPTION)

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>DESCRIPTION</u>
AGSALES	H68	1989 sales of agricultural products
AAGSALES	H189	1989 sales of agricultural products allocation
HUSFLAG	H41	All 100% housing unit data substituted
PDSFLAG	H42	All 100% person data substituted
AREATYPE	H18-19	Area type
BEDROOMS	H57	Bedrooms
VACANCY3	H54	Boarded up status
AVACANCY3	H175	Boarded up status allocation
COMMUSE	H46	Business or medical office on property
ACOMMUSE	H170	Business or medical office on property allocation
KITCHEN	H59	Complete kitchen facilities
AKITCHEN	H180	Complete kitchen facilities allocation
PLUMBING	H58	Complete plumbing facilities
APLUMBNG	H179	Complete plumbing facilities allocation
ACNDOFEE	H202	Condominium fee allocation
CONDOFEE	H108-111	Condominium fee (monthly amount)
DIVISION	H10	Division code
ELECCOST	H69-72	Electricity (yearly cost)
AELECCST	H190	Electricity (yearly cost) allocation
RFAMINC	H134-140	Family income
RFARM	H116	Farm/nonfarm status
HFILLER1	H36-38	Filler1
HFILLER2	H87-89	Filler2
HFILLER3	H123	Filler3
AINSAMT	H195	Fire, hazard, flood insurance allocation
INSAMT	H90-93	Fire/hazard/flood insurance (yearly amount)
GASCOST	H73-76	Gas (yearly cost)
AGASCST	H191	Gas (yearly cost) allocation
RGRENT	H117-120	Gross rent
RGRAPI	H121-122	Gross rent as a percentage of household income in 1989
GQINST	H35	Group quarters institution code
FUELHEAT	H62	House heating fuel
AFUEL	H183	House heating fuel allocation
FUELCOST	H81-84	House heating fuel (yearly cost)
ONEACRE	H67	House on less than 1 acre
AONEACRE	H188	House on less than 1 acre allocation
CONDO	H66	House or apartment part of condominium
ACONDO	H187	House or apartment part of condominium allocation
AFUELCST	H193	Household heating fuel (yearly cost) allocation
RHHINC	H141-147	Household income
RHHLANG	H149	Household language
RHHFAMTP	H151-152	Household/family type
SERIALNO	H2-8	Housing unit/GQ person serial number
HOUSWGHT	H29-32	Housing weight

INDEX TO HOUSING ITEMS (BY DESCRIPTION) CON.

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>DESCRIPTION</u>
RLINGISO	H150	Linguistic isolation
MEALS	H51	Meals included in rent
AMEALS	H173	Meals included in rent allocation
AMOBHME	H203	Mobile home costs allocation
MOBLHOME	H112-115	Mobile home costs (yearly amount)
RENT1	H49-50	Monthly rent
ARENT1	H172	Monthly rent allocation
VACANCY4	H55	Months vacant
AVACNCY4	H176	Months vacant allocation
MORTGAG3	H95-99	Mortgage payment (monthly amount)
MORTGAG	H94	Mortgage status
AMORTG	H196	Mortgage status allocation
MSAPMSA	H20-23	MSA/PMSA
ABEDROOM	H178	Number of bedrooms allocation
RNATADPT	H153-154	Number of own natural born/adopted children in household (unweighted)
RSTPCHLD	H155-156	Number of own stepchildren in household (unweighted)
RFAMPERS	H157-158	Number of persons in family (unweighted)
PERSONS	H33-34	Number of persons records following this housing record
RRELCHLD	H159-160	Number of related children in household (unweighted)
ACRE10	H45	On ten acres or more
AACRES1	H169	On ten acres or more allocation
INSINCL	H101	Payment include fire, hazard, flood insurance
AINSINCL	H199	Payment include fire, hazard, flood insurance allocation
TAXINCL	H100	Payment include real estate taxes
ATAXINCL	H198	Payment include real estate taxes allocation
PSA	H24-26	Planning service area (elderly sample only - state dependent)
RNONREL	H161	Presence of nonrelatives in household
R60OVER	H163	Presence of person 60 years and over in household
R65OVER	H164	Presence of person 65 years and over in household
R18UNDR	H162	Presence of person under 18 years in household
RSUBFAM	H165	Presence of subfamilies in household
RTAXAMT	H85-86	Property taxes (yearly amount)
VALUE	H47-48	Property value
PUMA	H13-17	Public Use Microdata Area (state dependent)
RECTYPE	H1	Record type
AMORTG3	H197	Regular mortgage payment allocation
ROOMS	H43	Rooms
AROOMS	H167	Rooms allocation
SAMPLE	H9	Sample identifier
MORTGAG2	H102	Second mortgage or home equity loan status
AMRTAMT2	H201	Second mortgage payment allocation
MORTAMT2	H103-107	Second mortgage payment (monthly amount)
AMORTG2	H200	Second mortgage status allocation
ROWNRCST	H124-128	Selected monthly owner costs
RNSMOCP1	H129-131	Selected monthly owner costs as a percentage of household income in 1989
SEWAGE	H64	Sewage disposal
ASEWER	H185	Sewage disposal allocation
WATER	H63	Source of water
AWATER	H184	Source of water allocation
RRENTUNT	H132	Specified rent unit
RVALUNT	H133	Specified value unit
STATE	H11-12	State code
SUBSAMPL	H27-28	Subsample number (use to pull extracts - 1/1000/etc.)
ATAXAMT	H194	Taxes on property allocation
TELEPHON	H60	Telephone in unit
APHONE	H181	Telephones in unit allocation
TENURE	H44	Tenure
ATENURE	H168	Tenure allocation
UNITS1	H39-40	Units in structure
AUNITS1	H166	Units in structure allocation
VACANCY2	H53	Vacancy status
AVACNCY2	H174	Vacancy status allocation
VACANCY1	H52	Vacant usual home elsewhere (UHE)

INDEX TO HOUSING ITEMS (BY DESCRIPTION) CON.

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>DESCRIPTION</u>
AVALUE	H171	Value allocation
AVEHICLE	H182	Vehicles available by household allocation
AUTOS	H61	Vehicles (1 ton or less) available
WATRCOST	H77-80	Water (yearly cost)
AWATRCST	H192	Water (yearly cost) allocation
YRMOVED	H56	When moved into this house or apartment
AYRMOVED	H177	When moved into this house or apartment allocation
YRBUILT	H65	When structure first built
AYRBUILT	H186	When structure first built allocation
RWRKR89	H148	Workers in family in 1989

INDEX TO POPULATION ITEMS (BY DESCRIPTION)

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>DESCRIPTION</u>
ENGLISH	P71	Ability to speak English
AENGLISH	P201	Ability to speak English allocation flag
AGE	P15-16	Age
AAGE	P187	Age allocation flag
AINCOME8	P231	All other income allocation flag
INCOME8	P178-182	All other income in 1989
ANCSTRY1	P53-55	Ancestry first entry
ANCSTRY2	P56-58	Ancestry second entry
AAUGMENT	P183	Augmented person
AVAIL	P113	Available for work
AFERTIL	P209	Children ever born allocation flag
CITIZEN	P47	Citizenship
ACITIZEN	P191	Citizenship allocation flag
CLASS	P121	Class of worker
ACLASS	P220	Class of worker allocation
AHISPAN	P189	Detailed Hispanic origin allocation flag
HISPANIC	P38-40	Detailed Hispanic origin code
ARACE	P186	Detailed race allocation flag
RACE	P12-14	Detailed race code
RELAT2	P35	Detailed relationship (other relative)
YEARSCH	P51-52	Educational attainment
REMPAR	P26-28	Employment status of parents
RLABOR	P91	Employment status recode
ALABOR	P210	Employment status recode allocation flag
AINCOME3	P226	Farm self-employment income allocation flag
INCOME3	P151-156	Farm self-employment income in 1989 (signed)
PFILLER2	P81	Filler
PFILLER1	P22-25	Filler
AANCSTR1	P195	First ancestry allocation flag
AYEARSCH	P194	Highest education allocation flag
HOURS	P93-94	Hours worked last week
AHOURS	P211	Hours worked last week allocation flag
SERIALNO	P2-8	Housing unit/GQ person serial number
INDUSTRY	P115-117	Industry
AINDUSTR	P218	Industry allocation flag
INCOME4	P157-162	Interest, dividend, and net rental income
AINCOME4	P227	Interest, dividend, and net rental income allocation flag (signed)
ALANG1	P199	Language other than English allocation flag
LANG1	P67	Language other than English at home
LANG2	P68-70	Language spoken at home
ALANG2	P200	Language spoken at home allocation flag
LOOKING	P112	Looking for work
MARITAL	P17	Marital status
AMARITAL	P188	Marital status allocation flag
RSPOUSE	P31	Married, spouse present/spouse absent
MEANS	P102-103	Means of transportation to work
AMEANS	P213	Means of transportation to work allocation flag
MIGPUMA	P62-66	Migration PUMA (State dependent)
AMIGSTATE	P198	Migration State allocation flag
MIGSTATE	P60-61	Migration State or foreign country code
ASERVPER	P203	Military periods of service allocation flag
MILITARY	P72	Military service
AVETS1	P202	Military service allocation flag
MOBILLIM	P87	Mobility limitation
AMOBLLIM	P207	Mobility limitation status allocation flag
AMOBLTY	P197	Mobility status allocation flag
MOBILITY	P59	Mobility status (lived here on April 1, 1985)
AINCOME2	P225	Nonfarm self-employment income allocation flag
INCOME2	P145-150	Nonfarm self-employment income in 1989 signed
FERTIL	P89-90	Number of children ever born
OCCUP	P118-120	Occupation
AOCCUP	P219	Occupation allocation flag
ROWNCHLD	P32	Own child
POVERTY	P41-43	Person poverty status recode

INDEX TO POPULATION ITEMS (BY DESCRIPTION) CON.

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>DESCRIPTION</u>
PERSCARE	P88	Personal care limitation
APERCARE	P208	Personal care limitation allocation flag
PWGT1	P18-21	Person's weight
POB	P44-46	Place of birth
ABIRTHPL	P190	Place of birth allocation flag
RPOB	P29-30	Place of birth recode
POWSTATE	P95-96	Place of work - State
POWPUMA	P97-101	Place of work PUMA (state dependent)
APOWST	P212	Place of work State allocation flag
RAGECHLD	P33	Presence and age of own children
AINCOME6	P229	Public assistance income allocation flag
INCOME6	P168-172	Public assistance income in 1989
RECTYPE	P1	Record type
RRELCHLD	P34	Related child
RELAT1	P9-10	Relationship
ARELAT1	P184	Relationship allocation flag
AINCOME7	P230	Retirement income allocation flag
INCOME7	P173-177	Retirement income in 1989
SCHOOL	P50	School enrollment
ASCHOOL	P193	School enrollment allocation flag
AANCSTR2	P196	Second ancestry allocation flag
OTHRSERV	P82	Served any other time
FEB55	P78	Served February 1955 - July 1964
KOREAN	P79	Served Korean conflict (June 1950 - January 1955)
MAY75880	P76	Served May 1975 to August 1980
SEPT80	P75	Served September 1980 or later
VIETNAM	P77	Served Vietnam ERA (August 1964 - April 1975)
WWII	P80	Served World War II (September 1940 - July 1947)
SEX	P11	Sex
ASEX	P185	Sex allocation flag
AINCOME5	P228	Social security income allocation flag
INCOME5	P163-167	Social security income in 1989
SUBFAM2	P36	Subfamily number
SUBFAM1	P37	Subfamily relationship
TMPABSNT	P111	Temporary absence from work
DEPART	P105-108	Time of departure for work - hour and minute
ADEPART	P215	Time of departure for work allocation flag
REARNING	P127-132	Total person's earnings (signed)
RPINCOME	P133-138	Total person's income (signed)
TRAVTIME	P109-110	Travel time to work
ATRANTHE	P216	Travel time to work allocation flag
AHOUR89	P223	Usual hours worked per week in 1989 allocation
HOUR89	P125-126	Usual hours worked per week last year (1989)
RIDERS	P104	Vehicle occupancy
ARIDERS	P214	Vehicle occupancy allocation flag
RVETSERV	P73-74	Veteran period of service
AINCOME1	P224	Wages and salary income allocation flag
INCOME1	P139-144	Wages or salary income in 1989 (signed)
AWKS89	P222	Weeks worked in 1989 allocation flag
WEEK89	P123-124	Weeks worked last year (1989)
DISABL1	P85	Work limitation status
ADISABL1	P205	Work limitation status allocation flag
DISABL2	P86	Work prevented status
ADISABL2	P206	Work prevention status allocation flag
WORKLWK	P92	Worked last week
AWORK89	P221	Worked last year allocation flag
WORK89	P122	Worked last year (1989)
YEARWRK	P114	Year last worked
ALSTWRK	P217	Year last worked allocation flag
IMMIGR	P48-49	Year of entry
AIMMIGR	P192	Year of entry allocation flag
YRSSERV	P83-84	Years of active duty military service
AYRSSERV	P204	Years of military service allocation flag

INDEX TO HOUSING ITEMS (BY CHARACTER LOCATION)

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
RECTYPE	H1	1	Record type
SERIALNO	H2-8	7	Housing unit/GQ person serial number
SAMPLE	H9	1	Sample identifier
DIVISION	H10	1	Division code
STATE	H11-12	2	State code
PUMA	H13-17	5	Public use microdata area (state dependent)
AREATYPE	H18-19	2	Area type
MSAPMSA	H20-23	4	MSA/PMSA
PSA	H24-26	3	Planning service area (elderly sample only state dependent)
SUBSAMPL	H27-28	2	Subsample number (use to pull extracts - 1/1000/etc.)
HOUSWGT	H29-32	4	Housing weight
PERSONS	H33-34	2	Number of persons records following this housing record
GQINST	H35	1	Group quarters institution code
HFILLER1	H36-38	3	Filler1
UNITS1	H39-40	2	Units in structure
HUSFLAG	H41	1	All 100% housing unit data substituted
PDSFLAG	H42	1	All 100% person data substituted
ROOMS	H43	1	Rooms
TENURE	H44	1	Tenure
ACRE10	H45	1	On ten acres or more
COMMUSE	H46	1	Business or medical office on property
VALUE	H47-48	2	Property value
RENT1	H49-50	2	Monthly rent
MEALS	H51	1	Meals included in rent
VACANCY1	H52	1	Vacant usual home elsewhere (UHE)
VACANCY2	H53	1	Vacancy status
VACANCY3	H54	1	Boarded up status
VACANCY4	H55	1	Months vacant
YRMOVED	H56	1	When moved into this house or apartment
BEDROOMS	H57	1	Bedrooms
PLUMBING	H58	1	Complete plumbing facilities
KITCHEN	H59	1	Complete kitchen facilities
TELEPHON	H60	1	Telephone in unit
AUTOS	H61	1	Vehicles (1 ton or less) available
FUELHEAT	H62	1	House heating fuel
WATER	H63	1	Source of water
SEWAGE	H64	1	Sewage disposal
YRBUILT	H65	1	When structure first built
CONDO	H66	1	House or apartment part of condominium
ONEACRE	H67	1	House on less than 1 acre
AGSALES	H68	1	1989 sales of agriculture products
ELECCOST	H69-72	4	Electricity (yearly cost)
GASCOST	H73-76	4	Gas (yearly cost)
WATRCOST	H77-80	4	Water (yearly cost)
FUELCOST	H81-84	4	House heating fuel (yearly cost)
RTAXAMT	H85-86	2	Property taxes (yearly amount)
HFILLER2	H87-89	3	Filler2
INSAMT	H90-93	4	Fire/hazard/flood insurance (yearly amount)
MORTGAG	H94	1	Mortgage status
MORTGAG3	H95-99	5	Mortgage payment (monthly amount)
TAXINCL	H100	1	Payment include real estate taxes
INSINCL	H101	1	Payment include fire/hazard/flood insurance
MORTGAG2	H102	1	Second mortgage or home equity loan status
MORTAMT2	H103-107	5	Second mortgage payment (monthly amount)
CONDOFEE	H108-111	4	Condominium fee (monthly amount)
MOBLHOME	H112-115	4	Mobile home costs (yearly amount)
RFARM	H116	1	Farm/nonfarm status
RGRENT	H117-120	4	Gross rent
RGRAPI	H121-122	2	Gross rent as a percentage of household income in 1989
HFILLER3	H123	1	Filler3
ROWNCST	H124-128	5	Selected monthly owner costs
RSMOCPI	H129-131	3	Selected monthly owner costs as a percentage of household income in 1989
RRENTUNT	H132	1	Specified rent unit
RVALUNT	H133	1	Specified value unit

INDEX TO HOUSING ITEMS (BY CHARACTER LOCATION) CON.

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
RFAMINC	H134-140	7	Family income
RHHINC	H141-147	7	Household income
RWRKR89	H148	1	Workers in family in 1989
RHHLANG	H149	1	Household language
RLINGISO	H150	2	Linguistic isolation
RHHFAMTP	H151-152	2	Household/family type
RNATADPT	H153-154	2	Number of own natural born/adopted children in household (unweighted)
RSTPCHLD	H155-156	2	Number of own stepchildren in household (unweighted)
RFAMPERS	H157-158	2	Number of persons in family (unweighted)
RRELCHLD	H159-160	2	Number of related children in household (unweighted)
RNONREL	H161	1	Presence of nonrelatives in household
R18UNDR	H162	1	Presence of person under 18 years in household
R60OVER	H163	1	Presence of person 60 years and over in household
R65OVER	H164	1	Presence of person 65 years and over in household
RSUBFAM	H165	1	Presence of subfamilies in household
AUMITS1	H166	1	Units in structure allocation
AROOMS	H167	1	Rooms allocation
ATENURE	H168	1	Tenure allocation
AACRES1	H169	1	On ten acres or more allocation
ACOMMUSE	H170	1	Business or medical office on property allocation
AVALUE	H171	1	Value allocation
ARENT1	H172	1	Monthly rent allocation
AMEALS	H173	1	Meals included in rent allocation
AVACNCY2	H174	1	Vacancy status allocation
AVACNCY3	H175	1	Boarded up status allocation
AVACNCY4	H176	1	Months vacant allocation
AYRMOVED	H177	1	When moved into this house or apartment allocation
ABEDROOM	H178	1	Number of bedrooms allocation
APLUMBNG	H179	1	Complete plumbing facilities allocation
AKITCHEN	H180	1	Complete kitchen facilities allocation
APHONE	H181	1	Telephones in unit allocation
AVEHICLE	H182	1	Vehicles available by household allocation
AFUEL	H183	1	House heating fuel allocation
AWATER	H184	1	Source of water allocation
ASEWER	H185	1	Sewage disposal allocation
AYRBUILT	H186	1	When structure first built allocation
ACONDO	H187	1	House or apartment part of condominium allocation
AONEACRE	H188	1	House on less than 1 acre allocation
AAGSALES	H189	1	1989 sales of agricultural products allocation
AELECCST	H190	1	Electricity (yearly cost) allocation
AGASCST	H191	1	Gas (yearly cost) allocation
AWATRCST	H192	1	Water (yearly cost) allocation
AFUELCST	H193	1	Household heating fuel (yearly cost) allocation
ATAXAHT	H194	1	Taxes on property allocation
AINSAMT	H195	1	Fire, hazard, flood insurance allocation
AMORTG	H196	1	Mortgage status allocation
MORTG3	H197	1	Regular mortgage payment allocation
ATAXINCL	H198	1	Payment include real estate taxes allocation
AINSINCL	H199	1	Payment include fire, hazard, flood insurance
AMORTG2	H200	1	Second mortgage status allocation
AMRTAHT2	H201	1	Second mortgage payment allocation
ACNDOFEE	H202	1	Condominium fee allocation
AMOBLHME	H203	1	Mobile home costs allocation
FILLER	H204-H231	28	Filler

INDEX TO POPULATION ITEMS (BY CHARACTER LOCATION)

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
RECTYPE	P1	1	Record type
SERIALNO	P2-8	7	Housing unit/GQ person serial number
RELAT1	P9-10	2	Relationship
SEX	P11	1	Sex
RACE	P12-14	3	Detailed race code
AGE	P15-16	2	Age
MARITAL	P17	1	Marital status
PWGT1	P18-21	4	Person's weight
PFILLER1	P22-25	4	Filler
REMPAR	P26-28	3	Employment status of parents
RPOB	P29-30	2	Place of birth (recode)
RSPOUSE	P31	1	Married, spouse present/spouse absent
ROWNCHLD	P32	1	Own child
RAGECHLD	P33	1	Presence and age of own children
RRELCHLD	P34	1	Related child
RELAT2	P35	1	Detailed relationship (other relative)
SUBFAM2	P36	1	Subfamily number
SUBFAM1	P37	1	Subfamily relationship
HISPANIC	P38-40	3	Detailed hispanic origin code
POVERTY	P41-43	3	Person poverty status recode
POB	P44-46	3	Place of birth
CITIZEN	P47	1	Citizenship
IMMIGR	P48-49	2	Year of entry
SCHOOL	P50	1	School enrollment
YEARSCH	P51-52	2	Educational attainment
ANCSTRY1	P53-55	3	Ancestry first entry
ANCSTRY2	P56-58	3	Ancestry second entry
MOBILITY	P59	1	Mobility status (lived here on April 1, 1985)
MIGSTATE	P60-61	2	Migration State or foreign country code
MIGPUMA	P62-66	5	Migration PUMA (State dependent)
LANG1	P67	1	Language other than English at home
LANG2	P68-70	3	Language spoken at home
ENGLISH	P71	1	Ability to speak English
MILITARY	P72	1	Military service
RVETSERV	P73-74	2	Veteran period of service
SEPT80	P75	1	Served September 1980 or later
MAY75880	P76	1	Served May 1975 to August 1980
VIETNAM	P77	1	Served Vietnam ERA (August 1964 - April 1975)
FEB55	P78	1	Served February 1955 - July 1964
KOREAN	P79	1	Served Korean conflict (June 1950 - January 1955)
WWII	P80	1	Served World War II (September 1940 - July 1947)
PFILLER2	P81	1	Filler
OTHRSERV	P82	1	Served any other time
YRSSERV	P83-84	2	Years of active duty military service
DISABL1	P85	1	Work limitation status
DISABL2	P86	1	Work prevented status
MOBLLIM	P87	1	Mobility limitation
PERSCARE	P88	1	Personal care limitation
FERTIL	P89-90	2	Number of children ever born
RLABOR	P91	-1	Employment status recode
WORKLWK	P92	1	Worked last week
HOURS	P93-94	2	Hours worked last week
POWSTATE	P95-96	2	Place of work - State
POWPUMA	P97-101	5	Place of work PUMA (State dependent)
MEANS	P102-103	2	Means of transportation to work
RIDERS	P104	1	Vehicle occupancy
DEPART	P105-108	4	Time of departure for work - hour and minute
TRAVTIME	P109-110	2	Travel time to work
TMPABSNT	P111	1	Temporary absence from work
LOOKING	P112	1	Looking for work
AVAIL	P113	1	Available for work
YEARWRK	P114	1	Year last worked
INDUSTRY	P115-117	3	Industry
OCCUP	P118-120	3	Occupation

INDEX TO POPULATION ITEMS (BY CHARACTER LOCATION) CON.

<u>MNEMONIC</u>	<u>CHARACTER LOCATION</u>	<u>SIZE</u>	<u>DESCRIPTION</u>
CLASS	P121	1	Class of worker
WORK89	P122	1	Worked last year (1989)
WEEK89	P123-124	2	Weeks worked last year (1989)
HOUR89	P125-126	2	Usual hours worked per week last year (1989)
REARNING	P127-132	6	Total person's earnings (signed)
RPINCOME	P133-138	6	Total person's income (signed)
INCOME1	P139-144	6	Wages or salary income in 1989 (signed)
INCOME2	P145-150	6	Nonfarm self-employment income in 1989
INCOME3	P151-156	6	Farm self-employment income in 1989 (signed)
INCOME4	P157-162	6	Interest, dividends, and net rental income in 1989 (signed)
INCOME5	P163-167	5	Social security income in 1989
INCOME6	P168-172	5	Public assistance income in 1989
INCOME7	P173-177	5	Retirement income in 1989
INCOME8	P178-182	5	All other income in 1989
AAUGMENT	P183	1	Augmented person
ARELAT1	P184	1	Relationship allocation flag
ASEX	P185	1	Sex allocation flag
ARACE	P186	1	Detailed race allocation flag
AAGE	P187	1	Age allocation flag
AMARITAL	P188	1	Marital status allocation flag
AHISPAN	P189	1	Detailed hispanic origin allocation flag
ABIRTHPL	P190	1	Place of birth allocation flag
ACITIZEN	P191	1	Citizenship allocation flag
AIMMIGR	P192	1	Year of entry allocation flag
ASCHOOL	P193	1	School enrollment allocation flag
AYEARSCH	P194	1	Highest education allocation flag
AANCSTR1	P195	1	First ancestry allocation flag
AANCSTR2	P196	1	Second ancestry allocation flag
AMOBLY	P197	1	Mobility status allocation flag
AMIGSTATE	P198	1	Migration state allocation flag
ALANG1	P199	1	Language other than english allocation flag
ALANG2	P200	1	Language spoken at home allocation flag
AENGLISH	P201	1	Ability to speak english allocation flag
AVETS1	P202	1	Military service allocation flag
ASERVPER	P203	1	Military periods of service allocation flag
AYRSSERV	P204	1	Years of military service allocation flag
ADISABL1	P205	1	Work limitation status allocation flag
ADISABL2	P206	1	Work prevention status allocation flag
AMOBLLIM	P207	1	Mobility limitation status allocation flag
APER CARE	P208	1	Personal care limitation allocation flag
AFERTIL	P209	1	Children ever born allocation flag
ALABOR	P210	1	Employment status recode allocation flag
AHOURS	P211	1	Hours worked last week allocation flag
APOWST	P212	1	Place of work state allocation flag
AMEANS	P213	1	Means of transportation to work allocation flag
ARIDERS	P214	1	Vehicle occupancy allocation flag
ADEPART	P215	1	Time of departure to work allocation flag
ATRA N TME	P216	1	Travel time to work allocation flag
ALSTWRK	P217	1	Year last worked allocation flag
AINDUSTR	P218	1	Industry allocation flag
AOCCUP	P219	1	Occupation allocation flag
AClass	P220	1	Class of worker allocation
AWORK89	P221	1	Worked last year allocation flag
AWKS89	P222	1	Weeks worked in 1989 allocation flag
AHOUR89	P223	1	Usual hours worked per week in 1989 allocation flag
AIncome1	P224	1	Wages and salary income allocation flag
AIncome2	P225	1	Nonfarm self-employment income allocation flag
AIncome3	P226	1	Farm self-employment income allocation flag
AIncome4	P227	1	Interest, dividend, and net rental income allocation flag
AIncome5	P228	1	Social security income allocation flag
AIncome6	P229	1	Public assistance allocation flag
AIncome7	P230	1	Retirement income allocation flag
AIncome8	P231	1	All other income allocation flag

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
HOUSING UNIT RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D RECTYPE	1	1	D MSAPMSA	4	20
Record Type			MSA/PMSA		
V H	.Housing Record		V 0040..		
D SERIALNO	7	2	V 9340	.FIPS/MSA/PMSA code, selected MSA/PMSA	
V 0000000..			V	.(See appendix G)	
9999999	.Housing unit/GQ person serial number unique		V 9997	.Mixed MSA/PMSA NONMSA/PMSA area	
	.identifier assigned within state or state group		V 9998	.2 or more MSAs	
			V 9999	.Not in MA	
D SAMPLE	1	9	D PSA	3	24
Sample Identifier			Planning service area (elderly sample only -		
V 1	.5% sample		state dependent)		
V 2	.1% sample		V 000	.N/A (Elderly PUMS only)	
V 3	.Elderly		V 1AA..188	.Planning service area codes (See appendix G)	
D DIVISION	1	10	D SUBSAMPL	2	27
Division code			Subsample number (Use to pull extracts - 1/1000/etc.)		
V 0	.Region/division not identifiable		V 00..99	.See text. pp 4-45.	
V	.(Selected MSA/PMSAs on 1% sample)				
V 1	.New England (Northeast region)		D HOUSWGT	4	29
V 2	.Middle Atlantic (Northeast region)		Housing Weight		
V 3	.East North Central (Midwest region)		V 0000..		
V 4	.West North Central (Midwest region)		V 1152	.Integer weight of housing unit	
V 5	.South Atlantic (South region)				
V 6	.East South Central (South region)		D PERSONS	2	33
V 7	.West South Central (South Region)		Number of person records following this housing		
V 8	.Mountain (West region)		record		
V 9	.Pacific (West region)		V 00	.Vacant unit	
			V 01	.One person record (one person in household	
			V	.or any person in group quarters)	
D STATE	2	11	V 02..29	.Number of person records (number of persons	
State Code			V	.in household)	
V 01..56	.FIPS state code (See appendix I)				
V 99	.PUMA boundaries cross state lines - 1% file		D GQINST	1	35
			Group quarters institution		
D PUMA	5	13	V 0	.N/A (housing unit)	
Public use microdata area (state dependent)			V 1	.Institutionalized	
V 00100..			V 2	.Not institutionalized	
V 99999	.PUMA code (Includes tract groups) 1st 3				
V	.Digits = main PUMA - generally county place		D HFILLER	3	36
V	.Last 2 digits = groups of tracts, BNA, etc.		Filler		
D AREATYPE	2	18	D UNITS1	2	39
Area type revised for PUMS equivalency file			Units in structure		
V 10	.Central city		V 00	.N/A (GQ)	
V 11	.Central city part		V 01	.Mobile home or trailer	
V 20	.MSA/PMSA - Outside central city		V 02	.One-family house detached	
V 21	.MSA/PMSA - Outside central city (part)		V 03	.One-family house attached	
V 22	.Central City (part) & outside central city		V 04	.2 Apartments	
V	.(part)		V 05	.3-4 Apartments	
V 30	.Entire MSA		V 06	.5-9 Apartments	
V 31	.2 or more MSAs/PMSAs		V 07	.10-19 Apartments	
V 40	.Mixed MSA/PMSA/NON-MSA/PMSA area		V 08	.20-49 Apartments	
V 50	.Outside MSA/PMSA		V 09	.50 or more apartments	
V 60	.Place		V 10	.Other	
V 61	.Place - part				
V 70	.MCDs/Towns (New England only)		D HUSFLAG	1	41
V 80	.Counties/independent Cities (2 or more)		All 100% housing unit data substituted		
V 81	.County/independent city - part		V 0	.No	
V 82	.County/independent city		V 1	.Yes	

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
HOUSING UNIT RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D PDSFLAG	1	42	V 20	.\$150000 - \$174999	
	All 100% person data substituted		V 21	.\$175000 - \$199999	
V 0	.No		V 22	.\$200000 - \$249999	
V 1	.Yes		V 23	.\$250000 - \$299999	
D ROOMS	1	43	V 24	.\$300000 - \$399999	
	Rooms		V 25	.\$400000 or more	
V 0	.N/A (GQ)		D RENT1	2	49
V 1	.1 Room			Monthly rent	
V 2	.2 Rooms		V 00	.N/A (GQ/not a rental unit)	
V 3	.3 Rooms		V 01	.Less than \$ 80	
V 4	.4 Rooms		V 02	.\$ 80 - \$ 99	
V 5	.5 Rooms		V 03	.\$ 100 - \$124	
V 6	.6 Rooms		V 04	.\$ 125 - \$149	
V 7	.7 Rooms		V 05	.\$ 150 - \$174	
V 8	.8 Rooms		V 06	.\$ 175 - \$199	
V 9	.9 or more rooms		V 07	.\$ 200 - \$224	
D TENURE	1	44	V 08	.\$ 225 - \$249	
	Tenure		V 09	.\$ 250 - \$274	
V 0	.N/A (GQ/vacant)		V 10	.\$ 275 - \$299	
V 1	.Owned with mortgage or loan		V 11	.\$ 300 - \$324	
V 2	.Owned free and clear		V 12	.\$ 325 - \$349	
V 3	.Rented for cash rent		V 13	.\$ 350 - \$374	
V 4	.No cash rent		V 14	.\$ 375 - \$399	
D ACRE10	1	45	V 15	.\$ 400 - \$424	
	On ten acres or more		V 16	.\$ 425 - \$449	
V 0	.N/A (GQ/not a one-family house or mobile home)		V 17	.\$ 450 - \$474	
V 1	.House on ten or more acres		V 18	.\$ 475 - \$499	
V 2	.House on less than ten acres		V 19	.\$ 500 - \$524	
D COMMUSE	1	46	V 20	.\$ 525 - \$549	
	Business or medical office on property		V 21	.\$ 550 - \$599	
V 0	.N/A (GQ/not a one-family house or mobile home)		V 22	.\$ 600 - \$649	
V 1	.Yes		V 23	.\$ 650 - \$699	
V 2	.No		V 24	.\$ 700 - \$749	
D VALUE	2	47	V 25	.\$ 750 - \$999	
	Property value		V 26	.\$1000 or more	
V 00	.N/A (GQ/rental unit/vacant, not for sale only)		V 27	.No cash rent (NCR)	
V 01	.Less than \$ 10000		D MEALS	1	51
V 02	.\$ 10000 - \$ 14999			Meals included in rent	
V 03	.\$ 15000 - \$ 19999		V 0	.N/A (GQ/not a rental unit/rental-NCR)	
V 04	.\$ 20000 - \$ 24999		V 1	.Yes	
V 05	.\$ 25000 - \$ 29999		V 2	.No	
V 06	.\$ 30000 - \$ 34999		D VACANCY1	1	52
V 07	.\$ 35000 - \$ 39999			Vacant usual home elsewhere (UHE)	
V 08	.\$ 40000 - \$ 44999		V 0	.N/A (occupied or regular vacant/GQ)	
V 09	.\$ 45000 - \$ 49999		V 1	.Vacant UHE-owner	
V 10	.\$ 50000 - \$ 54999		V 2	.Vacant UHE-renter	
V 11	.\$ 55000 - \$ 59999		V 3	.Vacant UHE-undetermined	
V 12	.\$ 60000 - \$ 64999		D VACANCY2	1	53
V 13	.\$ 65000 - \$ 69999			Vacancy status	
V 14	.\$ 70000 - \$ 74999		V 0	.N/A (occupied/GQ)	
V 15	.\$ 75000 - \$ 79999		V 1	.For rent	
V 16	.\$ 80000 - \$ 89999		V 2	.For sale only	
V 17	.\$ 90000 - \$ 99999		V 3	.Rented or sold, not occupied	
V 18	.\$100000 - \$124999		V 4	.For seasonal/recreational/occasional use	
V 19	.\$125000 - \$149999		V 5	.For migratory workers	
			V 6	.Other vacant	

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
HOUSING UNIT RECORD**

DATA SIZE BEGIN

D VACANCY3 1 54
 Boarded up status
V 0 .N/A (occupied/GQ)
V 1 .Yes
V 2 .No

D VACANCY4 1 55
 Months vacant
V 0 .N/A (occupied/GQ)
V 1 .Less than 1 month
V 2 .1 up to 2 months
V 3 .2 up to 6 months
V 4 .6 up to 12 months
V 5 .12 up to 24 months
V 6 .24 or more months

D YRMOVED 1 56
 When moved into this house or apartment
V 0 .N/A (GQ/vacant)
V 1 .1989 or 1990
V 2 .1985 to 1988
V 3 .1980 to 1984
V 4 .1970 to 1979
V 5 .1960 to 1969
V 6 .1959 or earlier

D BEDROOMS 1 57
 Bedrooms
V 0 .N/A (GQ)
V 1 .No bedrooms
V 2 .1 Bedroom
V 3 .2 Bedrooms
V 4 .3 Bedrooms
V 5 .4 Bedrooms
V 6 .5 or more bedrooms

D PLUMBING 1 58
 Complete plumbing facilities
V 0 .N/A (GQ)
V 1 .Yes, all three facilities
V 2 .No

D KITCHEN 1 59
 Complete kitchen facilities
V 0 .N/A (GQ)
V 1 .Yes
V 2 .No

D TELEPHON 1 60
 Telephone in Unit
V 0 .N/A (GQ/vacant)
V 1 .Yes
V 2 .No

D AUTOS 1 61
 Vehicles (1 ton or less) available
V 0 .N/A (GQ/vacant)
V 1 .No vehicles
V 2 .1 vehicle
V 3 .2 vehicles
V 4 .3 vehicles

DATA SIZE BEGIN

V 5 .4 Vehicles
V 6 .5 Vehicles
V 7 .6 Vehicles
V 8 .7 or more vehicles

D FUELHEAT 1 62
 House heating fuel
V 0 .N/A (GQ/vacant)
V 1 .Gas: Underground pipes
V 2 .Gas: Bottled, tank, or LP
V 3 .Electricity
V 4 .Fuel oil, kerosene, etc.
V 5 .Coal or coke
V 6 .Wood
V 7 .Solar energy
V 8 .Other fuel
V 9 .No fuel used

D WATER 1 63
 Source of water
V 0 .N/A (GQ)
V 1 .Public system or private company
V 2 .Individual drilled well
V 3 .Individual dug well
V 4 .Other source such as a spring, creek, etc.

D SEWAGE 1 64
 Sewage disposal
V 0 .N/A (GQ)
V 1 .Public sewer
V 2 .Septic tank or cesspool
V 3 .Other means

D YRBUILT 1 65
 When structure first built
V 0 .N/A (GQ)
V 1 .1989 or 1990
V 2 .1985 to 1988
V 3 .1980 to 1984
V 4 .1970 to 1979
V 5 .1960 to 1969
V 6 .1950 to 1959
V 7 .1940 to 1949
V 8 .1939 or earlier

D CONDO 1 66
 House or apartment part of condominium
V 0 .N/A (GQ)
V 1 .Yes
V 2 .No

D ONEACRE 1 67
 House on less than 1 acre
V 0 .N/A (GQ, two or more units in structure)
V 1 .Yes
V 2 .No

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
HOUSING UNIT RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D AGSALES	1	68			
1989		Sales of Agriculture Products	V	05	.\$ 150 - \$ 199
V	0	.N/A (less than 1 acre/GQ/vacant/ .2 or more units in structure)	V	06	.\$ 200 - \$ 249
V	1	.None	V	07	.\$ 250 - \$ 299
V	2	.\$1 to \$999	V	08	.\$ 300 - \$ 349
V	3	.\$1,000 to \$2,499	V	09	.\$ 350 - \$ 399
V	4	.\$2,500 to \$4,999	V	10	.\$ 400 - \$ 449
V	5	.\$5,000 to \$9,999	V	11	.\$ 450 - \$ 499
V	6	.\$10,000 or more	V	12	.\$ 500 - \$ 549
			V	13	.\$ 550 - \$ 599
			V	14	.\$ 600 - \$ 649
D ELECCOST	4	69	V	15	.\$ 650 - \$ 699
Electricity (yearly cost)*			V	16	.\$ 700 - \$ 749
V	0000	.N/A (GQ/vacant)	V	17	.\$ 750 - \$ 799
V	0001	.Included in rent or in condo fee	V	18	.\$ 800 - \$ 849
V	0002	.No charge or electricity not used	V	19	.\$ 850 - \$ 899
V	0003..		V	20	.\$ 900 - \$ 949
3099		.\$3 to \$3,099	V	21	.\$ 950 - \$ 999
V	3100	.Topcode	V	22	.\$1000 - \$1099
V	3101+	.\$3101 or more = state median of topcoded .values	V	23	.\$1100 - \$1199
			V	24	.\$1200 - \$1299
			V	25	.\$1300 - \$1399
D GASCOST	4	73	V	26	.\$1400 - \$1499
Gas (yearly cost)*			V	27	.\$1500 - \$1599
V	0000	.N/A (GQ/vacant)	V	28	.\$1600 - \$1699
V	0001	.Included in rent or in condo fee	V	29	.\$1700 - \$1799
V	0002	.No charge or gas not used	V	30	.\$1800 - \$1899
V	0003..		V	31	.\$1900 - \$1999
2099		.\$3 to \$2,099	V	32	.\$2000 - \$2099
V	2100	.Topcode	V	33	.\$2100 - \$2199
V	2101+	.\$2101 or more = state median of topcoded .values	V	34	.\$2200 - \$2299
			V	35	.\$2300 - \$2399
			V	36	.\$2400 - \$2499
D WATRCOST	4	77	V	37	.\$2500 - \$2599
Water (yearly cost)			V	38	.\$2600 - \$2699
V	000	.N/A (GQ/vacant)	V	39	.\$2700 - \$2799
V	001	.Included in rent or in condo fee	V	40	.\$2800 - \$2899
V	002	.No charge	V	41	.\$2900 - \$2999
V	003..999	.\$3 to \$999	V	42	.\$3000 - \$3099
V	1000	.Topcode	V	43	.\$3100 - \$3199
V	1000+	.\$1001+ or more = state median of topcoded .values	V	44	.\$3200 - \$3299
			V	45	.\$3300 - \$3399
			V	46	.\$3400 - \$3499
D FUELCOST	4	81	V	47	.\$3500 - \$3599
House heating fuel (yearly cost)			V	48	.\$3600 - \$3699
V	0000	.N/A (GQ/vacant)	V	49	.\$3700 - \$3799
V	0001	.Included in rent or in condo fee	V	50	.\$3800 - \$3899
V	0002	.No charge or these fuels not used	V	51	.\$3900 - \$3999
V	0003..		V	52	.\$4000 - \$4099
1899		.\$3 to \$1,899	V	53	.\$4100 - \$4199
V	1900	.Topcode	V	54	.\$4200 - \$4299
V	1,901+	.\$1,901 or more = state median of topcoded .value	V	55	.\$4300 - \$4399
			V	56	.\$4400 - \$4499
			V	57	.\$4500 = Topcode
D RTAXAMT	2	85	V	58	.\$4501 - \$5499
Property taxes (yearly amount)			V	59	.\$5500 - \$7499
V	00	.N/A (GQ/vacant/not owned or being bought/not a .one-family house, mobile home or trailer or .condo)	V	60	.\$7500 or more
V	01	.None			
V	02	.\$ 2 - \$ 49	D HFILLER2	3	87
V	03	.\$ 50 - \$ 99			
V	04	.\$ 100 - \$ 149			

RANGE
FOR
MEDIAN

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
HOUSING UNIT RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D INSAMT	4	90	V 01000		.Topcode
		Fire/hazard/flood insurance (yearly amount)	V 01001+		\$.1001 or more = state median of topcoded values
V 0000		.N/A (not owned or being bought/not a one family house, mobile home, or condo/GQ/vacant)	D CONDOFEE	4	108
V 0001		.None			Condo fee (monthly amount)
V 0002..			V 0000		.N/A (not owned or being bought/not condo/GQ/vacant/no condo fee)
V 3099		\$.2 to \$3,099	V 0001..		
V 3100		.Topcode	V 0599		\$.1 - \$599
V 3100+		\$.3,100 or more=state median of topcoded values	V 0600		.Topcode
D MORTGAG	1	94	V 0601+		\$.601 or more = state median of topcoded values
		Mortgage status	D MOBLHOME	4	112
V 0		.N/A (not owned or being bought/not a one family house, mobile home, or condo/GQ/vacant)			Mobile home costs (yearly amount)
V 1		.Mortgage deed of trust, or similar debt	V 0000		.N/A (GQ/vacant/not owned or being bought/not mobile home/no costs)
V 2		.Contract to purchase	V 0001..		
V 3		.None	V 3399		\$.1 - \$3,399 (cost in dollars)
D MORTGAG3	5	95	V 3400		.Topcode
		Mortgage payment (monthly amount)	V 3401+		\$.3401 or more = state median of topcoded values
V 00000		.N/A (not owned or being bought/not a one family house, mobile home, or condo/GQ/vacant)	D RFARM	1	116
V 00001		.No regular payment required			Farm/nonfarm status
V 00002..			V 0		.N/A (urban)
V 01999		\$.2 to \$1,999	V 1		.Rural farm
V 02000		.Topcode	V 2		.Rural nonfarm
V 02001+		\$.2,001 or more = state median of topcoded values	D RGRENT	4	117
D TAXINCL	1	100			Gross rent
		Payment include real estate taxes	V 0000		.N/A (GQ/vacant, not rented for cash rent)
V 0		.N/A (GQ/vacant/not owned or being bought/not a one family house or condo/not mortgaged/No regular mortgage payment)	V 0001..		
V 1		.Yes, taxes included in payment	V 1499		.Gross rent (dollars)
V 2		.No, taxes paid separately or taxes not required	V 1500		.Topcode
D INSINCL	1	101	V 1501+		\$.1501 or more = state median of topcoded values
		Payment include fire/hazard/flood insurance	D RGRAPI	2	121
V 0		.N/A (GQ/vacant/not owned or being bought/Not a one family house, MHT or condo/not mortgaged/no regular mortgage payment)			Gross rent as a percentage of household income in 1989
V 1		.Yes, insurance included in payment	V 00		.N/A (GQ/vacant/not rented for cash rent/owner occupied/no household income)
V 2		.No, insurance paid separately or no insurance	V 01		.1% to 9%
D MORTGAG2	1	102	V 02		.10% to 14%
		Second mortgage or home equity loan status	V 03		.15% to 19%
V 0		.N/A (GQ/vacant/not owned or being bought/not a one family house, mobile home, trailer or condo/not mortgaged/no second mortgage)?	V 04		.20% to 24%
V 1		.Yes	V 05		.25% to 29%
V 2		.No	V 06		.30% to 34%
D MORTAMT2	5	103	V 07		.35% to 39%
		Second mortgage payment (monthly amount)	V 08		.40% to 49%
V 00000		.N/A (GQ/vacant/condo/not owned or being bought/not a one family house/not mortgaged/no second mortgage)	V 09		.50% to 59%
V 00001		.No regular payment required	V 10		.60% to 69%
V 00002..			V 11		.70% to 79%
V 00999		\$.2 to \$999	V 12		.80% to 89%
			V 13		.90% to 99%
			V 14		.100% or more
			D HFILLER3	1	123
					Filler

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
HOUSING UNIT RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D ROWNRST	5	124	D RLINGISO	1	150
	Selected monthly owner costs			Linguistic isolation	
V 00000	.N/A (not owned or being bought/not a one		V 0	.N/A (GQ/vacant)	
V	.family house, mobile home, or		V 1	.Not linguistically isolated	
V	.condo/GQ/vacant/no costs)		V 2	.Linguistically isolated	
V 00001..			D RHHFAMTP	2	151
V 20299	.Monthly owner costs in dollars			Household/family type	
V 20300	.Topcode		V 00	.N/A (GQ/vacant)	
D RNSMOCPI	3	129	V 01	.Married-couple family household	
	Selected monthly owner costs as a percentage of		V	Other family household:	
	household income in 1989		V 02	.Male householder	
V 000	.N/A (not owned or being bought/not a one family		V 03	.Female householder	
	.house, mobile home, or condo/GQ/vacant/no HH		V	Nonfamily household:	
	.income)		V	Male householder:	
V 001..100	.1% to 100%		V 11	.Living alone	
V 101	.101% or more		V 12	.Not living alone	
D RRENTUNT	1	132	V	Female householder:	
	Specified rent unit		V 21	.Living alone	
V 0	.Not specified rent unit		V 22	.Not living alone	
V 1	.Specified rent unit		D RNATADPT	2	153
D RVALUNT	1	133		Number of own natural born/adopted children in	
	Specified value unit			household (unweighted)	
V 0	.Not specified value unit		V 00	.N/A(GQ/vacant/no own natural born/adopted	
V 1	.Specified value unit		V	.children)	
D RFAMINC	7	134	V 01..28	.Number of own children natural born/adopted	
	Family income		V	.children in household	
V 0000000	.N/A(GQ/vacant/no income)		D RSTPCHLD	2	155
V -999999..				Number of own stepchildren in household (unweighted)	
V 9999999	.Total family income in dollars (See user notes		V 00	.N/A(GQ/vacant/no own stepchildren)	
	.for state maximum and minimum values)		V 01..28	.Number of own stepchildren in household	
D RHHINC	7	141	D RFAMPERS	2	157
	Household income			Number of persons in family (unweighted)	
V 0000000	.N/A(GQ/vacant/no income)		V 00	.N/A (GQ/vacant/non-family household)	
V -999999..			V 01..29	.Number of persons in family	
V 9999999	.Total household income in dollars (See user notes		D RRELCHLD	2	159
	.for state maximum and minimum values)			Number of related children in household (unweighted)	
D RWRKR89	1	148	V 00	.N/A (GQ/vacant/no related children)	
	Workers in family in 1989		V 01..28	.Number of related children in household	
V 0	.N/A (GQ/vacant/non-family household)		D RNONREL	1	161
V 1	.No workers			Presence of nonrelatives in household	
V 2	.1 worker		V 0	.N/A (No nonrelatives in household/GQ/vacant)	
V 3	.2 workers		V 1	.1 or more nonrelatives in household	
V 4	.3 or more workers in family		D R18UNDR	1	162
D RHHLANG	1	149		Presence of person under 18 years in household	
	Household language		V 0	.N/A (No person under 18 in household/GQ/vacant)	
V 0	.N/A (GQ/vacant)		V 1	.1 or more person under 18 in household	
V 1	.English only		D R60OVER	1	163
V 2	.Spanish			Presence of persons 60 years and over in household	
V 3	.Other Indo-European language		V 0	.N/A (No person 60 and over/GQ/vacant)	
V 4	.Asian or Pacific Island language		V 1	.1 person 60 and over (unweighted)	
V 5	.Other language		V 2	.2 or more person 60 and over (unweighted)	

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
HOUSING UNIT RECORD**

DATA	SIZE	BEGIN
D R65OVER	1	164
	Presence of person 65 years and over in household	
V	0	.N/A (No person 65 and over/GQ/vacant)
V	1	.1 person 65 and over (unweighted)
V	2	.2 or more person 65 and over (unweighted)
D RSUBFAM	1	165
	Presence of subfamilies in Household	
V	0	.N/A (No subfamilies or not applicable/GQ/vacant)
V	1	.1 or more subfamilies
D AUNITS1	1	166
	Units in structure allocation	
V	0	.No
V	1	.Yes
D AROOMS	1	167
	Rooms allocation	
V	0	.No
V	1	.Yes
D ATENURE	1	168
	Tenure allocation	
V	0	.No
V	1	.Yes
D AACRES1	1	169
	On ten acres or more allocation	
V	0	.No
V	1	.Yes
D ACOMMUSE	1	170
	Business or medical office on property allocation	
V	0	.No
V	1	.Yes
D AVALUE	1	171
	Value allocation	
V	0	.No
V	1	.Yes
D ARENT1	1	172
	Monthly rent allocation	
V	0	.No
V	1	.Yes
D AMEALS	1	173
	Meals included in rent allocation	
V	0	.No
V	1	.Yes
D AVACNCY2	1	174
	Vacancy status allocation	
V	0	.No
V	1	.Yes
D AVACNCY3	1	175
	Boarded up status allocation	
V	0	.No
V	1	.Yes

DATA	SIZE	BEGIN
D AVACNCY4	1	176
	Months vacant allocation	
V	0	.No
V	1	.Yes
D AYRMOVED	1	177
	When moved into this house or apartment allocation	
V	0	.No
V	1	.Yes
D ABEDROOM	1	178
	Number of bedrooms allocation	
V	0	.No
V	1	.Yes
D APLUMBNG	1	179
	Complete plumbing facilities allocation	
V	0	.No
V	1	.Yes
D AKITCHEN	1	180
	Complete kitchen facilities allocation	
V	0	.No
V	1	.Yes
D APHONE	1	181
	Telephones in house allocation	
V	0	.No
V	1	.Yes
D AVEHICLE	1	182
	Vehicles available by household allocation	
V	0	.No
V	1	.Yes
D AFUEL	1	183
	House heating fuel allocation	
V	0	.No
V	1	.Yes
D AWATER	1	184
	Source of water allocation	
V	0	.No
V	1	.Yes
D ASEWER	1	185
	Sewage disposal allocation	
V	0	.No
V	1	.Yes
D AYRBUILT	1	186
	When structure first built allocation	
V	0	.No
V	1	.Yes from not answered
V	2	.Yes "don't know"
D ACONDO	1	187
	House or apartment part of condominium allocation	
V	0	.No
V	1	.Yes

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
HOUSING UNIT RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D AONEACRE	1	188	D AMORTG2	1	200
V	0 .No		V	0 .No	
V	1 .Yes		V	1 .Yes	
D AAGSALES	1	189	D AMRTAMT2	1	201
V	0 .No		V	0 .NO	
V	1 .Yes		V	1 .Yes	
D AELECCST	1	190	D ACNDOFEE	1	202
V	0 .No		V	0 .No	
V	1 .Yes		V	1 .Yes	
D AGASCST	1	191	D AMOBLHME	1	203
V	0 .No		V	0 .No	
V	1 .Yes		V	1 .Yes	
D AWATRCST	1	192	D FILLER	28	204
V	0 .No				
V	1 .Yes				
D FUELCST	1	193			
V	0 .No				
V	1 .Yes				
D ATAXAMT	1	194			
V	0 .No				
V	1 .Yes				
D AINSAMT	1	195			
V	0 .No				
V	1 .Yes				
D AMORTG	1	196			
V	0 .No				
V	1 .Yes no answer				
V	2 .Yes from junior mortgage				
D AMORTG3	1	197			
V	0 .No				
V	1 .Yes				
D ATAXINCL	1	198			
V	0 .No				
V	1 .Yes				
D AINSINCL	1	199			
V	0 .No				
V	1 .Yes				

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
PERSON RECORD**

DATA	SIZE	BEGIN
D RECTYPE	1	1
Record Type		
V P		.Person Record
D SERIALNO	7	2
V 0000000..		
V 9999999		.Housing unit/GQ person serial number unique
V		.identifier assigned within state or state group
D RELAT1	2	9
Relationship		
V 00		.Householder
V 01		.Husband/wife
V 02		.Son/daughter
V 03		.Stepson/stepdaughter
V 04		.Brother/sister
V 05		.Father/mother
V 06		.Grandchild
V 07		.Other relative
V		Not related
V 08		.Roomer/boarder/foster child
V 09		.Housemate/roommate
V 10		.Unmarried partner
V 11		.Other nonrelative
V		Group quarters
V 12		.Institutionalized person
V 13		.Other persons in group quarters
D SEX	1	11
Sex		
V 0		.Male
V 1		.Female
D RACE	3	12
Recoded detailed race code (Appendix C)		
V 001-037		.(See appendix C)
V 301-327		.American Indian Tribes
D AGE	2	15
Age		
V 00		.Less than 1 year
V 01..89		.Age in years
V 90		.90 or more years old
D MARITAL	1	17
Marital status		
V 0		.Now married, except separated
V 1		.Widowed
V 2		.Divorced
V 3		.Separated
V 4		.Never married or under 15 years old
D PWGT1	4	18
Person's weight		
V 0001..		
V 1152		.Person's weight
D PFILLER1	4	22
Filler		

DATA	SIZE	BEGIN
D REMPLPAR	3	26
Employment status of parents		
V 000		.N/A (not own child of householder, and not
V		.child in subfamily)
V		Living with two parents:
V		Both parents in labor force:
V 111		.Both parents at work 35 or more hours
V 112		.Father only at work 35 or more hours
V 113		.Mother only at work 35 or more hours
V 114		.Neither parent at work 35 or more hours
V		Father only in labor force:
V 121		.Father at work 35 or more hours
V 122		.Father not at work 35 or more hours
V		Mother only in labor force:
V 133		.Mother at work 35 or more hours
V 134		.Mother not at work 35 or more hours
V 141		Neither parent in labor force
V		Living with one parent:
V		Living with father:
V 211		.Father at work 35 or more hours
V 212		.Father not at work 35 or more hours
V 213		.Father not in labor force
V		Living with mother:
V 221		.Mother at work 35 or more hours
V 222		.Mother not at work 35 or more hours
V 223		.Mother not in labor force
D RPOB	2	29
Place of birth (Recode)		
V 10		.Born in State of residence
V		Born in other State in the U.S.:
V 21		.Northeast
V 22		.Midwest
V 23		.South
V 24		.West
V		U.S. outlying areas:
V 31		.Puerto Rico
V 32		.American Samoa
V 33		.Guam
V 34		.Northern Marianas
V 35		.US Virgin Islands
V 36		.Elsewhere
V 40		.Born abroad of American parents
V		Foreign born:
V 51		.Naturalized citizen
V 52		.Not a citizen
D RSPOUSE	1	31
Married, spouse present/spouse absent		
V 0		.N/A (less than 15 years old)
V 1		.Now married, spouse present
V 2		.Now married, spouse absent
V 3		.Widowed
V 4		.Divorced
V 5		.Separated
V 6		.Never married

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
PERSON RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D ROWNCHLD	1	32	D POVERTY	3	41
Own child			Person poverty status recode (See appendix B)		
V 0	.Own child		V 000	.N/A	
V 1	.Not own child		V 001..500	%. Below or above poverty status value	
			V 501	.501% or more of poverty value	
D RAGECHLD	1	33	D POB	3	44
Presence and age of own children			Place of birth (Appendix I)		
V 0	.N/A (male/female under 16 years old)		V 001..056	.FIPS State code (U.S. States and D.C.)	
V 1	.With own children under 6 years only		V 060..099	.Puerto Rico (072) or U.S. outlying area	
V 2	.With own children 6 to 17 years only		V 100..553	.Foreign country	
V 3	.With own children under 6 years and 6 to 17 years		V 554	.At sea	
V 4	.No own children		V 555	.Abroad, not specified	
D RRELCHLD	1	34	D CITIZEN	1	47
Related child			Citizenship		
V 0	.Related child		V 0	.Born in the U.S.	
V 1	.Not related child		V 1	.Born in Puerto Rico, Guam, and outlying areas	
			V 2	.Born abroad of American parents	
D RELAT2	1	35	V 3	.U.S. citizen by naturalization	
Detailed relationship (other relative)			V 4	.Not a citizen of the U.S.	
V 0	.N/A (GQ/not other relative)		D IMMIGR	2	48
V 1	.Son-in-law/daughter-in-law		Year of entry		
V 2	.Father-in-law/mother-in-law		V 00	.Born in the U.S.	
V 3	.Brother-in-law/sister-in-law		V 01	.1987 to 1990	
V 4	.Nephew/niece		V 02	.1985 to 1986	
V 5	.Grandparent		V 03	.1982 to 1984	
V 6	.Uncle/aunt		V 04	.1980 or 1981	
V 7	.Cousin		V 05	.1975 to 1979	
V 8	.Other related by blood or marriage	<i>other rec</i>	V 06	.1970 to 1974	
V 9	.Other relative	<i>other ns</i>	V 07	.1965 to 1969	
			V 08	.1960 to 1964	
D SUBFAM2	1	36	V 09	.1950 to 1959	
Subfamily number			V 10	.Before 1950	
V 0	.N/A (GQ/not in a subfamily)		D SCHOOL	1	50
V 1	.In subfamily 1		School enrollment		
V 2	.In subfamily 2		V 0	.N/A (less than 3 years old)	
V 3	.In subfamily 3		V 1	.Not attending school	
			V 2	.Yes, public school, public college	
D SUBFAM1	1	37	V 3	.Yes, private school, private college	
Subfamily relationship					
V 0	.N/A (GQ/not in a subfamily)		D YEARSCH	2	51
V 1	.Husband/wife		Educational attainment		
V 2	.Parent in a parent/child subfamily		V 00	.N/A (less than 3 years old)	
V 3	.Child in subfamily		V 01	.No school completed	
			V 02	.Nursery school	
D HISPANIC	3	38	V 03	.Kindergarten	
Detailed Hispanic origin code (See appendix I)			V 04	.1st, 2nd, 3rd, or 4th grade	
V 000,006..	. Not hispanic		V 05	.5th, 6th, 7th, or 8th grade	
199			V 06	.9th grade	
V 001,210..	.Mexican, mex-am		V 07	.10th grade	
220			V 08	.11th grade	
V 002,261..	.Puerto Rican		V 09	.12th grade, no diploma	
270			V 10	.High school graduate, diploma or GED	
V 003,271..	.Cuban		V 11	.Some college, but no degree	
274			V 12	.Associate degree in college, occupational program	
V 221..230	.Central American		V 13	.Associate degree in college, academic program	
V 231..249	.South American				
V 275..289	.Dominican				
V 004,200..					
209,250..					
260					
V 290..401	.Other Hispanic				

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
PERSON RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
V 14	.Bachelor's degree		D MILITARY	1	72
V 15	.Master's degree			Military service	
V 16	.Professional degree		V 0	.N/A (less than 16 years old)	
V 17	.Doctorate degree		V 1	.Yes, now on active duty	
D ANCSTRY1	3	53	V 2	.Yes, on active duty in past, but not now	
	Ancestry - first entry (See appendix I)		V 3	.Yes, service in reserves or national guard only	
V 001..998	.Ancestry codes - first entry		V 4	.No service	
V 999	.Not reported		D RVETSERV	2	73
D ANCSTRY2	3	56		Veteran period of service	
	Ancestry - second entry (See appendix I)		V 00	.N/A (less than 16 years old, no active duty)	
V 000	.No secondary ancestry		V 01	.September 1980 or later only	
V 001..998	.Ancestry codes		V 02	.May 1975 to August 1980 only	
V 999	.Not reported		V 03	.May 1975 to August 1980 and September 1980	
D MOBILITY	1	59		.or later only	
	Mobility status (lived here on April 1, 1985)		V 04	.Vietnam era, no Korean conflict, no WWII	
V 0	.N/A (less than 5 years old)		V 05	.Vietnam era and Korean conflict, no WWII	
V 1	.Yes same house (nonmovers)		V 06	.Vietnam era and Korean conflict and WWII	
V 2	.No, different house (movers)		V 07	.February 1955 to July 1964 only	
D MIGSTATE	2	60	V 08	.Korean conflict, no Vietnam era, no WWII	
	Migration - State or foreign country code		V 09	.Korean conflict and WWII, no Vietnam era	
	(Appendix I)		V 10	.WWII, no Korean conflict, no Vietnam era	
V 00	.N/A (person less than 5 years old/lived		V 11	.Other service	
V	.in same house in 1985)		D SEPT80	1	75
V 01..56	.FIPS state code (U.S. States and D.C.)			Served September 1980 or later	
V 72	.Puerto Rico		V 0	.(Did not serve this period/less than 16 years	
V 98	.Other abroad in 1985			.old)	
V 99	.State not identified (B sample)		V 1	.Served this period	
D MIGPUMA	5	62	D MAY75880	1	76
	Migration PUMA (state dependent)			Served May 1975 to August 1980	
V 00000	.N/A (person less than 5 years old/lived in		V 0	.(Did not serve this period/less than 16 years	
	.same house in 1985)			.old)	
V 00100..			V 1	.Served this period	
99800	.Migration PUMA		D VIETNAM	1	77
V 99900	.Abroad			Served Vietnam era (August 1964 - April 1975)	
D LANG1	1	67	V 0	.(Did not serve this period/less than 16 years	
	Language other than English at home			.old)	
V 0	.N/A (less than 5 years old)		V 1	.Served this period	
V 1	.Yes, speaks another language		D FEB55	1	78
V 2	.No, speaks only English			Served February 1955 - July 1964	
D LANG2	3	68	V 0	.(Did not serve this period/less than 16 years	
	Language spoken at home (See appendix I)			.old)	
V 000..600	.N/A (less than 5 years old/speaks only		V 1	.Served this period	
	.English)		D KOREAN	1	79
V 601..999	.Specific language codes			Served Korean conflict (June 1950 - January 1955)	
D ENGLISH	1	71	V 0	.(Did not serve this period/less than 16 years	
	Ability to speak English			.old)	
V 0	.N/A (less than 5 years old/speaks only English)		V 1	.Served this period	
V 1	.Very well		D WWII	1	80
V 2	.Well			Served World War II (September 1940 - July 1947)	
V 3	.Not well		V 0	.(Did not serve this period/less than 16 years	
V 4	.Not at all			.old)	
			V 1	.Served this period	
			D PFILLER2	1	81
				Filler	

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
PERSON RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D OTHRSERV	1	82	D RLABOR	1	91
V	0	Served any other time . (Did not serve this period/less than 16 years old)	V	0	Employment status recode .N/A (less than 16 years old)
V	1	.Served this period	V	1	.Civilian employed, at work
D YRSSERV	2	83	V	2	.Civilian employed, with a job but not at work
V	00	Years of active duty military service .N/A (less than 16 years/no active duty military service)	V	3	.Unemployed
V	01	.1 Year or less of service	V	4	.Armed forces, at work
V	02..49	.2 to 49 years of service	V	5	.Armed forces, with a job but not at work
V	50	.50 or more years of service	V	6	.Not in labor force
D DISABL1	1	85	D WORKLWK	1	92
V	0	Work limitation status .N/A (less than 16 years, and selected persons in GQs - See appendix C)	V	0	Worked last week .N/A (less than 16 years old/not at work/ .unemployed/NILF/Q21A not reported)
V	1	.Yes, limited in kind or amount of work	V	1	.Worked
V	2	.No, not limited	V	2	.Did not work
D DISABL2	1	86	D HOURS	2	93
V	0	Work prevented status .N/A (less than 16 years, and selected persons in GQs - See appendix C)	V	00	Hours worked last week .N/A (less than 16 years old/not at .work/unemployed/NILF)
V	1	.Yes, prevented from working	V	01..98	.1 to 98 hours worked last week
V	2	.No, not prevented from working	V	99	.99 or more hours worked last week
D MOBILIM	1	87	D POWSTATE	2	95
V	0	Mobility limitation .N/A (less than 15 years/institutionalized person, and selected persons in GQs - See appendix C)	V	00	Place of work - state - (Appendix I) .N/A (not a worker--not in the labor force, .including persons under 16 years; unemployed; .employed, with a job not at work; Armed Forces, .With a job but not at work)
V	1	.Yes, has a mobility limitation	V	01-56	.FIPS state code (U.S. States and D.C.)
V	2	.No, does not have a mobility limitation	V	98	.Abroad
D PERSCARE	1	88	V	99	.State not identified
V	0	Personal care limitation .N/A (less than 15 years/institutionalized person, and selected persons in GQs - See appendix C)	D POWPUMA	5	97
V	1	.Yes, has a personal care limitation	V	00000	Place of work PUMA (State dependent) .N/A (not a worker--not in the labor force, .including persons under 16 years; .unemployed; employed, with a job but not at .work; Armed Forces, with a job but not at .work)
V	2	.No, does not have a personal care limitation	V	00100..	
D FERTIL	2	89	V	99800	.PUMA of work
V	00	Number of children ever born .N/A (less than 15 years/male)	V	99900	.Abroad
V	01	.No children	D MEANS	2	102
V	02	.1 Child	V	00	Means of transportation to work .N/A (not a worker--not in the labor force, .including persons under 16 years; unemployed; .employed, with a job but not at work; Armed .Forces, with a job but not at work)
V	03	.2 Children	V	01	.Car, truck, or van
V	04	.3 Children	V	02	.Bus or trolley bus
V	05	.4 Children	V	03	.Streetcar or trolley car
V	06	.5 Children	V	04	.Subway or elevated
V	07	.6 Children	V	05	.Railroad
V	08	.7 Children	V	06	.Ferryboat
V	09	.8 Children	V	07	.Taxicab
V	10	.9 Children	V	08	.Motorcycle
V	11	.10 Children	V	09	.Bicycle
V	12	.11 Children	V	10	.Walked
V	13	.12 or more children	V	11	.Worked at home
			V	12	.Other method

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
PERSON RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D RIDERS	1	104	D INDUSTRY	3	115
V	0	.N/A (not a worker or worker whose means of transportation to work was not car, truck, or van)	V	000	.N/A (less than 16 years old/unemployed who never worked/nilf who last worked prior to 1985)
V	1	.Drove alone	V 010..992		.specific industry codes (see appendix I)
V	2	.2 People	D OCCUP	3	118
V	3	.3 People	V	000	.N/A (less than 16 years old/unemployed who never worked/nilf who last worked prior to 1985)
V	4	.4 People	V 003..909		.specific occupation codes (see appendix I)
V	5	.5 People	D CLASS	1	121
V	6	.6 People	V	0	.N/A (less than 16 years old/unemployed who never worked/NILF who last worked prior to 1985)
V	7	.7 to 9 people	V	1	.employee of a private for profit company or business or of an individual, for wages, salary, or commissions
V	8	.10 or more people	V	2	.Employee of a private not-for-profit, tax-exempt, or charitable organization
D DEPART	4	105	V	3	.Local government employee (city, county, etc.)
V	0000	.N/A (not a worker or worker who worked at home)	V	4	.State government employee
V	0001..2400	.Time (hour and minute of departure for work) (2400 midnight)	V	5	.Federal government employee
D TRAVTIME	2	109	V	6	.Self-employed in own not incorporated business, professional practice, or farm
V	00	.N/A (not a worker or worker who worked at home)	V	7	.Self-employed in own incorporated business, professional practice or farm
V	01..98	.1 to 98 minutes to get to work	V	8	.Working without pay in family business or farm
V	99	.99 Minutes or more to get to work	V	9	.Unemployed, last worked in 1984 or earlier
D TMPABSNT	1	111	D WORK89	1	122
V	0	.N/A (less than 16 years old/at work/did not report Q25)	V	0	.N/A (less than 16 years old)
V	1	.Yes, on layoff	V	1	.Worked last year
V	2	.Yes, on vacation, temporary illness, labor dispute	V	2	.Did not work last year
V	3	.No	D WEEK89	2	123
D LOOKING	1	112	V	00	.N/A (less than 16 years old/did not work in 1989)
V	0	.N/A (less than 16 years old/at work/did not report Q26A)	V	01..52	.1 to 52 weeks worked last year
V	1	.Yes	D HOUR89	2	125
V	2	.No	V	00	.N/A (less than 16 years old/did not work in 1989)
D AVAIL	1	113	V	01..98	.1 To 98 usual hours
V	0	.N/A (less than 16 years/at work/not looking/.Q26A = 0/did not report Q26B)	V	99	.99 Or more usual hours
V	1	.No, already has a job	D REARNING	6	127
V	2	.No, temporarily ill	V	000000	.N/A (no earnings)
V	3	.No, other reasons (in school, etc.)	V	-19996	.Loss of \$19996 or more
V	4	.Yes, could have taken a job	V	-19995..283999	.Total person's earnings in dollars
D YEARWRK	1	114	V	284000	\$.284000 = Topcode
V	0	.N/A (less than 16 years old)	V	284001+	.State medians included
V	1	.1990			
V	2	.1989			
V	3	.1988			
V	4	.1985 to 1987			
V	5	.1980 to 1984			
V	6	.1979 or earlier			
V	7	.Never worked			

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
PERSON RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D RPINCOME	6	133	V 17000		.Topcode
		Total person's income (signed)	V 17001+		.17001 or more = state median of topcoded values
V 000000		.N/A (no income)	D INCOME6	5	168
V -29997		.Loss of \$29997 or more			Public assistance income in 1989
V -29996..			V 00000		.N/A (less than 15 years/none)
400999		.Total person's income in dollars	V 00001..		9999 .\$.1 To \$9999
V 401000		.Topcode of total person's income	V 10000		.Topcode
V 401001+		.State medians included	V 10001+		\$.10001 or more = state median
D INCOME1	6	139	D INCOME7	5	173
		Wages or salary income in 1989			Retirement income in 1989
V 000000		.N/A (less than 16 years old/none)	V 00000		.N/A (less than 15 years/none)
V 000001..			V 00001..		29999 .\$.1 to \$29999
V 139999		\$.1 - 139,999	V 30000		.Topcode
V 140000		.Topcode	V 30001+		\$.30001 or more = state median of topcoded values
V 140001+		.140001 or more = state median of topcoded values	D INCOME8	5	178
D INCOME2	6	145			All other income in 1989
		Nonfarm self-employment income in 1989 (signed)	V 00000		.N/A (less than 15 years/none)
V 000000		.N/A (less than 16 years/none)	V 00001..		19999 .\$.1 to \$19999
V -09999		.Loss of \$9,999 or more	V 20000		.Topcode
V -00001..			V 20001+		\$.20,001 or more = state median of topcoded values
V -09998		.Loss \$1 to \$9,998	D AAUGMENT	1	183
V 000001		.Break even or \$1			Augmented person (see text pp. C-5)
V 000002..			V 0		.No
089999		\$.2 To \$89999	V 1		.Yes
V 090000		.Topcode	D ARELAT1	1	184
V 090001+		\$.90,001 or more = state median of topcoded values			Relationship allocation flag
D INCOME3	6	151	V 0		.No
		Farm self-employment income in 1989 (signed)	V 1		.Yes
V 000000		.N/A (less than 16 years/none)	D ASEX	1	185
V -09999		.Loss of \$9,999 or more			Sex allocation flag
V -00001 to			V 0		.No
-09998		.Loss \$1 to \$9,998	V 1		.Yes
V 1		.Break even or \$1	D ARACE	1	186
V 000002..					Detailed race allocation flag
053999		\$.2 To \$53999	V 0		.No
V 054000		.Topcode	V 1		.Yes
V 054001+		\$.54001 or more = state median of topcoded values	D AAGE	1	187
D INCOME4	6	157			Age allocation flag
		Interest, dividends, and net rental income in 1989 (signed)	V 0		.No
V 000000		.N/A (less than 15 years/none)	V 1		.Yes
V -09999		.Loss of \$9,999 or more	D AMARITAL	1	188
V -00001 to					Marital status allocation flag
-09998		.Loss \$1 to \$9,998	V 0		.No
V 1		.Break even or \$1	V 1		.Yes
V 000002..			D INCOME5	5	163
039999		\$.2 To \$39999			Social security income in 1989
V 040000		.Topcode	V 00000		.N/A (less than 15 years/none)
V 040001+		\$.40001 or more = state median of topcoded values	V 00001..		16999 .\$.1 to \$16999

**1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
PERSON RECORD**

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D AHISPAN	1	189	D AENGLISH	1	201
	Detailed Hispanic origin allocation flag			Ability to speak English allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D ABIRTHPL	1	190	D AVETS1	1	202
	Place of birth			Military service allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D ACITIZEN	1	191	D ASERVPER	1	203
	Citizenship allocation flag			Military periods of service allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D AIMMIGR	1	192	D AYRSSERV	1	204
	Year of entry allocation flag			Years of military service allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D ASCHOOL	1	193	D ADISABL1	1	205
	School enrollment allocation flag			Work limitation status allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D AYEARSCH	1	194	D ADISABL2	1	206
	Highest education allocation flag			Work prevention status allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D AANCSTR1	1	195	D AMOBLIM	1	207
	First ancestry allocation flag			Mobility limitation status allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D AANCSTR2	1	196	D APERCARE	1	208
	Second ancestry allocation flag			Personal care limitation status allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D AMOBLTY	1	197	D AFERTIL	1	209
	Mobility status allocation flag			Children ever born allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D AMIGSTATE	1	198	D ALABOR	1	210
	Migration state allocation flag			Employment status recode allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D ALANG1	1	199	D AHOURS	1	211
	Language other than English allocation flag			Hours worked last week allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes
D ALANG2	1	200	D APOWST	1	212
	Language spoken at home allocation flag			Place of work state allocation flag	
V	0	.No	V	0	.No
V	1	.Yes	V	1	.Yes

1990 PUBLIC USE MICRODATA SAMPLES, U.S. DATA DICTIONARY
PERSON RECORD

DATA	SIZE	BEGIN	DATA	SIZE	BEGIN
D AMEANS	1	213	D AINCOME2	1	225
V 0 .No			V 0 .No		
V 1 .Yes			V 1 .No (derived)		
D ARIDERS	1	214	V 2 .Yes		
V 0 .No			D AINCOME3	1	226
V 1 .Yes			V 0 .No		
D ADEPART	1	215	V 1 .No (derived)		
V 0 .No			V 2 .Yes		
V 1 .Yes			D AINCOME4	1	227
D ATRANTME	1	216	V 0 .No		
V 0 .No			V 1 .No (derived)		
V 1 .Yes			V 2 .Yes		
D ALSTWRK	1	217	D AINCOME5	1	228
V 0 .No			V 0 .No		
V 1 .Yes			V 1 .No (derived)		
D AINDUSTR	1	218	V 2 .Yes		
V 0 .No			D AINCOME6	1	229
V 1 .Yes			V 0 .No		
D AOCCUP	1	219	V 1 .No (derived)		
V 0 .No			V 2 .Yes		
V 1 .Yes			D AINCOME7	1	230
D ACLASS	1	220	V 0 .No		
V 0 .No			V 1 .No (derived)		
V 1 .Yes			V 2 .Yes		
D AWORK89	1	221	D AINCOME8	1	231
V 0 .No			V 0 .No		
V 1 .Yes			V 1 .No (derived)		
D AWKS89	1	222	V 2 .Yes		
V 0 .No					
V 1 .Yes					
D AHOUR89	1	223			
V 0 .No					
V 1 .Yes					
D AINCOME1	1	224			
V 0 .No					
V 1 .No (derived)					
V 2 .Yes					

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APPENDIX A.

Area Classifications

This section contains definitions for geographic entities used in various census products. 1990 PUMS products include a non-standard census geographical entity called the Public Use Microdata Area (PUMA) of which the lowest level released on the file is "groups of census tracts." All geography on the PUMS must represent areas with 100,000 or more persons.

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These definitions are for all geographic entities and concepts that the Census Bureau will include in its standard 1990 census data products. Not all entities and concepts are shown in any one 1990 census data product. For a description of geographic areas included in each data product, see appendix F.

AMERICAN INDIAN AND ALASKA NATIVE AREA

Alaska Native Regional Corporation (ANRC)

Alaska Native Regional Corporations (ANRC's) are corporate entities established under the Alaska Native Claims Settlement Act of 1972, Public Law 92-203, as amended by Public Law 94-204, to conduct both business and nonprofit affairs of Alaska Natives. Alaska is divided into

12 ANRC's that cover the entire State, except for the Annette Islands Reserve. The boundaries of the 12 ANRC's were established by the Department of the Interior, in cooperation with Alaska Natives. Each ANRC was designed to include, as far as practicable, Alaska Natives with a common heritage and common interests. The ANRC boundaries for the 1990 census were identified by the Bureau of Land Management. A 13th region was established for Alaska Natives who are not permanent residents and who chose not to enroll in one of the 12 ANRC's; no census products are prepared for the 13th region. ANRC's were first identified for the 1980 census.

Each ANRC is assigned a two-digit census code ranging from 07 through 84. These census codes are assigned in alphabetical order of the ANRC's.

Alaska Native Village (ANV) Statistical Area

Alaska Native villages (ANV's) constitute tribes, bands, clans, groups, villages, communities, or associations in Alaska that are recognized pursuant to the Alaska Native Claims Settlement Act of 1972, Public Law 92-203. Because ANV's do not have legally designated boundaries, the Census Bureau has established Alaska Native village statistical areas (ANVSA's) for statistical purposes. For the 1990 census, the Census Bureau cooperated with officials of the nonprofit corporation within each participating Alaska Native Regional Corporation (ANRC), as well as other knowledgeable officials, to delineate boundaries that encompass the settled area associated with each ANV. ANVSA's are located within ANRC's and do not cross ANRC boundaries. ANVSA's for the 1990 census replace the ANV's that the Census Bureau recognized for the 1980 census.

Each ANVSA is assigned a four-digit census code ranging from 6001 through 8989. Each ANVSA also is assigned a five-digit FIPS code. Both the census and FIPS codes are assigned in alphabetical order of ANVSA's.

American Indian Reservation and Trust Land

American Indian Reservation—Federal American Indian reservations are areas with boundaries established by treaty, statute, and/or executive or court order, and recognized by the Federal Government as territory in which American Indian tribes have jurisdiction. State reservations are lands held in trust by State governments for the use and benefit of a given tribe. The reservations and their boundaries were identified for the 1990 census by the Bureau of Indian Affairs (BIA), Department of Interior (for Federal reservations), and State governments (for State reservations). The names of American Indian reservations recognized by State governments, but not by the Federal Government, are followed by "(State)." Areas composed of reservation lands that are administered jointly and/or are claimed

by two reservations, as identified by the BIA, are called "joint areas," and are treated as separate American Indian reservations for census purposes.

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 portion of the reservations in a given State are shown in the data products for that State; the entire reservations are shown in data products for the United States.

Each American Indian reservation is assigned a four-digit census code ranging from 0001 through 4989. These census codes are assigned in alphabetical order of American Indian reservations nationwide, except that joint areas appear at the end of the code range. Each American Indian reservation also is assigned a five-digit FIPS code; because the FIPS codes are assigned in alphabetical sequence of American Indian reservations within each State, the FIPS code is different in each State for reservations in more than one State.

Trust Land—Trust lands are property associated with a particular American Indian reservation or tribe, held in trust by the Federal Government. Trust lands may be held in trust either for a tribe (tribal trust land) or for an individual member of a tribe (individual trust land). Trust lands recognized for the 1990 census comprise all tribal trust lands and inhabited individual trust lands located outside of a reservation boundary. As with other American Indian areas, trust lands may be located in more than one State. Only the trust lands in a given State are shown in the data products for that State; all trust lands associated with a reservation or tribe are shown in data products for the United States. The Census Bureau first reported data for tribal trust lands for the 1980 census.

Trust lands are assigned a four-digit census code and a five-digit FIPS code, the same as that for the reservation with which they are associated. Trust lands not associated with a reservation are presented by tribal name, interspersed alphabetically among the reservations.

Tribal Designated Statistical Area (TDSA)

Tribal designated statistical areas (TDSA's) are areas, delineated outside Oklahoma by federally- and State-recognized tribes without a land base or associated trust lands, to provide statistical areas for which the Census Bureau tabulates data. TDSA's represent areas generally containing the American Indian population over which federally-recognized tribes have jurisdiction and areas in which State tribes provide benefits and services to their members. The names of TDSA's delineated by State-recognized tribes are followed by "(State)." The Census Bureau did not recognize TDSA's before the 1990 census.

Each TDSA is assigned a four-digit census code ranging from 9001 through 9589. The census codes are

assigned in alphabetical order of TDSA's nationwide. Each TDSA also is assigned a five-digit FIPS code in alphabetical order within State.

Tribal Jurisdiction Statistical Area (TJSA)

Tribal jurisdiction statistical areas (TJSA's) are areas, delineated by federally-recognized tribes in Oklahoma without a reservation, for which the Census Bureau tabulates data. TJSA's represent areas generally containing the American Indian population over which one or more tribal governments have jurisdiction; if tribal officials delineated adjacent TJSA's so that they include some duplicate territory, the overlap area is called a "joint use area," which is treated as a separate TJSA for census purposes.

TJSA's replace the "Historic Areas of Oklahoma (excluding urbanized areas)" shown in 1980 census data products. The Historic Areas of Oklahoma comprised the territory located within reservations that had legally established boundaries from 1900 to 1907; these reservations were dissolved during the 2- to 3-year period preceding the statehood of Oklahoma in 1907. The Historic Areas of Oklahoma (excluding urbanized areas) were identified only for the 1980 census.

Each TJSA is assigned a four-digit census code ranging from 5001 through 5989. The census codes are assigned in alphabetical order of TJSA's, except that joint areas appear at the end of the code range. Each TJSA also is assigned a five-digit FIPS code in alphabetical order within Oklahoma.

AREA MEASUREMENT

Area measurements provide the size, in square kilometers (also in square miles in printed reports), recorded for each geographic entity for which the Census Bureau tabulates data in general-purpose data products (except crews-of-vessels entities and ZIP Codes). (Square kilometers may be divided by 2.59 to convert an area measurement to square miles.) Area was calculated from the specific set of boundaries recorded for the entity in the Census Bureau's geographic data base (see "TIGER"). On machine-readable files, area measurements are shown to three decimal places; the decimal point is implied. In printed reports and listings, area measurements are shown to one decimal.

The Census Bureau provides measurements for both land area and total water area for the 1990 census; the water figure includes inland, coastal, Great Lakes, and territorial water. (For the 1980 census, the Census Bureau provided area measurements for land and inland water.) The Census Bureau will provide measurements for the component types of water for the affected entities in a separate file. "Inland water" consists of any lake, reservoir, pond, or similar body of water that is recorded in the Census Bureau's geographic data base. It also includes any river, creek, canal, stream, or similar

feature that is recorded in that data base 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 considered to be "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, and territorial waters is for statistical purposes, and does not necessarily reflect legal definitions thereof.

By definition, census blocks do not include water within their boundaries; therefore, the water area of a block is always zero. Land area measurements may disagree with the information displayed on census maps and in the TIGER file because, for area measurement purposes, features identified as "intermittent water" and "glacier" are reported as land area. For this reason, it may not be possible to derive the land area for an entity by summing the land area of its component census blocks. In addition, 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, or the water is associated with a State but is not within the legal boundary of any county. Crews-of-vessels entities (see "Census Tract and Block Numbering Area" and "Block") do not encompass territory and therefore have no area measurements. ZIP Codes do not have specific boundaries, and therefore, also do not have area measurements.

The accuracy of any area measurement figure is limited by the inaccuracy inherent in (1) the location and shape of the various boundary features in the data base, and (2) rounding affecting the last digit in all operations that compute and/or sum the area measurements.

BLOCK

Census blocks are small areas bounded on all sides by visible features such as streets, roads, streams, and railroad tracks, and by invisible boundaries such as city, town, township, and county limits, property lines, and short, imaginary extensions of streets and roads.

Tabulation blocks, used in census data products, are in most cases the same as collection blocks, used in the census enumeration. In some cases, collection blocks have been "split" into two or more parts required for data tabulations. Tabulation blocks do not cross the boundaries of counties, county subdivisions, places, census tracts or block numbering areas, American

Indian and Alaska Native areas, congressional districts, voting districts, urban or rural areas, or urbanized areas. The 1990 census is the first for which the entire United States and its possessions are block-numbered.

Blocks are numbered uniquely within each census tract or BNA. A block is identified by a three-digit number, sometimes with a single alphabetical suffix. Block numbers with suffixes generally represent collection blocks that were "split" in order to identify separate geographic entities that divide the original block. For example, when a city limit runs through data collection block 101, the data for the portion inside the city is tabulated in block 101A and the portion outside, in block 101B. A block number with the suffix "Z" represents a "crews-of-vessels" entity for which the Census Bureau tabulates data, but that does not represent a true geographic area; such a block is shown on census maps associated with an anchor symbol and a census tract or block numbering area with a .99 suffix.

BLOCK GROUP (BG)

Geographic Block Group

A geographic block group (BG) is a cluster of blocks having the same first digit of their three-digit identifying numbers within a census tract or block numbering area (BNA). For example, BG 3 within a census tract or BNA includes all blocks numbered between 301 and 397. In most cases, the numbering involves substantially fewer than 97 blocks. Geographic BG's never cross census tract or BNA boundaries, but may cross the boundaries of county subdivisions, places, American Indian and Alaska Native areas, urbanized areas, voting districts, and congressional districts. BG's generally contain between 250 and 550 housing units, with the ideal size being 400 housing units.

Tabulation Block Group

In the data tabulations, a geographic BG may be split to present data for every unique combination of county subdivision, place, American Indian and Alaska Native area, urbanized area, voting district, urban/rural and congressional district shown in the data product; for example, if BG 3 is partly in a city and partly outside the city, there will be separate tabulated records for each portion of BG 3. BG's are used in tabulating decennial census data nationwide in the 1990 census, in all block-numbered areas in the 1980 census, and in Tape Address Register (TAR) areas in the 1970 census. For purposes of data presentation, BG's are a substitute for the enumeration districts (ED's) used for reporting data in many parts of the United States for the 1970 and 1980 censuses, and in all areas for pre-1970 censuses.

BOUNDARY CHANGES

The boundaries of some counties, county subdivisions, American Indian and Alaska Native areas, and

many incorporated places, changed between those reported for the 1980 census and January 1, 1990. 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 and Executive Orders.

The historical counts shown for counties, county subdivisions, and places are not updated for such changes, and thus reflect the population and housing units in the area as delineated at each census. Information on boundary changes reported between the 1980 and 1990 censuses for counties, county subdivisions, and incorporated places is presented in the "User Notes" section of the technical documentation of Summary Tape Files 1 and 3, and in the 1990 CPH-2, *Population and Housing Unit Counts* printed reports. For information on boundary changes for such areas in the decade preceding other decennial censuses, see the *Number of Inhabitants* reports for each census. Boundary changes are not reported for some areas, such as census designated places and block groups.

CENSUS REGION AND CENSUS DIVISION

Census Division

Census divisions are groupings of States that are subdivisions of the four census regions. There are nine divisions, which the Census Bureau adopted in 1910 for the presentation of data. The regions, divisions, and their constituent States are:

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

Census Region

Census regions are groupings of States that subdivide the United States for the presentation of data. There are four regions—Northeast, Midwest, South, and West. Each of the four census regions is divided into two or more census divisions. Prior to 1984, the Midwest region was named the North Central region. From 1910, when census regions were established, through the 1940's, there were three regions—North, South, and West.

CENSUS TRACT AND BLOCK NUMBERING AREA

Block Numbering Area (BNA)

Block numbering areas (BNA's) are small statistical subdivisions of a county for grouping and numbering blocks in nonmetropolitan counties where local census statistical areas committees have not established census tracts. State agencies and the Census Bureau delineated BNA's for the 1990 census, using guidelines similar to those for the delineation of census tracts. BNA's do not cross county boundaries.

BNA's are identified by a four-digit basic number and may have a two-digit suffix; for example, 9901.07. The decimal point separating the four-digit basic BNA number from the two-digit suffix is shown in printed reports, in microfiche, and on census maps; in machine-readable files, the decimal point is implied. Many BNA's do not have a suffix; in such cases, the suffix field is left blank in all data products. BNA numbers range from 9501 through 9989.99, and are unique within a county (numbers in the range of 0001 through 9499.99 denote a census tract). The suffix .99 identifies a BNA that was

populated entirely by persons aboard one or more civilian or military ships. A "crews-of-vessels" BNA appears on census maps only as an anchor symbol with its BNA number (and block numbers on maps showing block numbers); the BNA relates to the ships associated with the onshore BNA's having the same four-digit basic number. Suffixes in the range .80 through .98 usually identify BNA's that either were revised or were created during the 1990 census data collection activities. Some of these revisions produced BNA's that have extremely small land area and may have little or no population or housing. For data analysis, such a BNA can be summarized with an adjacent BNA.

Census Tract

Census tracts are small, relatively permanent statistical subdivisions of a county. Census tracts are delineated for all metropolitan areas (MA's) and other densely populated counties by local census statistical areas committees following Census Bureau guidelines (more than 3,000 census tracts have been established in 221 counties outside MA's). Six States (California, Connecticut, Delaware, Hawaii, New Jersey, and Rhode Island) and the District of Columbia are covered entirely by census tracts. Census tracts usually have between 2,500 and 8,000 persons and, when first delineated, are designed to be homogeneous with respect to population characteristics, economic status, and living conditions. Census tracts do not cross county boundaries. The spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census. However, physical changes in street patterns caused by highway construction, new development, etc., may require occasional revisions; census tracts occasionally are split due to large population growth, or combined as a result of substantial population decline. Census tracts are referred to as "tracts" in all 1990 data products.

Census tracts are identified by a four-digit basic number and may have a two-digit suffix; for example, 6059.02. The decimal point separating the four-digit basic tract number from the two-digit suffix is shown in printed reports, in microfiche, and on census maps; in machine-readable files, the decimal point is implied. Many census tracts do not have a suffix; in such cases, the suffix field is left blank in all data products. Leading zeros in a census tract number (for example, 002502) are shown only on machine-readable files.

Census tract numbers range from 0001 through 9499.99 and are unique within a county (numbers in the range of 9501 through 9989.99 denote a block numbering area). The suffix .99 identifies a census tract that was populated entirely by persons aboard one or more civilian or military ships. A "crews-of-vessels" census tract appears on census maps only as an anchor

symbol with its census tract number (and block numbers on maps showing block numbers). These census tracts relate to the ships associated with the onshore census tract having the same four-digit basic number. Suffixes in the range .80 through .98 usually identify census tracts that either were revised or were created during the 1990 census data collection activities. Some of these revisions may have resulted in census tracts that have extremely small land area and may have little or no population or housing. For data analysis, such a census tract can be summarized with an adjacent census tract.

CONGRESSIONAL DISTRICT (CD)

Congressional districts (CD's) are the 435 areas from which persons 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 CD's for the purpose of electing representatives. Each CD is to be as equal in population to all other CD's in the State as practicable, based on the decennial census counts.

The CD's that were in effect on January 1, 1990 were those of the 101st Congress. Data on the 101st Congress appear in an early 1990 census data product (Summary Tape File 1A). The CD's of the 101st Congress are the same as those in effect for the 102nd Congress. CD's of the 103rd Congress, reflecting redistricting based on the 1990 census, are summarized in later 1990 data products (STF's 1D and 3D, and 1990 CPH-4, *Population and Housing Characteristics for Congressional Districts of the 103rd Congress* printed reports).

COUNTY

The primary political divisions of most States are termed "counties." In Louisiana, these divisions are known as "parishes." In Alaska, which has no counties, the county equivalents are the organized "boroughs" and the "census areas" that are delineated for statistical purposes by the State of Alaska and the Census Bureau. In four States (Maryland, Missouri, Nevada, and Virginia), there are one or more cities that are independent of any county organization and thus constitute primary divisions of their States. These cities are known as "independent cities" and are treated as equivalent to counties for statistical purposes. That part of Yellowstone National Park in Montana is treated as a county equivalent. The District of Columbia has no primary divisions, and the entire area is considered equivalent to a county for statistical purposes.

Each county and county equivalent is assigned a three-digit FIPS code that is unique within State. These codes are assigned in alphabetical order of county or county equivalent within State, except for the independent cities, which follow the listing of counties.

COUNTY SUBDIVISION

County subdivisions are the primary subdivisions of counties and their equivalents for the reporting of decennial census data. They include census county divisions, census subareas, minor civil divisions, and unorganized territories.

Each county subdivision is assigned a three-digit census code in alphabetical order within county and a five-digit FIPS code in alphabetical order within State.

Census County Division (CCD)

Census county divisions (CCD's) are subdivisions of a county that were delineated by the Census Bureau, in cooperation with State officials and local census statistical areas committees, for statistical purposes. CCD's were established in 21 States where there are no legally established minor civil divisions (MCD's), where the MCD's do not have governmental or administrative purposes, where the boundaries of the MCD's change frequently, and/or where the MCD's are not generally known to the public. CCD's have no legal functions, and are not governmental units.

The boundaries of CCD's usually are delineated to follow visible features, and in most cases coincide with census tract or block numbering area boundaries. The name of each CCD is based on a place, county, or well-known local name that identifies its location. CCD's 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. For the 1980 census, the county subdivisions recognized for Nevada were MCD's.

Census Subarea (Alaska)

Census subareas are statistical subdivisions of boroughs and census areas (county equivalents) in Alaska. Census subareas were delineated cooperatively by the State of Alaska and the Census Bureau. The census subareas, identified first in 1980, replaced the various types of subdivisions used in the 1970 census.

Minor Civil Division (MCD)

Minor civil divisions (MCD's) are the primary political or administrative divisions of a county. MCD's represent many different kinds of legal entities with a wide variety of governmental and/or administrative functions. MCD's are variously designated as American Indian reservations, assessment districts, boroughs, election districts, gores, grants, magisterial districts, parish governing authority districts, plantations, precincts, purchases, supervisors' districts, towns, and townships. In some States, all or some incorporated places are not located in any

MCD and thus serve as MCD's in their own right. In other States, incorporated places are subordinate to (part of) the MCD's in which they are located, or the pattern is mixed—some incorporated places are independent of MCD's and others are subordinate to one or more MCD's.

The Census Bureau recognizes MCD's 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 entire area is considered equivalent to an MCD for statistical purposes.

The MCD's in 12 selected 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. The Census Bureau presents data for these MCD's in all data products in which it provides data for places.

Unorganized Territory (unorg.)

In nine States (Arkansas, Iowa, Kansas, Louisiana, Maine, Minnesota, North Carolina, North Dakota, and South Dakota), some counties contain territory that is not included in an MCD recognized by the Census Bureau. Each separate area of unorganized territory in these States is recognized as one or more separate county subdivisions for census purposes. Each unorganized territory is given a descriptive name, followed by the designation "unorg."

GEOGRAPHIC CODE

Geographic codes are shown primarily on machine-readable data products, such as computer tape and compact disc-read only memory (CD-ROM), but also appear on other products such as microfiche; they also are shown on some census maps. Codes are identified as "census codes" only if there is also a Federal Information Processing Standards (FIPS) code for the same geographic entity. A code that is not identified as either "census" or "FIPS" is usually a census code for which there is no FIPS equivalent, or for which the Census Bureau does not use the FIPS code. The exceptions, which use only the FIPS code in census products, are county, congressional district, and metropolitan area (that is, metropolitan statistical area, consolidated metropolitan statistical area, and primary metropolitan statistical area).

Census Code

Census codes are assigned for a variety of geographic entities, including American Indian and Alaska

Native area, census division, census region, county subdivision, place, State, urbanized area, and voting district. The structure, format, and meaning of census codes appear in the 1990 census *Geographic Identification Code Scheme*; in the data dictionary portion of the technical documentation for summary tape files, CD-ROM's, and microfiche.

Federal Information Processing Standards (FIPS) Code

Federal Information Processing Standards (FIPS) codes are assigned for a variety of geographic entities, including American Indian and Alaska Native area, congressional district, county, county subdivision, metropolitan area, place, and State. The structure, format, and meaning of FIPS codes used in the census are shown in the 1990 census *Geographic Identification Code Scheme*; in the data dictionary portion of the technical documentation for summary tape files, CD-ROM's, and microfiche.

The objective of the FIPS codes is to improve the use of data resources of the Federal Government and avoid unnecessary duplication and incompatibilities in the collection, processing, and dissemination of data. More information about FIPS and FIPS code documentation is available from the National Technical Information Service, Springfield, VA 22161.

United States Postal Service (USPS) Code

United States Postal Service (USPS) codes for States are used in all 1990 data products. The codes are two-character alphabetic abbreviations. These codes are the same as the FIPS two-character alphabetic abbreviations.

GEOGRAPHIC PRESENTATION

Hierarchical Presentation

A hierarchical geographic presentation shows the geographic entities in a superior/subordinate structure in census products. 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 machine-readable media in the discussion of file structure in the geographic coverage portion of the abstract in the technical documentation. An example of hierarchical presentation is the "standard census geographic hierarchy": block, within block group, within census tract or block numbering area, 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)
 Census tract/ block numbering area
 (or part)
 Block group (or part)
 Block

Inventory Presentation

An inventory presentation of geographic entities is one in which all entities of the same type are shown in alphabetical or code 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, census tract/ block numbering area, or block group. 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"

HISTORICAL COUNTS

Historical counts for total population and total housing units are shown in the 1990 CPH-2, *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, the symbol three dots "... " is shown for earlier censuses. The three-dot symbol 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. For counties, county subdivisions, and places formed since January 1, 1980, 1980 census population and housing unit counts in the 1990 territory are reported in the geographic change notes included in the "User Notes" text section of 1990 CPH-2, *Population and Housing Unit Counts*, and in the technical documentation of Summary Tape Files 1 and 3.

In some cases, population and housing unit counts for individual areas were revised since publication of the 1980 reports (indicated by the prefix "r"). In a number of tables of 1990 CPH-2, *Population and Housing Unit Counts*, 1980 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.

INTERNAL POINT

An internal point is a set of geographic coordinates (latitude and longitude) that is located within a specified geographic entity. A single point is identified for each entity; for many entities, this point represents the approximate geographic center of that entity. If the shape of the entity caused this point to be located outside the boundaries of the entity, it is relocated from the center so that it is within the entity. If the internal point for a block falls in a water area, it is relocated to a land area within the block. On machine-readable products, internal points are shown to six decimal places; the decimal point is implied.

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 MA's are defined around two or more nuclei.

The MA classification is a statistical standard, developed for use by Federal agencies in the production, analysis, and publication of data on MA's. The MA's are designated and defined by the Federal Office of Management and Budget, following a set of official published standards. 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 MA's nationwide.

Each MA must contain either a place with a minimum population of 50,000 or a Census Bureau-defined urbanized area and a total MA population of at least 100,000 (75,000 in New England). An MA comprises 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, MA's are composed of cities and towns rather than whole counties.

The territory, population, and housing units in MA's 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 MA's are referred to as "nonmetropolitan." The metropolitan and nonmetropolitan classification cuts across the other hierarchies; for example, there is generally 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 an MA either as a metropolitan statistical area (MSA) or as a consolidated metropolitan statistical area (CMSA) that is divided into primary metropolitan statistical areas (PMSA's). Documentation of the MA standards and how they are applied is available from the Secretary, Federal Executive Committee on Metropolitan Areas, Population Division, U.S. Bureau of the Census, Washington, DC 20233.

Central City

In each MSA and CMSA, the largest place and, in some cases, additional places are designated as "central cities" under the official standards. A few PMSA's 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 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 city that extends outside the MA boundary.

Consolidated and Primary Metropolitan Statistical Area (CMSA and PMSA)

If an area that qualifies as an MA has more than one million persons, primary metropolitan statistical areas (PMSA's) may be defined within it. PMSA's consist of a large urbanized county or cluster of counties that demonstrates very strong internal economic and social links, in addition to close ties to other portions of the larger

area. When PMSA's are established, the larger area of which they are component parts is designated a consolidated metropolitan statistical area (CMSA).

Metropolitan Statistical Area (MSA)

Metropolitan statistical areas (MSA's) are relatively freestanding MA's and are not closely associated with other MA's. These areas typically are surrounded by nonmetropolitan counties.

Metropolitan Area Title and Code

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

The title of a PMSA may contain up to three place names, as determined above, or up to three county names, sequenced in order of population. A 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 such a designation is supported by local opinion and is deemed to be unambiguous and suitable by the Office of Management and Budget.

The titles for all MA's also contain the name of each State in which the area is located. Each metropolitan area is assigned a four-digit FIPS code, in alphabetical order nationwide. If the fourth digit of the code is a "2," it identifies a CMSA. Additionally, there is a separate set of two-digit codes for CMSA's, also assigned alphabetically.

OUTLYING AREAS OF THE UNITED STATES

The Census Bureau treats the outlying areas as the statistical equivalents of States for the 1990 census. The outlying areas are American Samoa, Guam, the Commonwealth of the Northern Mariana Islands (Northern Mariana Islands), Republic of Palau (Palau), Puerto Rico, and the Virgin Islands of the United States (Virgin Islands). Geographic definitions specific to each outlying area are shown in appendix A of the text in the data products for each area.

PLACE

Places, for the reporting of decennial census data, include census designated places and incorporated places. Each place is assigned a four-digit census code

that is unique within State. Each place is also assigned a five-digit FIPS code that is unique within State. Both the census and FIPS codes are assigned based on alphabetical order within State. Consolidated cities (see below) are assigned a one-character alphabetical census code that is unique nationwide and a five-digit FIPS code that is unique within State.

Census Designated Place (CDP)

Census designated places (CDP's) are delineated for the decennial census as the statistical counterparts of incorporated places. CDP's comprise densely settled concentrations of population that are identifiable by name, but are not legally incorporated places. Their boundaries, which usually coincide with visible features or the boundary of an adjacent incorporated place, have no legal status, nor do these places have officials elected to serve traditional municipal functions. CDP boundaries may change with changes in the settlement pattern; a CDP with the same name as in previous censuses does not necessarily have the same boundaries.

Beginning with the 1950 census, the Census Bureau, in cooperation with State agencies and local census statistical areas committees, has identified and delineated boundaries for CDP's. In the 1990 census, the name of each such place is followed by "CDP." In the 1980 census, "(CDP)" was used; in 1970, 1960, and 1950 censuses, these places were identified by "(U)," meaning "unincorporated place."

To qualify as a CDP for the 1990 census, an unincorporated community must have met the following criteria:

1. In all States except Alaska and Hawaii, the Census Bureau uses three population size criteria to designate a CDP. These criteria are:
 - a. 1,000 or more persons if outside the boundaries of an urbanized area (UA) delineated for the 1980 census or a subsequent special census.
 - b. 2,500 or more persons if inside the boundaries of a UA delineated for the 1980 census or a subsequent special census.
 - c. 250 or more persons if outside the boundaries of a UA delineated for the 1980 census or a subsequent special census, and within the official boundaries of an American Indian reservation recognized for the 1990 census.
2. In Alaska, 25 or more persons if outside a UA, and 2,500 or more persons if inside a UA delineated for the 1980 census or a subsequent special census.
3. In Hawaii, 300 or more persons, regardless of whether the community is inside or outside a UA.

For the 1990 census, CDP's qualified on the basis of the population counts prepared for the 1990 Postcensus Local Review Program. Because these counts were subject to change, a few CDP's may have final population counts lower than the minimums shown above.

Hawaii is the only State with no incorporated places recognized by the Bureau of the Census. All places shown for Hawaii in the data products are CDP's. 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.

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. Where this occurs, and where one or more other incorporated places in the county or MCD continue to function as separate governments, even though they have been included in the consolidated government, the primary incorporated place is referred to as a "consolidated city."

The data presentation for consolidated cities varies depending upon the geographic presentation. In hierarchical presentations, consolidated cities are not shown. These presentations include the semi-independent places and the "consolidated city (remainder)." Where the consolidated city is coextensive with a county or county subdivision, the data shown for those areas in hierarchical presentations are equivalent to those for the consolidated government.

For inventory geographic presentations, the consolidated city appears at the end of the listing of places. The data for the consolidated city include places that are part of the consolidated city. The "consolidated city (remainder)" is the portion of the consolidated government minus the semi-independent places, and is shown in alphabetical sequence with other places.

In summary presentations by size of place, the consolidated city is not included. The places semi-independent of consolidated cities are categorized by their size, as is the "consolidated city (remainder)."

Each consolidated city is assigned a one-character alphabetic census code. Each consolidated city also is assigned a five-digit FIPS code that is unique within State. The semi-independent places and the "consolidated city (remainder)" are assigned a four-digit census code and a five-digit FIPS place code that are unique within State. Both the census and FIPS codes are assigned based on alphabetical order within State.

Incorporated Place

Incorporated places recognized in 1990 census data products are those reported to the Census Bureau as legally in existence on January 1, 1990 under the laws of their respective States as cities, boroughs, 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 census purposes; the boroughs in Alaska are county equivalents.

POPULATION OR HOUSING UNIT DENSITY

Population or housing unit density is computed by dividing the total population or housing units of a geographic unit (for example, United States, State, county, place) by its land area measured in square kilometers or square miles. Density is expressed as both "persons (or housing units) per square kilometer" and "persons (or housing units) per square mile" of land area in 1990 census printed reports.

STATE

States are the primary governmental divisions of the United States. The District of Columbia is treated as a statistical equivalent of a State for census purposes. The four census regions, nine census divisions, and their component States are shown under "CENSUS REGION AND CENSUS DIVISION" in this appendix.

The Census Bureau treats the outlying areas as State equivalents for the 1990 census. The outlying areas are American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, and the Virgin Islands of the United States. Geographic definitions specific to each outlying area are shown in appendix A in the data products for each area.

Each State and equivalent is assigned a two-digit numeric Federal Information Processing Standards (FIPS) code in alphabetical order by State name, followed by the outlying area names. Each State and equivalent area also is assigned a two-digit census code. This code is assigned on the basis of the geographic sequence of each State within each census division; the first digit of the code is the code for the respective division. Puerto Rico, the Virgin Islands, and the outlying areas of the Pacific are assigned "0" as the division code. Each State and equivalent area also is assigned the two-letter FIPS/United States Postal Service (USPS) code.

In 12 selected States (Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin), the minor civil divisions also serve as general-purpose local governments. The Census Bureau presents data for these minor civil divisions in all data products in which it provides data for places.

AREA CLASSIFICATIONS

TIGER

TIGER is an acronym for the new digital (computer-readable) geographic data base that automates the mapping and related geographic activities required to support the Census Bureau's census and survey programs. The Census Bureau developed the Topologically Integrated Geographic Encoding and Referencing (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 publication, providing the geographic structure for tabulation and publication of the collected data, assigning residential and employer addresses to their geographic location and relating those locations to the Census Bureau's geographic units, and so forth. The content of the TIGER data base is made available to the public through a variety of "TIGER Extract" files that may be obtained from the Data User Services Division, U.S. Bureau of the Census, Washington, DC 20233.

UNITED STATES

The United States comprises the 50 States and the District of Columbia. In addition, the Census Bureau treats the outlying areas as statistical equivalents of States for the 1990 census. The outlying areas include American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, and the Virgin Islands.

URBAN AND RURAL

The Census Bureau defines "urban" for the 1990 census as comprising all territory, population, and housing units in urbanized areas and in places of 2,500 or more persons outside urbanized areas. More specifically, "urban" consists of territory, persons, and housing units in:

1. Places of 2,500 or more persons incorporated as cities, villages, boroughs (except in Alaska and New York), and towns (except in the six New England States, New York, and Wisconsin), but excluding the rural portions of "extended cities."
2. Census designated places of 2,500 or more persons.
3. Other territory, incorporated or unincorporated, included in urbanized areas.

Territory, population, and housing units not classified as urban constitute "rural." In the 100-percent data products, "rural" is divided into "places of less than 2,500" and "not in places." The "not in places" category comprises "rural" outside incorporated and census designated places and the rural portions of extended

cities. In many data products, the term "other rural" is used; "other rural" is a residual category specific to the classification of the rural in each data product.

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

The urban and rural classification cuts across the other hierarchies; for example, there is generally both urban and rural territory within both metropolitan and nonmetropolitan areas.

In censuses prior to 1950, "urban" comprised all territory, persons, and housing units in incorporated places of 2,500 or more persons, and in areas (usually minor civil divisions) classified as urban under special rules relating to population size and density. The definition of urban that restricted itself to incorporated places having 2,500 or more persons excluded many large, densely settled areas merely because they were not incorporated. Prior to the 1950 census, the Census Bureau attempted to avoid some of the more obvious omissions by classifying selected areas as "urban under special rules." Even with these rules, however, many large, closely built-up areas were excluded from the urban category.

To improve its measure of urban territory, population, and housing units, the Census Bureau adopted the concept of the urbanized area and delineated boundaries for unincorporated places (now, census designated places) for the 1950 census. Urban was defined as territory, persons, and housing units in urbanized areas and, outside urbanized areas, in all places, incorporated or unincorporated, that had 2,500 or more persons. With the following three exceptions, the 1950 census definition of urban has continued substantially unchanged. First, in the 1960 census (but not in the 1970, 1980, or 1990 censuses), certain towns in the New England States, townships in New Jersey and Pennsylvania, and Arlington County, Virginia, were designated as urban. However, most of these "special rule" areas would have been classified as urban anyway because they were included in an urbanized area or in an unincorporated place of 2,500 or more persons. Second, "extended cities" were identified for the 1970, 1980, and 1990 censuses. Extended cities primarily affect the figures for urban and rural territory (area), but have very little effect on the urban and rural population and housing units at the national and State levels—although for some individual counties and urbanized areas, the effects have been more evident. Third, changes since the 1970 census in the criteria for defining urbanized areas have permitted these areas to be defined around smaller centers.

Documentation of the urbanized area and extended city criteria is available from the Chief, Geography Division, U.S. Bureau of the Census, Washington, DC 20233.

Extended City

Since the 1960 census, there has been a trend in some States toward the extension of city boundaries to include territory that is essentially rural in character. The classification of all the population and living quarters of such places as urban would include in the urban designation territory, persons, and housing units whose environment is primarily rural. For the 1970, 1980, and 1990 censuses, the Census Bureau identified as rural such territory and its population and housing units for each extended city whose closely settled area was located in an urbanized area. For the 1990 census, this classification also has been applied to certain places outside urbanized areas.

In summary presentations by size of place, the urban portion of an extended city is classified by the population of the entire place; the rural portion is included in "other rural."

URBANIZED AREA (UA)

The Census Bureau delineates urbanized areas (UA's) to provide a better separation of urban and rural territory, population, and housing in the vicinity of large places. A UA comprises one or more places ("central place") and the adjacent densely settled surrounding territory ("urban fringe") that together have a minimum of 50,000 persons. The urban fringe generally consists of contiguous territory having a density of at least 1,000 persons per square mile. The urban fringe also includes outlying territory of such density if it was connected to the core of the contiguous area by road and is within 1 1/2 road miles of that core, or within 5 road miles of the core but separated by water or other undevelopable territory. Other territory with a population density of fewer than 1,000 people per square mile is included in the urban fringe if it eliminates an enclave or closes an indentation in the boundary of the urbanized area. The population density is determined by (1) outside of a place, one or more contiguous census blocks with a population density of at least 1,000 persons per square mile or (2) inclusion of a place containing census blocks that have at least 50 percent of the population of the place and a density of at least 1,000 persons per square mile. The complete criteria are available from the Chief, Geography Division, U.S. Bureau of the Census, Washington, DC 20233.

Urbanized Area Central Place

One or more central places function as the dominant centers of each UA. The identification of a UA central place permits the comparison of this dominant center

with the remaining territory in the UA. There is no limit on the number of central places, and not all central places are necessarily included in the UA title. UA central places include:

1. Each place entirely (or partially, if the place is an extended city) within the UA that is a central city of a metropolitan area (MA).
2. If the UA does not contain an MA central city or is located outside of an MA, the central place(s) is determined by population size.

Urbanized Area Title and Code

The title of a UA identifies those places that are most important within the UA; it links the UA to the encompassing MA, where appropriate. If a single MA includes most of the UA, the title and code of the UA generally are the same as the title and code of the MA. If the UA is not mostly included in a single MA, if it does not include any place that is a central city of the encompassing MA, or if it is not located in an MA, the Census Bureau uses the population size of the included places, with a preference for incorporated places, to determine the UA title. The name of each State in which the UA is located also is in each UA title.

The numeric code used to identify each UA is the same as the code for the mostly encompassing MA (including CMSA and PMSA). If MA title cities represent multiple UA's, or the UA title city does not correspond to the first name of an MA title, the Census Bureau assigns a code based on the alphabetical sequence of the UA title in relationship to the other UA and MA titles.

VOTING DISTRICT (VTD)

A voting district (VTD) is any of a variety of types of areas (for example, election districts, precincts, wards,

legislative districts) established by State and local governments for purposes of elections. For census purposes, each State participating in Phase 2 of the 1990 Census Redistricting Data Program outlined the boundaries of VTD's around groups of whole census blocks on census maps. The entities identified as VTD's are not necessarily those legally or currently established. Also, to meet the "whole block" criterion, a State may have had to adjust VTD boundaries to nearby block boundaries. Therefore, the VTD's shown on the 1990 census tapes, listings, and maps may not represent the actual VTD's in effect at the time of the census. In the 1980 census, VTD's were referred to as "election precincts."

Each VTD is assigned a four-character alphanumeric code that is unique within each county. The code "ZZZZ" is assigned to nonparticipating areas; the Census Bureau reports data for areas coded "ZZZZ."

ZIP CODE*

ZIP Codes are administrative units established by the United States Postal Service (USPS) for the distribution of mail. ZIP Codes serve addresses for the most efficient delivery of mail, and therefore generally do not respect political or census statistical area boundaries. ZIP Codes usually do not have clearly identifiable boundaries, often serve a continually changing area, are changed periodically to meet postal requirements, and do not cover all the land area of the United States. ZIP Codes are identified by five-digit codes assigned by the USPS. The first three digits identify a major city or sectional distribution center, and the last two digits generally signify a specific post office's delivery area or point. For the 1990 census, ZIP Code data are tabulated for the five-digit codes in STF 3B.

APPENDIX B.

Definitions of Subject Characteristics

This section contains definitions for the subjects asked on the questionnaire. Most of the subjects appear as variables on PUMS, although several may be changed because of requirements to protect the identity of individual respondents; for example, collapsed data or recoded data. See appendix C for those variables.

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POPULATION CHARACTERISTICS

AGE

The data on age were derived from answers to questionnaire item 5, which was asked of all persons. The age classification is based on the age of the person in complete years as of April 1, 1990. The age response in question 5a was used normally to represent a person's age. However, when the age response was unacceptable or unavailable, a person's age was derived from an acceptable year-of-birth response in question 5b.

Data on age are used to determine the applicability of other questions for a person and to classify other characteristics in census tabulations. Age data are needed to interpret most social and economic characteristics used to plan and examine many programs and policies. Therefore, age is tabulated by single years of age and by many different groupings, such as 5-year age groups.

Some tabulations are shown by the age of the householder. These data were derived from the age responses for each householder. (For more information on householder, see the discussion under "Household Type and Relationship.")

Median Age—This measure divides the age distribution into two equal parts: one-half of the cases falling below the median value and one-half above the value. Generally, median age is computed on the basis of more detailed age intervals than are shown in some census publications; thus, a median based on a less detailed distribution may differ slightly from a corresponding median for the same population based on a more detailed distribution. (For more information on medians, see the discussion under "Derived Measures.")

Limitation of the Data—Counts in 1970 and 1980 for persons 100 years old and over were substantially overstated. Improvements were made in the questionnaire design, in the allocation procedures, and to the respondent instruction guide to attempt to minimize this problem for the 1990 census.

Review of detailed 1990 census information indicated that respondents tended to provide their age as of the date of completion of the questionnaire, not their age as of April 1, 1990. In addition, there may have been a tendency for respondents to round their age up if they were close to having a birthday. It is likely that approximately 10 percent of persons in most age groups are actually 1 year younger. For most single years of age, the misstatements are largely offsetting. The problem is most pronounced at age 0 because persons lost to age 1 may not have been fully offset by the inclusion of babies born after April 1, 1990, and because there may have been more rounding up to age 1 to avoid reporting age as 0 years. (Age in complete months was not collected for infants under age 1.)

The reporting of age 1 year older than age on April 1, 1990, is likely to have been greater in areas where the census data were collected later in 1990. The magnitude of this problem was much less in the three previous censuses where age was typically derived from respondent data on year of birth and quarter of birth. (For more information on the design of the age question, see the section below that discusses "Comparability.")

Comparability—Age data have been collected in every census. For the first time since 1950, the 1990 data are not available by quarter year of age. This change was made so that coded information could be obtained for both age and year of birth. In each census since 1940, the age of a person was assigned when it was not reported. In censuses before 1940, with the exception of 1880, persons of unknown age were shown as a separate category. Since 1960, assignment of unknown age has been performed by a general procedure described as "imputation." The specific procedures for imputing age have been different in each census. (For more information on imputation, see Appendix C, Accuracy of the Data.)

ANCESTRY

The data on ancestry were derived from answers to questionnaire item 13, which was asked of a sample of persons. The question was based on self-identification; the data on ancestry represent self-classification by people according to the ancestry group(s) with which they most closely identify. Ancestry refers to a person's ethnic origin or descent, "roots," or heritage or the place of birth of the person or the person's parents or ancestors before their arrival in the United States. Some ethnic identities, such as "Egyptian" or "Polish" can be traced to geographic areas outside the United States, while other ethnicities such as "Pennsylvania Dutch" or "Cajun" evolved in the United States.

The intent of the ancestry question was not to measure the degree of attachment the respondent had to a particular ethnicity. For example, a response of "Irish" might reflect total involvement in an "Irish" community or only a memory of ancestors several generations removed from the individual.

The Census Bureau coded the responses through an automated review, edit, and coding operation. The open-ended write-in ancestry item was coded by subject-matter specialists into a numeric representation using a code list containing over 1,000 categories. The 1990 code list reflects the results of the Census Bureau's own research and consultations with many ethnic experts. Many decisions were made to determine the classification of responses. These decisions affected the grouping of the tabulated data. For example, the "Assyrian" category includes both responses of "Assyrian" and "Chaldean."

The ancestry question allowed respondents to report one or more ancestry groups. While a large number of respondents listed a single ancestry, the majority of answers included more than one ethnic entry. Generally, only the first two responses reported were coded in 1990. If a response was in terms of a dual ancestry, for example, Irish-English, the person was assigned two codes, in this case one for Irish and another for English.

However, in certain cases, multiple responses such as "French Canadian," "Scotch-Irish," "Greek Cypriote," and "Black Dutch" were assigned a single code reflecting their status as unique groups. If a person reported one of these unique groups in addition to another group, for example, "Scotch-Irish English," resulting in three terms, that person received one code for the unique group ("Scotch-Irish") and another one for the remaining group ("English"). If a person reported "English Irish French," only English and Irish were coded. Certain combinations of ancestries where the ancestry group is a part of another, such as "German-Bavarian," the responses were coded as a single ancestry using the smaller group ("Bavarian"). Also, responses such as "Polish-American" or "Italian-American" were coded and tabulated as a single entry ("Polish" or "Italian").

The Census Bureau accepted "American" as a unique ethnicity if it was given alone, with an ambiguous response, or with State names. If the respondent listed any other ethnic identity such as "Italian American," generally the "American" portion of the response was not coded. However, distinct groups such as "American Indian," "Mexican American," and "African American" were coded and identified separately because they represented groups who considered themselves different from those who reported as "Indian," "Mexican," or "African," respectively.

In all tabulations, when respondents provided an unacceptable ethnic identity (for example, an uncodeable or unintelligible response such as "multi-national,"

"adopted," or "I have no idea"), the answer was included in "Ancestry not reported."

The tabulations on ancestry are presented using two types of data presentations—one used total persons as the base, and the other used total responses as the base. The following are categories shown in the two data presentations:

Presentation Based on Persons:

Single Ancestries Reported—Includes all persons who reported only one ethnic group. Included in this category are persons with multiple-term responses such as "Scotch-Irish" who are assigned a single code.

Multiple Ancestries Reported—Includes all persons who reported more than one group and were assigned two ancestry codes.

Ancestry Unclassified—Includes all persons who provided a response that could not be assigned an ancestry code because they provided nonsensical entries or religious responses.

Presentations Based on Responses:

Total Ancestries Reported—Includes the total number of ancestries reported and coded. If a person reported a multiple ancestry such as "French Danish," that response was counted twice in the tabulations—once in the "French" category and again in the "Danish" category. Thus, the sum of the counts in this type of presentation is not the total population but the total of all responses.

First Ancestry Reported—Includes the first response of all persons who reported at least one codeable entry. For example, in this category, the count for "Danish" would include all those who reported only Danish and those who reported Danish first and then some other group.

Second Ancestry Reported—Includes the second response of all persons who reported a multiple ancestry. Thus, the count for "Danish" in this category includes all persons who reported Danish as the second response, regardless of the first response provided.

The Census Bureau identified hundreds of ethnic groups in the 1990 census. However, it was impossible to show information for every group in all census tabulations because of space constraints. Publications such as the 1990 CP-2, *Social and Economic Characteristics* and the 1990 CPH-3, *Population and Housing Characteristics for Census Tracts and Block Numbering Areas* reports show a limited number of groups based on the number reported and the advice received from experts. A more complete distribution of groups is

presented in the 1990 Summary Tape File 4, *Supplementary Reports*, and a special subject report on ancestry. In addition, groups identified specifically in the questions on race and Hispanic origin (for example, Japanese, Laotian, Mexican, Cuban, and Spaniard), in general, are not shown separately in ancestry tabulations.

Limitation of the Data—Although some experts consider religious affiliation a component of ethnic identity, the ancestry question was not designed to collect any information concerning religion. The Bureau of the Census is prohibited from collecting information on religion. Thus, if a religion was given as an answer to the ancestry question, it was coded as an “Other” response.

Comparability—A question on ancestry was first asked in the 1980 census. Although there were no comparable data prior to the 1980 census, related information on ethnicity was collected through questions on parental birthplace, own birthplace, and language which were included in previous censuses. Unlike other census questions, there was no imputation for nonresponse to the ancestry question.

In 1990, respondents were allowed to report more than one ancestry group; however, only the first two ancestry groups identified were coded. In 1980, the Census Bureau attempted to code a third ancestry for selected triple-ancestry responses.

New categories such as “Arab” and “West Indian” were added to the 1990 question to meet important data needs. The “West Indian” category excluded “Hispanic” groups such as “Puerto Rican” and “Cuban” that were identified primarily through the question on Hispanic origin. In 1990, the ancestry group, “American” is recognized and tabulated as a unique ethnicity. In 1980, “American” was tabulated but included under the category “Ancestry not specified.”

A major improvement in the 1990 census was the use of an automated coding system for ancestry responses. The automated coding system used in the 1990 census greatly reduced the potential for error associated with a clerical review. Specialists with a thorough knowledge of the subject matter reviewed, edited, coded, and resolved inconsistent or incomplete responses.

CITIZENSHIP

The data on citizenship were derived from answers to questionnaire item 9, which was asked of a sample of persons.

Citizen—Persons who indicated that they were native-born and foreign-born persons who indicated that they have become naturalized. (For more information on native and foreign born, see the discussion under “Place of Birth.”)

There are four categories of citizenship: (1) born in the United States, (2) born in Puerto Rico, Guam, the Virgin Islands of the United States, or the Commonwealth of the Northern Mariana Islands, (3) born abroad of American parents, and (4) citizen by naturalization.

Naturalized Citizen—Foreign-born persons who had completed the naturalization process at the time of the census and upon whom the rights of citizenship had been conferred.

Not a Citizen—Foreign-born persons who were not citizens, including persons who had begun but not completed the naturalization process at the time of the census.

Limitation of the Data—Evaluation studies completed after previous censuses indicated that some persons may have reported themselves as citizens although they had not yet attained the status.

Comparability—Similar questions on citizenship were asked in the censuses of 1820, 1830, 1870, 1890 through 1950, 1970, and 1980. The 1980 question was asked of a sample of the foreign-born population. In 1990, both native and foreign-born persons who received the long-form questionnaire were asked to respond to the citizenship question.

EDUCATIONAL ATTAINMENT

Data on educational attainment were derived from answers to questionnaire item 12, which was asked of a sample of persons. Data are tabulated as attainment for persons 15 years old and over. Persons are classified according to the highest level of school completed or the highest degree received. The question included instructions to report the level of the previous grade attended or the highest degree received for persons currently enrolled in school. The question included response categories which allowed persons to report completing the 12th grade without receiving a high school diploma, and which instructed respondents to report as “high school graduate(s)” —persons who received either a high school diploma or the equivalent, for example, passed the Test of General Educational Development (G.E.D.), and did not attend college. (On the Military Census Report questionnaire, the lowest response category was “Less than 9th grade.”)

Instructions included in the 1990 respondent instruction guide, which was mailed with the census questionnaire, further specified that schooling completed in foreign or ungraded school systems should be reported as the equivalent level of schooling in the regular American system; that vocational certificates or diplomas from vocational, trade, or business schools or colleges were not to be reported unless they were

college level degrees; and that honorary degrees were not to be reported. The instructions gave "medicine, dentistry, chiropractic, optometry, osteopathic medicine, pharmacy, podiatry, veterinary medicine, law, and theology" as examples of professional school degrees, and specifically excluded "barber school, cosmetology, or other training for a specific trade" from the professional school category. The order in which they were listed suggested that doctorate degrees were "higher" than professional school degrees, which were "higher" than master's degrees.

Persons who did not report educational attainment were assigned the attainment of a person of the same age, race or Spanish origin, and sex who resided in the same or a nearby area. Persons who filled more than one circle were edited to the highest level or degree reported.

High School Graduate or Higher—Includes persons whose highest degree was a high school diploma or its equivalent, persons who attended college or professional school, and persons who received a college, university, or professional degree. Persons who reported completing the 12th grade but not receiving a diploma are not included.

Not Enrolled, Not High School Graduate—Includes persons of compulsory school attendance age or above who were not enrolled in school and were not high school graduates; these persons may be taken to be "high school dropouts." There is no restriction on when they "dropped out" of school, and they may have never attended high school.

In prior censuses, "Median school years completed" was used as a summary measure of educational attainment. In 1990, the median can only be calculated for groups of which less than half the members have attended college. "Percent high school graduate or higher" and "Percent bachelor's degree or higher" are summary measures which can be calculated from the present data and offer quite readily interpretable measures of differences between population subgroups. To make comparisons over time, "Percent high school graduate or higher" can be calculated and "Percent bachelor's degree or higher" can be approximated with data from previous censuses.

Comparability—From 1840 to 1930, the census measured educational attainment by means of a basic literacy question. In 1940, a single question was asked on highest grade of school completed. In the censuses of 1950 through 1980, a two-part question asking highest grade of school attended and whether that grade was finished was used to construct highest grade or year of school completed. For persons who have not attended college, the response categories in the 1990

educational attainment question should produce data which are comparable to data on highest grade completed from earlier censuses.

The response categories for persons who have attended college were modified from earlier censuses because there was some ambiguity in interpreting responses in terms of the number of years of college completed. For instance, it was not clear whether "completed the fourth year of college," "completed the senior year of college," and "college graduate" were synonymous. Research conducted shortly before the census suggests that these terms were more distinct in 1990 than in earlier decades, and this change may have threatened the ability to estimate the number of "college graduates" from the number of persons reported as having completed the fourth or a higher year of college. It was even more difficult to make inferences about post-baccalaureate degrees and "Associate" degrees from highest year of college completed. Thus, comparisons of post-secondary educational attainment in this and earlier censuses should be made with great caution.

In the 1960 and subsequent censuses, persons for whom educational attainment was not reported were assigned the same attainment level as a similar person whose residence was in the same or a nearby area. In the 1940 and 1950 censuses, persons for whom educational attainment was not reported were not allocated.

EMPLOYMENT STATUS

The data on employment status were derived from answers to questionnaire items 21, 25, and 26, which were asked of a sample of persons. The series of questions on employment status was asked of all persons 15 years old and over and was designed to identify, in this sequence: (1) persons who worked at any time during the reference week; (2) persons who did not work during the reference week but who had jobs or businesses from which they were temporarily absent (excluding layoff); (3) persons on layoff; and (4) persons who did not work during the reference week, but who were looking for work during the last four weeks and were available for work during the reference week. (For more information, see the discussion under "Reference Week.")

The employment status data shown in this and other 1990 census tabulations relate to persons 16 years old and over. Some tabulations showing employment status, however, include persons 15 years old. By definition, these persons are classified as "Not in Labor Force." In the 1940, 1950, and 1960 censuses, employment status data were presented for persons 14 years old and over. The change in the universe was made in 1970 to agree with the official measurement of the labor force as revised in January 1967 by the U.S. Department of Labor. The 1970 census was the last to show employment data for persons 14 and 15 years old.

Employed—All civilians 16 years old and over who were either (1) “at work”—those who did any work at all during the reference week as paid employees, worked in their own business or profession, worked on their own farm, or worked 15 hours or more as unpaid workers on a family farm or in a family business; or (2) were “with a job but not at work”—those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are persons whose only activity consisted of work around the house or unpaid volunteer work for religious, charitable, and similar organizations; also excluded are persons on active duty in the United States Armed Forces.

Unemployed—All civilians 16 years old and over are classified as unemployed if they (1) were neither “at work” nor “with a job but not at work” during the reference week, and (2) were looking for work during the last 4 weeks, and (3) were available to accept a job. Also included as unemployed are civilians who did not work at all during the reference week and were waiting to be called back to a job from which they had been laid off. Examples of job seeking activities are:

- Registering at a public or private employment office
- Meeting with prospective employers
- Investigating possibilities for starting a professional practice or opening a business
- Placing or answering advertisements
- Writing letters of application
- Being on a union or professional register

Civilian Labor Force—Consists of persons classified as employed or unemployed in accordance with the criteria described above.

Experienced Unemployed—These are unemployed persons who have worked at any time in the past.

Experienced Civilian Labor Force—Consists of the employed and the experienced unemployed.

Labor Force—All persons classified in the civilian labor force plus members of the U.S. Armed Forces (persons on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard).

Not in Labor Force—All persons 16 years old and over who are not classified as members of the labor force. This category consists mainly of students, housewives, retired workers, seasonal workers enumerated in an

off season who were not looking for work, institutionalized persons, and persons doing only incidental unpaid family work (less than 15 hours during the reference week).

Worker—This term appears in connection with several subjects: journey-to-work items, class of worker, weeks worked in 1989, and number of workers in family in 1989. Its meaning varies and, therefore, should be determined in each case by referring to the definition of the subject in which it appears.

Actual Hours Worked Last Week—All persons who reported working during the reference week were asked to report in questionnaire item 21b the number of hours that they worked. The statistics on hours worked pertain to the number of hours actually worked at all jobs, and do not necessarily reflect the number of hours typically or usually worked or the scheduled number of hours. The concept of “actual hours” differs from that of “usual hours” described below. The number of persons who worked only a small number of hours is probably understated since such persons sometimes consider themselves as not working. Respondents were asked to include overtime or extra hours worked, but to exclude lunch hours, sick leave, and vacation leave.

Limitation of the Data—The census may understate the number of employed persons because persons who have irregular, casual, or unstructured jobs sometimes report themselves as not working. The number of employed persons “at work” is probably overstated in the census (and conversely, the number of employed “with a job, but not at work” is understated) since some persons on vacation or sick leave erroneously reported themselves as working. This problem has no effect on the total number of employed persons. The reference week for the employment data is not the same for all persons. Since persons can change their employment status from one week to another, the lack of a uniform reference week may mean that the employment data do not reflect the reality of the employment situation of any given week. (For more information, see the discussion under “Reference Week.”)

Comparability—The questionnaire items and employment status concepts for the 1990 census are essentially the same as those used in the 1980 and 1970 censuses. However, these concepts differ in many respects from those associated with the 1950 and 1960 censuses.

Since employment data from the census are obtained from respondents in households, they differ from statistics based on reports from individual business establishments, farm enterprises, and certain government programs. Persons employed at more than one job are counted only once in the census and are classified according to the job at which they worked the greatest

number of hours during the reference week. In statistics based on reports from business and farm establishments, persons who work for more than one establishment may be counted more than once. Moreover, some tabulations may exclude private household workers, unpaid family workers, and self-employed persons, but may include workers less than 16 years of age.

An additional difference in the data arises from the fact that persons who had a job but were not at work are included with the employed in the census statistics, whereas many of these persons are likely to be excluded from employment figures based on establishment payroll reports. Furthermore, the employment status data in census tabulations include persons on the basis of place of residence regardless of where they work, whereas establishment data report persons at their place of work regardless of where they live. This latter consideration is particularly significant when comparing data for workers who commute between areas.

Census data on actual hours worked during the reference week may differ from data from other sources. The census measures hours actually worked, whereas some surveys measure hours paid for by employers. Comparability of census actual hours worked data may also be affected by the nature of the reference week (see "Reference Week").

For several reasons, the unemployment figures of the Census Bureau are not comparable with published figures on unemployment compensation claims. For example, figures on unemployment compensation claims exclude persons who have exhausted their benefit rights, new workers who have not earned rights to unemployment insurance, and persons losing jobs not covered by unemployment insurance systems (including some workers in agriculture, domestic services, and religious organizations, and self-employed and unpaid family workers). In addition, the qualifications for drawing unemployment compensation differ from the definition of unemployment used by the Census Bureau. Persons working only a few hours during the week and persons with a job but not at work are sometimes eligible for unemployment compensation but are classified as "Employed" in the census. Differences in the geographical distribution of unemployment data arise because the place where claims are filed may not necessarily be the same as the place of residence of the unemployed worker.

The figures on employment status from the decennial census are generally comparable with similar data collected in the Current Population Survey. However, some difference may exist because of variations in enumeration and processing techniques.

FERTILITY

The data on fertility (also referred to as "children ever born") were derived from answers to questionnaire item 20, which was asked of a sample of women 15 years old

and over regardless of marital status. Stillbirths, stepchildren, and adopted children were excluded from the number of children ever born. Ever-married women were instructed to include all children born to them before and during their most recent marriage, children no longer living, and children away from home, as well as children who were still living in the home. Never-married women were instructed to include all children born to them.

Data are most frequently presented in terms of the aggregate number of children ever born to women in the specified category and in terms of the rate per 1,000 women. For purposes of calculating the aggregate, the open-ended response category, "12 or more" is assigned a value of 13.

Limitation of the Data—Although the data are assumed to be less complete for out-of-wedlock births than for births occurring within marriage, comparisons of 1980 census data on the fertility of single women with other census sources and administrative records indicate that no significant differences were found between different data sources; that is, 1980 census data on children ever born to single women were complete with no significant understatements of childbearing.

Comparability—The wording of the question on children ever born was the same in 1990 as in 1980. In 1970, however, the question on children ever born was asked of all ever-married women but only of never-married women who received self-administered questionnaires. Therefore, rates and numbers of children ever born to single women in 1970 may be understated. Data presented for children ever born to ever-married women are comparable for the 1990 census and all previous censuses containing this question.

GROUP QUARTERS

All persons not living in households are classified by the Census Bureau as living in group quarters. Two general categories of persons in group quarters are recognized: (1) institutionalized persons and (2) other persons in group quarters (also referred to as "noninstitutional group quarters").

Institutionalized Persons—Includes persons under formally authorized, supervised care or custody in institutions at the time of enumeration. Such persons are classified as "patients or inmates" of an institution regardless of the availability of nursing or medical care, the length of stay, or the number of persons in the institution. Generally, institutionalized persons are restricted to the institutional buildings and grounds (or must have passes or escorts to leave) and thus have limited interaction with the surrounding community. Also, they are generally under the care of trained staff who have responsibility for their safekeeping and supervision.

Type of Institution—The type of institution was determined as part of census enumeration activities. For institutions which specialize in only one specific type of service, all patients or inmates were given the same classification. For institutions which had multiple types of major services (usually general hospitals and Veterans' Administration hospitals), patients were classified according to selected types of wards. For example, in psychiatric wards of hospitals, patients were classified in "mental (psychiatric) hospitals"; in hospital wards for persons with chronic diseases, patients were classified in "hospitals for the chronically ill." Each patient or inmate was classified in only one type of institution. Institutions include the following types:

Correctional Institutions—Includes prisons, Federal detention centers, military stockades and jails, police lockups, halfway houses, local jails, and other confinement facilities, including work farms.

Prisons—Where persons convicted of crimes serve their sentences. In some census products, the prisons are classified by two types of control: (1) "Federal" (operated by the Bureau of Prisons of the Department of Justice) and (2) "State." Residents who are criminally insane were classified on the basis of where they resided at the time of enumeration: (1) in institutions (or hospital wards) operated by departments of correction or similar agencies; or (2) in institutions operated by departments of mental health or similar agencies.

Federal Detention Centers—Operated by the Immigration and Naturalization Service (INS) and the Bureau of Prisons. These facilities include detention centers used by the Park Police; Bureau of Indian Affairs Detention Centers; INS Centers, such as the INS Federal Alien Detention Facility; INS Processing Centers; and INS Contract Detention Centers used to detain aliens under exclusion or deportation proceedings, as well as those aliens who have not been placed into proceedings, such as custodial required departures; and INS Detention Centers operated within local jails, and State and Federal prisons.

Military Stockades, Jails—Operated by military police and used to hold persons awaiting trial or convicted of violating military laws.

Local Jails and Other Confinement Facilities—Includes facilities operated by counties and cities that primarily hold persons beyond arraignment, usually for more than 48 hours. Also included in this category are work farms used to hold persons awaiting trial or serving time on relatively short sentences and jails run by private businesses under contract for local governments (but *not* by State governments).

Police Lockups—Temporary-holding facilities operated by county and city police that hold persons for 48 hours or less only if they have not been formally charged in court.

Halfway Houses—Operated for correctional purposes and include probation and restitution centers, pre-release centers, and community-residential centers.

Other Types of Correctional Institutions—Privately operated correctional facilities and correctional facilities specifically for alcohol/ drug abuse.

Nursing Homes—Comprises a heterogeneous group of places. The majority of patients are elderly, although persons who require nursing care because of chronic physical conditions may be found in these homes regardless of their age. Included in this category are skilled-nursing facilities, intermediate-care facilities, long-term care rooms in wards or buildings on the grounds of hospitals, or long-term care rooms/nursing wings in congregate housing facilities. Also included are nursing, convalescent, and rest homes, such as soldiers', sailors', veterans', and fraternal or religious homes for the aged, with or without nursing care. In some census products, nursing homes are classified by type of ownership as "Federal," "State," "Private not-for-profit," and "Private for profit."

Mental (Psychiatric) Hospitals—Includes hospitals or wards for the criminally insane not operated by a prison, and psychiatric wards of general hospitals and veterans' hospitals. Patients receive supervised medical/nursing care from formally-trained staff. In some census products, mental hospitals are classified by type of ownership as "Federal," "State or local," "Private," and "Ownership not known."

Hospitals for Chronically Ill—Includes hospitals for patients who require long-term care, including those in military hospitals and wards for the chronically ill located on military bases; or other hospitals or wards for the chronically ill, which include tuberculosis hospitals or wards, wards in general and Veterans' Administration hospitals for the chronically ill, neurological wards, hospices, wards for patients with Hansen's Disease (leprosy) and other incurable diseases, and other unspecified wards for the chronically ill. Patients who had no usual home elsewhere were enumerated as part of the institutional population in the wards of general and military hospitals. Most hospital patients are at the hospital temporarily and were enumerated at their usual place of residence. (For more information, see "Wards in General and Military Hospitals for Patients Who Have No Usual Home Elsewhere.")

Schools, Hospitals, or Wards for the Mentally Retarded—Includes those institutions such as wards in hospitals for the mentally retarded, and intermediate-care facilities for the mentally retarded that provide supervised medical/nursing care from formally-trained staff. In some census products, this category is classified by type of ownership as “Federal,” “State or local,” “Private,” and “Ownership not known.”

Schools, Hospitals, or Wards for the Physically Handicapped—Includes three types of institutions: institutions for the blind, those for the deaf, and orthopedic wards and institutions for the physically handicapped. Institutions for persons with speech problems are classified with “institutions for the deaf.” The category “orthopedic wards and institutions for the physically handicapped” includes those institutions providing relatively long-term care to accident victims, and to persons with polio, cerebral palsy, and muscular dystrophy. In some census products, this category is classified by type of ownership as “Public,” “Private,” and “Ownership not known.”

Hospitals, and Wards for Drug/Alcohol Abuse—Includes hospitals, and hospital wards in psychiatric and general hospitals. These facilities are equipped medically and designed for the diagnosis and treatment of medical or psychiatric illnesses associated with alcohol or drug abuse. Patients receive supervised medical care from formally-trained staff.

Wards in General and Military Hospitals for Patients Who Have No Usual Home Elsewhere—Includes maternity, neonatal, pediatric (including wards for boarder babies), military, and surgical wards of hospitals, and wards for persons with infectious diseases.

Juvenile Institutions—Includes homes, schools, and other institutions providing care for children (short- or long-term care). Juvenile institutions include the following types:

Homes for Abused, Dependent, and Neglected Children—Includes orphanages and other institutions which provide long-term care (usually more than 30 days) for children. This category is classified in some census products by type of ownership as “Public” and “Private.”

Residential Treatment Centers—Includes those institutions which primarily serve children who, by clinical diagnosis, are moderately or seriously disturbed emotionally. Also, these institutions provide long-term treatment services, usually supervised or directed by a psychiatrist.

Training Schools for Juvenile Delinquents—Includes residential training schools or homes, and industrial schools, camps, or farms for juvenile delinquents.

Public Training Schools for Juvenile Delinquents—Usually operated by a State agency (for example, department of welfare, corrections, or a youth authority). Some are operated by county and city governments. These public training schools are specialized institutions serving delinquent children, generally between the ages of 10 and 17 years old, all of whom are committed by the courts.

Private Training Schools—Operated under private auspices. Some of the children they serve are committed by the courts as delinquents. Others are referred by parents or social agencies because of delinquent behavior. One difference between private and public training schools is that, by their administrative policy, private schools have control over their selection and intake.

Detention Centers—Includes institutions providing short-term care (usually 30 days or less) primarily for delinquent children pending disposition of their cases by a court. This category also covers diagnostic centers. In practice, such institutions may be caring for both delinquent and neglected children pending court disposition.

Other Persons in Group Quarters (also referred to as “noninstitutional group quarters”)—Includes all persons who live in group quarters other than institutions. Persons who live in the following living quarters are classified as “other persons in group quarters” when there are 10 or more unrelated persons living in the unit; otherwise, these living quarters are classified as housing units.

Rooming Houses—Includes persons residing in rooming and boarding houses and living in quarters with 10 or more unrelated persons.

Group Homes—Includes “community-based homes” that provide care and supportive services. Such places include homes for the mentally ill, mentally retarded, and physically handicapped; drug/alcohol halfway houses; communes; and maternity homes for unwed mothers.

Homes for the Mentally Ill—Includes community-based homes that provide care primarily for the mentally ill. In some data products, this category is classified by type of ownership as “Federal,” “State,” “Private,” and “Ownership not known.” Homes which combine treatment of the physically handicapped with treatment of the mentally ill are counted as homes for the mentally ill.

Homes for the Mentally Retarded—Includes community-based homes that provide care primarily for the mentally retarded. Homes which combine treatment of the physically handicapped with treatment

of the mentally retarded are counted as homes for the mentally retarded. This category is classified by type of ownership in some census products, as "Federal," "State," "Private," or "Ownership not known."

Homes for the Physically Handicapped—Includes community-based homes for the blind, for the deaf, and other community-based homes for the physically handicapped. Persons with speech problems are classified with homes for the deaf. In some census products, this category is classified by type of ownership as "Public," "Private," or "Ownership not known."

Homes or Halfway Houses for Drug/Alcohol Abuse—Includes persons with no usual home elsewhere in places that provide community-based care and supportive services to persons suffering from a drug/alcohol addiction and to recovering alcoholics and drug abusers. Places providing community-based care for drug and alcohol abusers include group homes, detoxification centers, quarterway houses (residential treatment facilities that work closely with accredited hospitals), halfway houses, and recovery homes for ambulatory, mentally competent recovering alcoholics and drug abusers who may be re-entering the work force.

Maternity Homes for Unwed Mothers—Includes persons with no usual home elsewhere in places that provide domestic care for unwed mothers and their children. These homes may provide social services and post-natal care within the facility, or may make arrangements for women to receive such services in the community. Nursing services are usually available in the facility.

Other Group Homes—Includes persons with no usual home elsewhere in communes, foster care homes, and job corps centers with 10 or more unrelated persons. These types of places provide communal living quarters, generally for persons who have formed their own community in which they have common interests and often share or own property jointly.

Religious Group Quarters—Includes, primarily, group quarters for nuns teaching in parochial schools and for priests living in rectories; it also includes other convents and monasteries, except those associated with a general hospital or an institution.

College Quarters Off Campus—Includes privately-owned rooming and boarding houses off campus, if the place is reserved exclusively for occupancy by college students and if there are 10 or more unrelated persons. In census products, persons in this category are classified as living in a college dormitory.

Persons residing in certain other types of living arrangements are classified as living in "noninstitutional group quarters" regardless of the number of people sharing the unit. These include persons residing in the following types of group quarters:

College Dormitories—Includes college students in dormitories (provided the dormitory is restricted to students who do not have their families living with them), fraternity and sorority houses, and on-campus residential quarters used exclusively for those in religious orders who are attending college. Students in privately-owned rooming and boarding houses off campus are also included, if the place is reserved exclusively for occupancy by college-level students and if there are 10 or more unrelated persons.

Military Quarters—Includes military personnel living in barracks and dormitories on base, in transient quarters on base for temporary residents (both civilian and military), and on military ships. However, patients in military hospitals receiving treatment for chronic diseases or who had no usual home elsewhere, and persons being held in military stockades were included as part of the institutional population.

Agriculture Workers' Dormitories—Includes persons in migratory farm workers' camps on farms, bunkhouses for ranch hands, and other dormitories on farms, such as those on "tree farms."

Other Workers' Dormitories—Includes persons in logging camps, construction workers' camps, firehouse dormitories, job-training camps, energy enclaves (Alaska only), and nonfarm migratory workers' camps (for example, workers in mineral and mining camps).

Emergency Shelters for Homeless Persons (with sleeping facilities) and Visible in Street Locations—Includes persons enumerated during the "Shelter-and-Street-Night" operation primarily on March 20-21, 1990. Enumerators were instructed not to ask if a person was "homeless." If a person was at one of the locations below on March 20-21, the person was counted as described below. (For more information on the "Shelter-and-Street-Night" operation, see Appendix D, Collection and Processing Procedures.) This category is divided into four classifications:

Emergency Shelters for Homeless Persons (with sleeping facilities)—Includes persons who stayed overnight on March 20, 1990, in permanent and temporary emergency housing, missions, hotels/motels, and flophouses charging \$12 or less (excluding taxes) per night; Salvation Army shelters, hotels, and motels used *entirely* for homeless persons regardless of the nightly rate charged; rooms in hotels and motels used *partially* for the homeless;

and similar places known to have persons who have no usual home elsewhere staying overnight. If not shown separately, shelters and group homes that provide temporary sleeping facilities for runaway, neglected, and homeless children are included in this category in data products.

Shelters for Runaway, Neglected, and Homeless Children—Includes shelters/group homes which provide temporary sleeping facilities for juveniles.

Visible in Street Locations—Includes street blocks and open public locations designated before March 20, 1990, by city and community officials as places where the homeless congregate at night. All persons found at predesignated street sites from 2 a.m. to 4 a.m. and leaving abandoned or boarded-up buildings from 4 a.m. to 8 a.m. on March 21, 1990, were enumerated during "street" enumeration, except persons in uniform such as police and persons engaged in obvious money-making activities other than begging or panhandling. Enumerators were instructed not to ask if a person was "homeless."

This cannot be considered a complete count of all persons living on the streets because those who were so well hidden that local people did not know where to find them were likely to have been missed as were persons moving about or in places not identified by local officials. It is also possible that persons with homes could have been included in the count of "visible in street locations" if they were present when the enumerator did the enumeration of a particular block.

Predesignated street sites include street corners, parks, bridges, persons emerging from abandoned and boarded-up buildings, noncommercial campsites (tent cities), all-night movie theaters, all-night restaurants, emergency hospital waiting rooms, train stations, airports, bus depots, and subway stations.

Shelters for Abused Women (Shelters Against Domestic Violence or Family Crisis Centers)—Includes community-based homes or shelters that provide domiciliary care for women who have sought shelter from family violence and who may have been physically abused. Most shelters also provide care for children of abused women. These shelters may provide social services, meals, psychiatric treatment, and counseling. In some census products, "shelters for abused women" are included in the category "other noninstitutional group quarters."

Dormitories for Nurses and Interns in General and Military Hospitals—Includes group quarters for nurses and other staff members. It excludes patients.

Crews of Maritime Vessels—Includes officers, crew members, and passengers of maritime U.S. flag vessels. All ocean-going and Great Lakes ships are included.

Staff Residents of Institutions—Includes staff residing in group quarters on institutional grounds who provide formally-authorized, supervised care or custody for the institutionalized population.

Other Nonhousehold Living Situations—Includes persons with no usual home elsewhere enumerated during transient or "T-Night" enumeration at YMCA's, YWCA's, youth hostels, commercial and government-run campgrounds, campgrounds at racetracks, fairs, and carnivals, and similar transient sites.

Living Quarters for Victims of Natural Disasters—Includes living quarters for persons temporarily displaced by natural disasters.

Limitation of the Data—Two types of errors can occur in the classification of "types of group quarters":

1. *Misclassification of Group Quarters*—During the 1990 Special Place Prelist operation, the enumerator determined the type of group quarters associated with each special place in their assignment. The enumerator used the Alphabetical Group Quarters Code List and Index to the Alphabetical Group Quarters Code List to assign a two-digit code number followed by either an "I," for institutional, or an "N," for noninstitutional to each group quarters. In 1990, unacceptable group quarter codes were edited. (For more information on editing of unacceptable data, see Appendix C, Accuracy of the Data.)
2. *No Classification (unknowns)*—The imputation rate for type of institution was higher in 1980 (23.5 percent) than in 1970 (3.3 percent). Improvements were made to the 1990 Alphabetical Group Quarters Code List; that is, the inclusion of more group quarters categories and an "Index to the Alphabetical Group Quarters Code List." (For more information on the allocation rates for Type of Institution, see the allocation rates in 1990 CP-1, *General Population Characteristics*.)

In previous censuses, allocation rates for demographic characteristics (such as age, sex, race, and marital status) of the institutional population were similar to those for the total population. The allocation rates for sample characteristics such as school enrollment, highest grade completed, income, and veteran status for the institutional and noninstitutional group quarters population have been substantially higher than the population in households at least as far back as the 1960 census. The data, however, have historically presented a reasonable picture of the institutional and noninstitutional group quarters population.

Shelter and Street Night (S-Night)—For the 1990 census “Shelter-and-Street-Night” operation, persons well hidden, moving about, or in locations enumerators did not visit were likely to be missed. The number of people missed will never be known; thus, the 1990 census cannot be considered to include a definitive count of America’s total homeless population. It does, however, give an idea of relative differences among areas of the country. Other components were counted as part of regular census procedures.

The count of persons in shelters and visible on the street could have been affected by many factors. How much the factors affected the count can never be answered definitively, but some elements include:

1. How well enumerators were trained and how well they followed procedures.
2. How well the list of shelter and street locations given to the Census Bureau by the local government reflected the actual places that homeless persons stay at night.
3. Cities were encouraged to open temporary shelters for census night, and many did that and actively encouraged people to enter the shelters. Thus, people who may have been on the street otherwise were in shelters the night of March 20, so that the ratio of shelter-to-street population could be different than usual.
4. The weather, which was unusually cold in some parts of the country, could affect how likely people were to seek emergency shelter or to be more hidden than usual if they stayed outdoors.
5. The media occasionally interfered with the ability to do the count.
6. How homeless people perceived the census and whether they wanted to be counted or feared the census and hid from it.

The Census Bureau conducted two assessments of Shelter and Street Night: (1) the quality of the lists of shelters used for the Shelter-and-Street-Night operation, and (2) how well procedures were followed by census-takers for the street count in parts of five cities (Chicago, Los Angeles, New Orleans, New York, and Phoenix). Information about these two assessments is available from the Chief, Center for Survey Methods Research, Bureau of the Census, Washington, DC 20233.

Comparability—For the 1990 census, the definition of institutionalized persons was revised so that the definition of “care” only includes persons under organized medical or formally-authorized, supervised care or custody. As a result of this change to the institutional definition, maternity homes are classified as noninstitutional rather than institutional group quarters as in

previous censuses. The following types of other group quarters are classified as institutional rather than non-institutional group quarters: “halfway houses (operated for correctional purposes)” and “wards in general and military hospitals for patients who have no usual home elsewhere,” which includes maternity, neonatal, pediatric, military, and surgical wards of hospitals, other-purpose wards of hospitals, and wards for infectious diseases. These changes should not significantly affect the comparability of data with earlier censuses because of the relatively small number of persons involved.

As in 1980, 10 or more unrelated persons living together were classified as living in noninstitutional group quarters. In 1970, the criteria was six or more unrelated persons.

Several changes also have occurred in the identification of specific types of group quarters. For the first time, the 1990 census identifies separately the following types of correctional institutions: persons in halfway houses (operated for correctional purposes), military stockades and jails, and police lockups. In 1990, tuberculosis hospitals or wards are included with hospitals for the chronically ill; in 1980, they were shown separately. For 1990, the noninstitutional group quarters category, “Group homes” is further classified as: group homes for drug/alcohol abuse; maternity homes (for unwed mothers), group homes for the mentally ill, group homes for the mentally retarded, and group homes for the physically handicapped. Persons living in communes, foster-care homes, and job corps centers are classified with “Other group homes” only if 10 or more unrelated persons share the unit; otherwise, they are classified as housing units.

In 1990, workers’ dormitories were classified as group quarters regardless of the number of persons sharing the dorm. In 1980, 10 or more unrelated persons had to share the dorm for it to be classified as a group quarters. In 1960, data on persons in military barracks were shown only for men. In subsequent censuses, they include both men and women.

In 1990 census data products, the phrase “inmates of institutions” was changed to “institutionalized persons.” Also, persons living in noninstitutional group quarters were referred to as “other persons in group quarters,” and the phrase “staff residents” was used for staff living in institutions.

In 1990, there are additional institutional categories and noninstitutional group quarters categories compared with the 1980 census. The institutional categories added include “hospitals and wards for drug/alcohol abuse” and “military hospitals for the chronically ill.” The noninstitutional group quarters categories added include emergency shelters for homeless persons; shelters for runaway, neglected, and homeless children; shelters for abused women; and visible-in-street locations. Each of these noninstitutional group quarters categories was enumerated on March 20-21, 1990,

during the "Shelter-and-Street-Night" operation. (For more information on the "Shelter-and-Street-Night" operation, see Appendix D, Collection and Processing Procedures.)

HISPANIC ORIGIN

The data on Spanish/Hispanic origin were derived from answers to questionnaire item 7, which was asked of all persons. Persons of Hispanic origin are those who classified themselves in one of the specific Hispanic origin categories listed on the questionnaire—"Mexican," "Puerto Rican," or "Cuban"—as well as those who indicated that they were of "other Spanish/Hispanic" origin. Persons of "Other Spanish/Hispanic" origin are those whose origins are from Spain, the Spanish-speaking countries of Central or South America, or the Dominican Republic, or they are persons of Hispanic origin identifying themselves generally as Spanish, Spanish-American, Hispanic, Hispano, Latino, and so on. Write-in responses to the "other Spanish/Hispanic" category were coded only for sample data.

Origin can be viewed as the ancestry, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. Persons of Hispanic origin may be of any race.

Some tabulations are shown by the Hispanic origin of the householder. In all cases where households, families, or occupied housing units are classified by Hispanic origin, the Hispanic origin of the householder is used. (See the discussion of householder under "Household Type and Relationship.")

During direct interviews conducted by enumerators, if a person could not provide a single origin response, he or she was asked to select, based on self-identification, the group which best described his or her origin or descent. If a person could not provide a single group, the origin of the person's mother was used. If a single group could not be provided for the person's mother, the first origin reported by the person was used.

If any household member failed to respond to the Spanish/Hispanic origin question, a response was assigned by the computer according to the reported entries of other household members by using specific rules of precedence of household relationship. In the processing of sample questionnaires, responses to other questions on the questionnaire, such as ancestry and place of birth, were used to assign an origin before any reference was made to the origin reported by other household members. If an origin was not entered for any household member, an origin was assigned from another household according to the race of the householder. This procedure is a variation of the general imputation process described in Appendix C, Accuracy of the Data.

Comparability—There may be differences between the total Hispanic origin population based on 100-percent tabulations and sample tabulations. Such differences

are the result of sampling variability, nonsampling error, and more extensive edit procedures for the Spanish/Hispanic origin item on the sample questionnaires. (For more information on sampling variability and nonsampling error, see Appendix C, Accuracy of the Data.)

The 1990 data on Hispanic origin are generally comparable with those for the 1980 census. However, there are some differences in the format of the Hispanic origin question between the two censuses. For 1990, the word "descent" was deleted from the 1980 wording. In addition, the term "Mexican-Amer." used in 1980 was shortened further to "Mexican-Am." to reduce misreporting (of "American") in this category detected in the 1980 census. Finally, the 1990 question allowed those who reported as "other Spanish/Hispanic" to write in their specific Hispanic origin group.

Misreporting in the "Mexican-Amer." category of the 1980 census item on Spanish/Hispanic origin may affect the comparability of 1980 and 1990 census data for persons of Hispanic origin for certain areas of the country. An evaluation of the 1980 census item on Spanish/Hispanic origin indicated that there was misreporting in the Mexican origin category by White and Black persons in certain areas. The study results showed evidence that the misreporting occurred in the South (excluding Texas), the Northeast (excluding the New York City area), and a few States in the Midwest Region. Also, results based on available data suggest that the impact of possible misreporting of Mexican origin in the 1980 census was severe in those portions of the above-mentioned regions where the Hispanic origin population was generally sparse. However, national 1980 census data on the Mexican origin population or total Hispanic origin population at the national level was not seriously affected by the reporting problem. (For a more detailed discussion of the evaluation of the 1980 census Spanish/Hispanic origin item, see the 1980 census Supplementary Reports.)

The 1990 and 1980 census data on the Hispanic population are not directly comparable with 1970 Spanish origin data because of a number of factors: (1) overall improvements in the 1980 and 1990 censuses, (2) better coverage of the population, (3) improved question designs, and (4) an effective public relations campaign by the Census Bureau with the assistance of national and community ethnic groups.

Specific changes in question design between the 1980 and 1970 censuses included the placement of the category "No, not Spanish/Hispanic" as the first category in that question. (The corresponding category appeared last in the 1970 question.) Also, the 1970 category "Central or South American" was deleted because in 1970 some respondents misinterpreted the category; furthermore, the designations "Mexican-American" and "Chicano" were added to the Spanish/Hispanic origin question in 1980. In the 1970 census, the question on Spanish origin was asked of only a 5-percent sample of the population.

HOUSEHOLD TYPE AND RELATIONSHIP

Household

A household includes all the persons who occupy a housing unit. A housing unit is 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 and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. 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 persons who share living arrangements.

In 100-percent tabulations, the count of households or householders always equals the count of occupied housing units. In sample tabulations, the numbers may differ as a result of the weighting process.

Persons Per Household—A measure obtained by dividing the number of persons in households by the number of households (or householders). In cases where persons in households are cross-classified by race or Hispanic origin, persons in the household are classified by the race or Hispanic origin of the householder rather than the race or Hispanic origin of each individual.

Relationship to Householder

Householder—The data on relationship to householder were derived from answers to questionnaire item 2, which was asked of all persons in housing units. One person in each household is designated as the householder. In most cases, this is the person, or one of the persons, in whose name the home is owned, being bought, or rented and who is listed in column 1 of the census questionnaire. If there is no such person in the household, any adult household member 15 years old and over could be designated as the householder.

Households are classified by type according to the sex of the householder and the presence of relatives. Two types of householders are distinguished: a family householder and a nonfamily householder. A family householder is a householder living with one or more persons related to him or her by birth, marriage, or adoption. The householder and all persons in the household related to him or her are family members. A nonfamily householder is a householder living alone or with nonrelatives only.

Spouse—Includes a person married to and living with a householder. This category includes persons in formal marriages, as well as persons in common-law marriages.

The number of spouses is equal to the number of “married-couple families” or “married-couple households” in 100-percent tabulations. The number of spouses, however, is generally less than half of the number of “married persons with spouse present” in sample tabulations, since more than one married couple can live in a household, but only spouses of householders are specifically identified as “spouse.” For sample tabulations, the number of “married persons with spouse present” includes married-couple subfamilies and married-couple families.

Child—Includes a son or daughter by birth, a stepchild, or adopted child of the householder, regardless of the child’s age or marital status. The category excludes sons-in-law, daughters-in-law, and foster children.

Natural-Born or Adopted Son/Daughter—A son or daughter of the householder by birth, regardless of the age of the child. Also, this category includes sons or daughters of the householder by legal adoption, regardless of the age of the child. If the stepson/stepdaughter of the householder has been legally adopted by the householder, the child is still classified as a stepchild.

Stepson/Stepdaughter—A son or daughter of the householder through marriage but not by birth, regardless of the age of the child. If the stepson/stepdaughter of the householder has been legally adopted by the householder, the child is still classified as a stepchild.

Own Child—A never-married child under 18 years who is a son or daughter by birth, a stepchild, or an adopted child of the householder. In certain tabulations, own children are further classified as living with two parents or with one parent only. Own children of the householder living with two parents are by definition found only in married-couple families.

In a subfamily, an “own child” is a never-married child under 18 years of age who is a son, daughter, stepchild, or an adopted child of a mother in a mother-child subfamily, a father in a father-child subfamily, or either spouse in a married-couple subfamily.

“Related children” in a family include own children and all other persons under 18 years of age in the household, regardless of marital status, who are related to the householder, except the spouse of the householder. Foster children are not included since they are not related to the householder.

Other Relatives—In tabulations, includes any household member related to the householder by birth, marriage, or adoption, but not included specifically in another relationship category. In certain detailed tabulations, the following categories may be shown:

Grandchild—The grandson or granddaughter of the householder.

Brother/Sister—The brother or sister of the householder, including stepbrothers, stepsisters, and brothers and sisters by adoption. Brothers-in-law and sisters-in-law are included in the “Other relative” category on the questionnaire.

Parent—The father or mother of the householder, including a stepparent or adoptive parent. Fathers-in-law and mothers-in-law are included in the “Other relative” category on the questionnaire.

Other Relatives—Anyone not listed in a reported category above who is related to the householder by birth, marriage, or adoption (brother-in-law, grandparent, nephew, aunt, mother-in-law, daughter-in-law, cousin, and so forth).

Nonrelatives—Includes any household member, including foster children not related to the householder by birth, marriage, or adoption. The following categories may be presented in more detailed tabulations:

Roomer, Boarder, or Foster Child—Roomer, boarder, lodger, and foster children or foster adults of the householder.

Housemate or Roommate—A person who is not related to the householder and who shares living quarters primarily in order to share expenses.

Unmarried Partner—A person who is not related to the householder, who shares living quarters, and who has a close personal relationship with the householder.

Other Nonrelatives—A person who is not related by birth, marriage, or adoption to the householder and who is not described by the categories given above.

When relationship is not reported for an individual, it is imputed according to the responses for age, sex, and marital status for that person while maintaining consistency with responses for other individuals in the household. (For more information on imputation, see Appendix C, Accuracy of the Data.)

Unrelated Individual

An unrelated individual is: (1) a householder living alone or with nonrelatives only, (2) a household member who is not related to the householder, or (3) a person living in group quarters who is not an inmate of an institution.

Family Type

A family consists of a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. All persons in a household who are related to the householder are regarded as members of his or her family. A household can contain only one family for purposes of census tabulations. Not all households contain families since a household may comprise a group of unrelated persons or one person living alone.

Families are classified by type as either a “married-couple family” or “other family” according to the sex of the householder and the presence of relatives. The data on family type are based on answers to questions on sex and relationship which were asked on a 100-percent basis.

Married-Couple Family—A family in which the householder and his or her spouse are enumerated as members of the same household.

Other Family:

Male Householder, No Wife Present—A family with a male householder and no spouse of householder present.

Female Householder, No Husband Present—A family with a female householder and no spouse of householder present.

Persons Per Family—A measure obtained by dividing the number of persons in families by the total number of families (or family householders). In cases where the measure, “persons in family” or “persons per family” are cross-tabulated by race or Hispanic origin, the race or Hispanic origin refers to the householder rather than the race or Hispanic origin of each individual.

Subfamily

A subfamily is a married couple (husband and wife enumerated as members of the same household) with or without never-married children under 18 years old, or one parent with one or more never-married children under 18 years old, living in a household and related to, but not including, either the householder or the householder’s spouse. The number of subfamilies is not included in the count of families, since subfamily members are counted as part of the householder’s family.

Subfamilies are defined during processing of sample data. In selected tabulations, subfamilies are further classified by type: married-couple subfamilies, with or without own children; mother-child subfamilies; and father-child subfamilies.

Lone parents include people maintaining either one-parent families or one-parent subfamilies. Married couples include husbands and wives in both married-couple families and married-couple subfamilies.

Unmarried-Partner Household

An unmarried-partner household is a household other than a "married-couple household" that includes a householder and an "unmarried partner." An "unmarried partner" can be of the same sex or of the opposite sex of the householder. An "unmarried partner" in an "unmarried-partner household" is an adult who is unrelated to the householder, but shares living quarters and has a close personal relationship with the householder.

Unmarried-Couple Household

An unmarried-couple household is composed of two unrelated adults of the opposite sex (one of whom is the householder) who share a housing unit with or without the presence of children under 15 years old.

Foster Children

Foster children are nonrelatives of the householder and are included in the category, "Roomer, boarder, or foster child" on the questionnaire. Foster children are identified as persons under 18 years old and living in households that have no nonrelatives 18 years old and over (who might be parents of the nonrelatives under 18 years old).

Stepfamily

A stepfamily is a "married-couple family" with at least one stepchild of the householder present, where the householder is the husband.

Comparability—The 1990 definition of a household is the same as that used in 1980. The 1980 relationship category "Son/daughter" has been replaced by two categories, "Natural-born or adopted son/daughter" and "Stepson/stepdaughter." "Grandchild" has been added as a separate category. The 1980 nonrelative categories: "Roomer, boarder" and "Partner, roommate" have been replaced by the categories "Roomer, boarder, or foster child," "Housemate, roommate," and "Unmarried partner." The 1980 nonrelative category "Paid employee" has been dropped.

INCOME IN 1989

The data on income in 1989 were derived from answers to questionnaire items 32 and 33. Information on money income received in the calendar year 1989 was requested from persons 15 years old and over.

"Total income" is the algebraic sum of the amounts reported separately for wage or salary income; net nonfarm self-employment income; net farm self-employment income; interest, dividend, or net rental or royalty income; Social Security or railroad retirement income; public assistance or welfare income; retirement or disability income; and all other income. "Earnings" is defined as the algebraic sum of wage or salary income and net income from farm and nonfarm self-employment. "Earnings" represent the amount of income received regularly before deductions for personal income taxes, Social Security, bond purchases, union dues, medicare deductions, etc.

Receipts from the following sources are not included as income: money received from the sale of property (unless the recipient was engaged in the business of selling such property); the value of income "in kind" from food stamps, public housing subsidies, medical care, employer contributions for persons, etc.; withdrawal of bank deposits; money borrowed; tax refunds; exchange of money between relatives living in the same household; gifts and lump-sum inheritances, insurance payments, and other types of lump-sum receipts.

Income Type in 1989

The eight types of income reported in the census are defined as follows:

1. *Wage or Salary Income*—Includes total money earnings received for work performed as an employee during the calendar year 1989. It includes wages, salary, Armed Forces pay, commissions, tips, piece-rate payments, and cash bonuses earned before deductions were made for taxes, bonds, pensions, union dues, etc.
2. *Nonfarm Self-Employment Income*—Includes net money income (gross receipts minus expenses) from one's own business, professional enterprise, or partnership. Gross receipts include the value of all goods sold and services rendered. Expenses includes costs of goods purchased, rent, heat, light, power, depreciation charges, wages and salaries paid, business taxes (not personal income taxes), etc.
3. *Farm Self-Employment Income*—Includes net money income (gross receipts minus operating expenses) from the operation of a farm by a person on his or her own account, as an owner, renter, or sharecropper. Gross receipts include the value of all products sold, government farm programs, money received from the rental of farm equipment to others, and incidental receipts from the sale of wood, sand, gravel, etc. Operating expenses include cost of feed, fertilizer, seed, and other farming supplies, cash wages paid to farmhands, depreciation charges, cash rent, interest on farm mortgages, farm building

repairs, farm taxes (not State and Federal personal income taxes), etc. The value of fuel, food, or other farm products used for family living is not included as part of net income.

4. *Interest, Dividend, or Net Rental Income*—Includes interest on savings or bonds, dividends from stockholdings or membership in associations, net income from rental of property to others and receipts from boarders or lodgers, net royalties, and periodic payments from an estate or trust fund.
5. *Social Security Income*—Includes Social Security pensions and survivors benefits and permanent disability insurance payments made by the Social Security Administration prior to deductions for medical insurance, and railroad retirement insurance checks from the U.S. Government. Medicare reimbursements are not included.
6. *Public Assistance Income*—Includes: (1) supplementary security income payments made by Federal or State welfare agencies to low income persons who are aged (65 years old or over), blind, or disabled; (2) aid to families with dependent children, and (3) general assistance. Separate payments received for hospital or other medical care (vendor payments) are excluded from this item.
7. *Retirement or Disability Income*—Includes: (1) retirement pensions and survivor benefits from a former employer, labor union, or Federal, State, county, or other governmental agency; (2) disability income from sources such as worker's compensation; companies or unions; Federal, State, or local government; and the U.S. military; (3) periodic receipts from annuities and insurance; and (4) regular income from IRA and KEOGH plans.
8. *All Other Income*—Includes unemployment compensation, Veterans Administration (VA) payments, alimony and child support, contributions received periodically from persons not living in the household, military family allotments, net gambling winnings, and other kinds of periodic income other than earnings.

Income of Households—Includes the income of the householder and all other persons 15 years old and over in the household, whether related to the householder or not. Because many households consist of only one person, average household income is usually less than average family income.

Income of Families and Persons—In compiling statistics on family income, the incomes of all members 15 years old and over in each family are summed and treated as a single amount. However, for persons 15 years old and over, the total amounts of their own

incomes are used. Although the income statistics covered the calendar year 1989, the characteristics of persons and the composition of families refer to the time of enumeration (April 1990). Thus, the income of the family does not include amounts received by persons who were members of the family during all or part of the calendar year 1989 if these persons no longer resided with the family at the time of enumeration. Yet, family income amounts reported by related persons who did not reside with the family during 1989 but who were members of the family at the time of enumeration are included. However, the composition of most families was the same during 1989 as in April 1990.

Median Income—The median divides the income distribution into two equal parts, one having incomes above the median and the other having incomes below the median. For households and families, the median income is based on the distribution of the total number of units including those with no income. The median for persons is based on persons with income. The median income values for all households, families, and persons are computed on the basis of more detailed income intervals than shown in most tabulations. Median household or family income figures of \$50,000 or less are calculated using linear interpolation. For persons, corresponding median values of \$40,000 or less are also computed using linear interpolation. All other median income amounts are derived through Pareto interpolation. (For more information on medians and interpolation, see the discussion under "Derived Measures.")

Mean Income—This is the amount obtained by dividing the total income of a particular statistical universe by the number of units in that universe. Thus, mean household income is obtained by dividing total household income by the total number of households. For the various types of income the means are based on households having those types of income. "Per capita income" is the mean income computed for every man, woman, and child in a particular group. It is derived by dividing the total income of a particular group by the total population in that group.

Care should be exercised in using and interpreting mean income values for small subgroups of the population. Because the mean is influenced strongly by extreme values in the distribution, it is especially susceptible to the effects of sampling variability, misreporting, and processing errors. The median, which is not affected by extreme values, is, therefore, a better measure than the mean when the population base is small. The mean, nevertheless, is shown in some data products for most small subgroups because, when weighted according to the number of cases, the means can be added to obtained summary measures for areas and groups other than those shown in census tabulations.

Limitation of the Data—Since questionnaire entries for income frequently are based on memory and not on records, many persons tended to forget minor or irregular sources of income and, therefore, underreport their income. Underreporting tends to be more pronounced for income sources that are not derived from earnings, such as Social Security, public assistance, or from interest, dividends, and net rental income.

There are errors of reporting due to the misunderstanding of the income questions such as reporting gross rather than net dollar amounts for the two questions on net self-employment income, which resulted in an overstatement of these items. Another common error is the reporting of identical dollar amounts in two of the eight type of income items where a respondent with only one source of income assumed that the second amount should be entered to represent total income. Such instances of overreporting had an impact on the level of mean nonfarm or farm self-employment income and mean total income published for the various geographical subdivisions of the State.

Extensive computer editing procedures were instituted in the data processing operation to reduce some of these reporting errors and to improve the accuracy of the income data. These procedures corrected various reporting deficiencies and improved the consistency of reported income items associated with work experience and information on occupation and class of worker. For example, if persons reported they were self-employed on their own farm, not incorporated, but had reported wage and salary earnings only, the latter amount was shifted to net farm self-employment income. Also, if any respondent reported total income only, the amount was generally assigned to one of the type of income items according to responses to the work experience and class-of-worker questions. Another type of problem involved nonreporting of income data. Where income information was not reported, procedures were devised to impute appropriate values with either no income or positive or negative dollar amounts for the missing entries. (For more information on imputation, see Appendix C, Accuracy of the Data.)

In income tabulations for households and families, the lowest income group (e.g., less than \$5,000) includes units that were classified as having no 1989 income. Many of these were living on income "in kind," savings, or gifts, were newly created families, or families in which the sole breadwinner had recently died or left the household. However, many of the households and families who reported no income probably had some money income which was not recorded in the census.

The income data presented in the tabulations covers money income only. The fact that many farm families receive an important part of their income in the form of "free" housing and goods produced and consumed on the farm rather than in money should be taken into consideration in comparing the income of farm and nonfarm residents. Nonmoney income such as business

expense accounts, use of business transportation and facilities, or partial compensation by business for medical and educational expenses was also received by some nonfarm residents. Many low income families also receive income "in kind" from public welfare programs. In comparing income data for 1989 with earlier years, it should be noted that an increase or decrease in money income does not necessarily represent a comparable change in real income, unless adjustments for changes in prices are made.

Comparability—The income data collected in the 1980 and 1970 censuses are similar to the 1990 census data, but there are variations in the detail of the questions. In 1980, income information for 1979 was collected from persons in approximately 19 percent of all housing units and group quarters. Each person was required to report:

- Wage or salary income
- Net nonfarm self-employment income
- Net farm self-employment income
- Interest, dividend, or net rental or royalty income
- Social Security income
- Public assistance income
- Income from all other sources

Between the 1980 and 1990 censuses, there were minor differences in the processing of the data. In both censuses, all persons with missing values in one or more of the detailed type of income items *and* total income were designated as allocated. Each missing entry was imputed either as a "no" or as a dollar amount. If total income was reported *and* one or more of the type of income fields was not answered, then the entry in total income generally was assigned to one of the income types according to the socioeconomic characteristics of the income recipient. This person was designated as unallocated.

In 1980 and 1990, all nonrespondents with income not reported (whether heads of households or other persons) were assigned the reported income of persons with similar characteristics. (For more information on imputation, see Appendix C, "Accuracy of the Data.")

There was a difference in the method of computer derivation of aggregate income from individual amounts between the two census processing operations. In the 1980 census, income amounts less than \$100,000 were coded in tens of dollars, and amounts of \$100,000 or more were coded in thousands of dollars; \$5 was added to each amount coded in tens of dollars and \$500 to each amount coded in thousands of dollars. Entries of \$999,000 or more were treated as \$999,500 and losses of \$9,999 or more were treated as minus \$9,999. In the 1990 census, income amounts less than \$999,999 were

keyed in dollars. Amounts of \$999,999 or more were treated as \$999,999 and losses of \$9,999 or more were treated as minus \$9,999 in all of the computer derivations of aggregate income.

In 1970, information on income in 1969 was obtained from all members in every fifth housing unit and small group quarters (less than 15 persons) and every fifth person in all other group quarters. Each person was required to report:

- Wage or salary income
- Net nonfarm self-employment income
- Net farm self-employment income
- Social Security or Railroad Retirement
- Public assistance or welfare payments
- Income from all other sources

If a person reported a dollar amount in wage or salary, net nonfarm self-employment income, or net farm self-employment income, the person was considered as unallocated only if no further dollar amounts were imputed for any additional missing entries.

In 1960, data on income were obtained from all members in every fourth housing unit and from every fourth person 14 years old and over living in group quarters. Each person was required to report wage or salary income, net self-employment income, and income other than earnings received in 1959. An assumption was made in the editing process that no other type of income was received by a person who reported the receipt of either wage and salary income or self-employment but who had failed to report the receipt of other money income.

For several reasons, the income data shown in census tabulations are not directly comparable with those that may be obtained from statistical summaries of income tax returns. Income, as defined for Federal tax purposes, differs somewhat from the Census Bureau concept. Moreover, the coverage of income tax statistics is different because of the exemptions of persons having small amounts of income and the inclusion of net capital gains in tax returns. Furthermore, members of some families file separate returns and others file joint returns; consequently, the income reporting unit is not consistently either a family or a person.

The earnings data shown in census tabulations are not directly comparable with earnings records of the Social Security Administration. The earnings record data for 1989 excluded the earnings of most civilian government employees, some employees of nonprofit organizations, workers covered by the Railroad Retirement Act, and persons not covered by the program because of insufficient earnings. Furthermore, earnings received from any one employer in excess of \$48,000 in 1989 are not covered by earnings records. Finally, because census data are obtained from household

questionnaires, they may differ from Social Security Administration earnings record data, which are based upon employers' reports and the Federal income tax returns of self-employed persons.

The Bureau of Economic Analysis (BEA) of the Department of Commerce publishes annual data on aggregate and per-capita personal income received by the population for States, metropolitan areas, and selected counties. Aggregate income estimates based on the income statistics shown in census products usually would be less than those shown in the BEA income series for several reasons. The Census Bureau data are obtained directly from households, whereas the BEA income series is estimated largely on the basis of data from administrative records of business and governmental sources. Moreover, the definitions of income are different. The BEA income series includes some items not included in the income data shown in census publications, such as income "in kind," income received by nonprofit institutions, the value of services of banks and other financial intermediaries rendered to persons without the assessment of specific charges, Medicare payments, and the income of persons who died or emigrated prior to April 1, 1990. On the other hand, the census income data include contributions for support received from persons not residing in the same household and employer contributions for social insurance.

INDUSTRY, OCCUPATION, AND CLASS OF WORKER

The data on industry, occupation, and class of worker were derived from answers to questionnaire items 28, 29, and 30 respectively. These questions were asked of a sample of persons. Information on industry relates to the kind of business conducted by a person's employing organization; occupation describes the kind of work the person does on the job.

For employed persons, the data refer to the person's job during the reference week. For those who worked at two or more jobs, the data refer to the job at which the person worked the greatest number of hours. For unemployed persons, the data refer to their last job. The industry and occupation statistics are derived from the detailed classification systems developed for the 1990 census as described below. The *Classified Index of Industries and Occupations* provided additional information on the industry and occupation classification systems.

Respondents provided the data for the tabulations by writing on the questionnaires descriptions of their industry and occupation. These descriptions were keyed and passed through automated coding software which assigned a portion of the written entries to categories in the classification system. The automated system assigned codes to 59 percent of the industry entries and 38 percent of the occupation entries.

Those cases not coded by the computer were referred to clerical staff in the Census Bureau's Kansas City processing office for coding. The clerical staff converted the written questionnaire descriptions to codes by comparing these descriptions to entries in the *Alphabetical Index of Industries and Occupations*. For the industry code, these coders also referred to an Employer Name List (formerly called Company Name List). This list, prepared from the Standard Statistical Establishment List developed by the Census Bureau for the economic censuses and surveys, contained the names of business establishments and their Standard Industrial Classification (SIC) codes converted to population census equivalents. This list facilitated coding and maintained industrial classification comparability.

Industry

The industry classification system developed for the 1990 census consists of 235 categories for employed persons, classified into 13 major industry groups. Since 1940, the industrial classification has been based on the Standard Industrial Classification Manual (SIC). The 1990 census classification was developed from the 1987 SIC published by the Office of Management and Budget Executive Office of the President.

The SIC was designed primarily to classify establishments by the type of industrial activity in which they were engaged. However, census data, which were collected from households, differ in detail and nature from those obtained from establishment surveys. Therefore, the census classification systems, while defined in SIC terms, cannot reflect the full detail in all categories. There are several levels of industrial classification found in census products. For example, the 1990 CP-2, *Social and Economic Characteristics* report includes 41 unique industrial categories, while the 1990 Summary Tape File 4 (STF 4) presents 72 categories.

Occupation

The occupational classification system developed for the 1990 census consists of 500 specific occupational categories for employed persons arranged into 6 summary and 13 major occupational groups. This classification was developed to be consistent with the Standard Occupational Classification (SOC) Manual: 1980, published by the Office of Federal Statistical Policy and Standards, U.S. Department of Commerce. Tabulations with occupation as the primary characteristic present several levels of occupational detail. The most detailed tabulations are shown in a special 1990 subject report and tape files on occupation. These products contain all 500 occupational categories plus industry or class of worker subgroupings of occupational categories.

Some occupation groups are related closely to certain industries. Operators of transportation equipment, farm operators and workers, and private household

workers account for major portions of their respective industries of transportation, agriculture, and private households. However, the industry categories include persons in other occupations. For example, persons employed in agriculture include truck drivers and bookkeepers; persons employed in the transportation industry include mechanics, freight handlers, and payroll clerks; and persons employed in the private household industry include occupations such as chauffeur, gardener, and secretary.

Class of Worker

The data on class of worker were derived from answers to questionnaire item 30. The information on class of worker refers to the same job as a respondent's industry and occupation and categorizes persons according to the type of ownership of the employing organization. The class of worker categories are defined as follows:

Private Wage and Salary Workers—Includes persons who worked for wages, salary, commission, tips, pay-in-kind, or piece rates for a private for profit employer or a private not-for-profit, tax-exempt or charitable organization. Self-employed persons whose business was incorporated are included with private wage and salary workers because they are paid employees of their own companies. Some tabulations present data separately for these subcategories: "For profit," "Not for profit," and "Own business incorporated."

Employees of foreign governments, the United Nations, or other formal international organizations were classified as "Private-not-for-profit."

Government Workers—Includes persons who were employees of any local, State, or Federal governmental unit, regardless of the activity of the particular agency. For some tabulations, the data were presented separately for the three levels of government.

Self-Employed Workers—Includes persons who worked for profit or fees in their own unincorporated business, profession, or trade, or who operated a farm.

Unpaid Family Workers—Includes persons who worked 15 hours or more without pay in a business or on a farm operated by a relative.

Salaried/Self-Employed—In tabulations that categorize persons as either salaried or self-employed, the salaried category includes private and government wage and salary workers; self-employed includes self-employed persons and unpaid family workers.

The industry category, "Public administration," is limited to regular government functions such as legislative, judicial, administrative, and regulatory activities of

governments. Other government organizations such as schools, hospitals, liquor stores, and bus lines are classified by industry according to the activity in which they are engaged. On the other hand, the class of worker government categories include all government workers.

Occasionally respondents supplied industry, occupation, or class of worker descriptions which were not sufficiently specific for precise classification or did not report on these items at all. Some of these cases were corrected through the field editing process and during the coding and tabulation operations. In the coding operation, certain types of incomplete entries were corrected using the *Alphabetical Index of Industries and Occupations*. For example, it was possible in certain situations to assign an industry code based on the occupation reported.

Following the coding operations, there was a computer edit and an allocation process. The edit first determined whether a respondent was in the universe which required an industry and occupation code. The codes for the three items (industry, occupation, and class of worker) were checked to ensure they were valid and were edited for their relation to each other. Invalid and inconsistent codes were either blanked or changed to a consistent code.

If one or more of the three codes were blank after the edit, a code was assigned from a "similar" person based on other items such as age, sex, education, farm or nonfarm residence, and weeks worked. If all the labor force and income data also were blank, all these economic items were assigned from one other person who provided all the necessary data.

Comparability—Comparability of industry and occupation data was affected by a number of factors, primarily the systems used to classify the questionnaire responses. For both the industry and occupation classification systems, the basic structures were generally the same from 1940 to 1970, but changes in the individual categories limited comparability of the data from one census to another. These changes were needed to recognize the "birth" of new industries and occupations, the "death" of others, and the growth and decline in existing industries and occupations, as well as, the desire of analysts and other users for more detail in the presentation of the data. Probably the greatest cause of incomparability is the movement of a segment of a category to a different category in the next census. Changes in the nature of jobs and respondent terminology, and refinement of category composition made these movements necessary.

In the 1990 census, the industry classification had minor revisions to reflect recent changes to the SIC. The 1990 occupational classification system is essentially the same as that for the 1980 census. However, the conversion of the census classification to the SOC

in 1980 meant that the 1990 classification system was less comparable to the classifications used prior to the 1980 census.¹

Other factors that affected data comparability included the universe to which the data referred (in 1970, the age cutoff for labor force was changed from 14 years to 16 years); how the industry and occupation questions were worded on the questionnaire (for example, important changes were made in 1970); improvements in the coding procedures (the Employer Name List technique was introduced in 1960); and how the "not reported" cases are handled. Prior to 1970, they were placed in the residual categories, "Industry not reported" and "Occupation not reported." In 1970, an allocation process was introduced that assigned these cases to major groups. In 1990, as in 1980, the "Not reported" cases were assigned to individual categories. Therefore, the 1980 and 1990 data for individual categories included some numbers of persons who were tabulated in a "Not reported" category in previous censuses.

The following publications contain information on the various factors affecting comparability and are particularly useful for understanding differences in the occupation and industry information from earlier censuses: U.S. Bureau of the Census, *Changes Between the 1950 and 1960 Occupation and Industry Classifications With Detailed Adjustments of 1950 Data to the 1960 Classifications*, Technical Paper No. 18, 1968; U.S. Bureau of the Census, *1970 Occupation and Industry Classification Systems in Terms of their 1960 Occupation and Industry Elements*, Technical Paper No. 26, 1972; and U.S. Bureau of the Census, *The Relationship Between the 1970 and 1980 Industry and Occupation Classification Systems*, Technical Paper No. 59, 1988. For citations for earlier census years, see the 1980 Census of Population report, PC80-1-D, *Detailed Population Characteristics*.

The 1990 census introduced an additional class of worker category for "private not-for-profit" employers. This category is a subset of the 1980 category "employee of private employer" so there is no comparable data before 1990. Also in 1990, employees of foreign governments, the United Nations, etc., are classified as "private not-for-profit," rather than Federal Government as in 1970 and 1980. While in theory, there was a change in comparability, in practice, the small number of U.S. residents working for foreign governments made this change negligible.

Comparability between the statistics on industry and occupation from the 1990 census and statistics from other sources is affected by many of the factors described in the section on "Employment Status." These factors are primarily geographic differences between residence and place of work, different dates of reference, and differences in counts because of dual job holding. Industry data from population censuses cover all industries and all kinds of workers, whereas, data from

establishments often excluded private household workers, government workers, and the self-employed. Also, the replies from household respondents may have differed in detail and nature from those obtained from establishments.

Occupation data from the census and data from government licensing agencies, professional associations, trade unions, etc., may not be as comparable as expected. Organizational listings often include persons not in the labor force or persons devoting all or most of their time to another occupation; or the same person may be included in two or more different listings. In addition, relatively few organizations, except for those requiring licensing, attained complete coverage of membership in a particular occupational field.

JOURNEY TO WORK

Place of Work

The data on place of work were derived from answers to questionnaire item 22, which was asked of persons who indicated in question 21 that they worked at some time during the reference week. (For more information, see discussion under "Reference Week.")

Data were tabulated for workers 16 years and over; that is, members of the Armed Forces and civilians who were at work during the reference week. Data on place of work refer to the geographic location at which workers carried out their occupational activities during the reference week. The exact address (number and street) of the place of work was asked, as well as the place (city, town, or post office); whether or not the place of work was inside or outside the limits of that city or town; and the county, State, and ZIP Code. If the person's employer operated in more than one location, the exact address of the location or branch where the respondent worked was requested. When the number and street name were unknown, a description of the location, such as the building name or nearest street or intersection, was to be entered.

Persons who worked at more than one location during the reference week were asked to report the one at which they worked the greatest number of hours. Persons who regularly worked in several locations each day during the reference week were requested to give the address at which they began work each day. For cases in which daily work did not begin at a central place each day, the person was asked to provide as much information as possible to describe the area in which he or she worked most during the reference week.

In some tabulations, place-of-work locations may be defined as "in area of residence" and "outside area of residence." The area of residence may vary from table to table or even within a table, and refers to the particular area or areas shown. For example, in a table

that provides data for counties, "in area of residence" refers to persons who worked in the same county in which they lived, while "outside area of residence" refers to persons whose workplace was located in a county different from the one in which they lived. Similarly, in a table that provides data for several types of areas, such as the State and its individual metropolitan areas (MA's), counties, and places, the place-of-work data will be variable and is determined by the geographic level (State, MA, county, or place) shown in each section of the tabulation.

In tabulations that present data for States, workplaces for the residents of the State may include, in addition to the State itself, each contiguous State. The category, "in noncontiguous State or abroad," includes persons who worked in a State that did not border their State of residence as well as persons who worked outside the United States.

In tabulations that present data for an MSA/PMSA, place-of-work locations are specified to show the main destinations of workers living in the MSA/PMSA. (For more information on metropolitan areas (MA's), see Appendix A, Area Classifications.) All place-of-work locations are identified with respect to the boundaries of the MSA/PMSA as "inside MSA/PMSA" or "outside MSA/PMSA." Locations within the MSA/PMSA are further divided into each central city, and each county or county balance. Selected large incorporated places also may be specified as places of work.

Within New England MSA/PMSA's, the places of work presented generally are cities and towns. Locations outside the MSA/PMSA are specified if they are important commuting destinations for residents of the MSA/PMSA, and may include adjoining MSA/PMSA's and their central cities, their component counties, large incorporated places, or counties, cities, or other geographic areas outside any MA. In tabulations for MSA/PMSA's in New England; Honolulu, Hawaii; and certain other MA's, some place-of-work locations are identified as "areas" (e.g., Area 1, Area 5, Area 12, etc.). Such areas consist of groups of towns, cities, census designated places (Honolulu MSA only), or counties that have been identified as unique place-of-work destinations. When an adjoining MSA/PMSA or MSA/PMSA remainder is specified as a place-of-work location, its components are not defined. However, the components are presented in the 1990 CP-1, *General Population Characteristics for Metropolitan Areas* and the 1990 CH-1, *General Housing Characteristics for Metropolitan Areas* reports. In tabulations that present data for census tracts outside MA's, place-of-work locations are defined as "in county of residence" and "outside county of residence."

In areas where the workplace address was coded to the block level, persons were tabulated as working inside or outside a specific place based on the location of that address, regardless of the response to question 22c concerning city/town limits. In areas where it was

impossible to code the workplace address to the block level, persons were tabulated as working in a place if a place name was reported in question 22b and the response to question 22c was either "Yes" or the item was left blank. In selected areas, census designated places (CDP's) may appear in the tabulations as places of work. The accuracy of place-of-work data for CDP's may be affected by the extent to which their census names were familiar to respondents, and by coding problems caused by similarities between the CDP name and the names of other geographic jurisdictions in the same vicinity.

Place-of-work data are given for selected minor civil divisions (generally, cities, towns, and townships) in the nine Northeastern States, based on the responses to the place-of-work question. Many towns and townships are regarded locally as equivalent to a place and therefore, were reported as the place of work. When a respondent reported a locality or incorporated place that formed a part of a township or town, the coding and tabulating procedure was designed to include the response in the total for the township or town. The accuracy of the place-of-work data for minor civil divisions is greatest for the New England States. However, the data for some New England towns, for towns in New York, and for townships in New Jersey and Pennsylvania may be affected by coding problems that resulted from the unfamiliarity of the respondent with the minor civil division in which the workplace was located or when a township and a city or borough of the same or similar name are located close together.

Place-of-work data may show a few workers who made unlikely daily work trips (e.g., workers who lived in New York and worked in California). This result is attributable to persons who worked during the reference week at a location that was different from their usual place of work, such as persons away from home on business.

Comparability—The wording of the question on place of work was substantially the same in the 1990 census as it was in 1980. However, data on place of work from the 1990 census are based on the full census sample, while data from the 1980 census were based on only about one-half of the full sample.

For the 1980 census, nonresponse or incomplete responses to the place-of-work question were not allocated, resulting in the use of "not reported" categories in the 1980 publications. However, for the 1990 census, when place of work was not reported or the response was incomplete, a work location was allocated to the person based on their means of transportation to work, travel time to work, industry, and location of residence and workplace of others. The 1990 publications, therefore, do not contain a "not reported" category for the place-of-work data.

Comparisons between 1980 and 1990 census data on the gross number of workers in particular commuting

flows, or the total number of persons working in an area, should be made with extreme caution. Any apparent increase in the magnitude of the gross numbers may be due solely to the fact that for 1990 the "not reported" cases have been distributed among specific place-of-work destinations, instead of tallied in a separate category as in 1980.

Limitation of the Data—The data on place of work relate to a reference week; that is, the calendar week preceding the date on which the respondents completed their questionnaires or were interviewed by enumerators. This week is not the same for all respondents because the enumeration was not completed in 1 week. However, for the majority of persons, the reference week for the 1990 census is the last week in March 1990. The lack of a uniform reference week means that the place-of-work data reported in the census will not exactly match the distribution of workplace locations observed or measured during an actual workweek.

The place-of-work data are estimates of persons 16 years old and over who were both employed and at work during the reference week (including persons in the Armed Forces). Persons who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons are not included in the place-of-work data. Therefore, the data on place of work understate the total number of jobs or total employment in a geographic area during the reference week. It also should be noted that persons who had irregular, casual, or unstructured jobs during the reference week may have erroneously reported themselves as not working.

The address where the individual worked most often during the reference week was recorded on the census questionnaire. If a worker held two jobs, only data about the primary job (the one worked the greatest number of hours during the preceding week) was requested. Persons who regularly worked in several locations during the reference week were requested to give the address at which they began work each day. For cases in which daily work was not begun at a central place each day, the person was asked to provide as much information as possible to describe the area in which he or she worked most during the reference week.

Means of Transportation to Work

The data on means of transportation to work were derived from answers to questionnaire item 23a, which was asked of persons who indicated in question 21 that they worked at some time during the reference week. (For more information, see discussion under "Reference Week.") Means of transportation to work refers to the principal mode of travel or type of conveyance that the person usually used to get from home to work during the reference week.

Persons who used different means of transportation on different days of the week were asked to specify the one they used most often, that is, the greatest number of days. Persons who used more than one means of transportation to get to work each day were asked to report the one used for the longest distance during the work trip. The category, "Car, truck, or van," includes workers using a car (including company cars but excluding taxicabs), a truck of one-ton capacity or less, or a van. The category, "Public transportation," includes workers who used a bus or trolley bus, streetcar or trolley car, subway or elevated, railroad, ferryboat, or taxicab even if each mode is not shown separately in the tabulation. The category, "Other means," includes workers who used a mode of travel which is not identified separately within the data distribution. The category, "Other means," may vary from table to table, depending on the amount of detail shown in a particular distribution.

The means of transportation data for some areas may show workers using modes of public transportation that are not available in those areas (e.g., subway or elevated riders in an MA where there actually is no subway or elevated service). This result is largely due to persons who worked during the reference week at a location that was different from their usual place of work (such as persons away from home on business in an area where subway service was available) and persons who used more than one means of transportation each day but whose principal means was unavailable where they lived (for example, residents of nonmetropolitan areas who drove to the fringe of an MA and took the commuter railroad most of the distance to work).

Private Vehicle Occupancy

The data on private vehicle occupancy were derived from answers to questionnaire item 23b. This question was asked of persons who indicated in question 21 that they worked at some time during the reference week and who reported in question 23a that their means of transportation to work was "Car, truck, or van." (For more information, see discussion under "Reference Week.")

Private vehicle occupancy refers to the number of persons who usually rode to work in the vehicle during the reference week. The category, "Drove alone," includes persons who usually drove alone to work as well as persons who were driven to work by someone who then drove back home or to a nonwork destination. The category, "Carpooled," includes workers who reported that two or more persons usually rode to work in the vehicle during the reference week.

Persons Per Car, Truck, or Van—This is obtained by dividing the number of persons who reported using a car, truck, or van to get to work by the number of such vehicles that they used. The number of vehicles used is

derived by counting each person who drove alone as one vehicle, each person who reported being in a two-person carpool as one-half vehicle, each person who reported being in a three-person carpool as one-third vehicle, and so on, and then summing all the vehicles.

Time Leaving Home to Go to Work

The data on time leaving home to go to work were derived from answers to questionnaire item 24a. This question was asked of persons who indicated in question 21 that they worked at some time during the reference week and who reported in question 23a that they worked outside their home. The departure time refers to the time of day that the person usually left home to go to work during the reference week. (For more information, see discussion under "Reference Week.")

Travel Time to Work

The data on travel time to work were derived from answers to questionnaire item 24b. This question was asked of persons who indicated in question 21 that they worked at some time during the reference week and who reported in question 23a that they worked outside their home. Travel time to work refers to the total number of minutes that it usually took the person to get from home to work during the reference week. The elapsed time includes time spent waiting for public transportation, picking up passengers in carpools, and time spent in other activities related to getting to work. (For more information, see discussion under "Reference Week.")

LANGUAGE SPOKEN AT HOME AND ABILITY TO SPEAK ENGLISH

Language Spoken at Home

Data on language spoken at home were derived from the answers to questionnaire items 15a and 15b, which were asked of a sample of persons born before April 1, 1985. Instructions mailed with the 1990 census questionnaire stated that a respondent should mark "Yes" in question 15a if the person sometimes or always spoke a language other than English at home and should not mark "Yes" if a language was spoken only at school or if speaking was limited to a few expressions or slang. For question 15b, respondents were instructed to print the name of the non-English language spoken at home. If the person spoke more than one language other than English, the person was to report the language spoken more often or the language learned first.

The cover of the census questionnaire included information in Spanish which provided a telephone number for respondents to call to request a census

questionnaire and instructions in Spanish. Instruction guides were also available in 32 other languages to assist enumerators who encountered households or respondents who spoke no English.

Questions 15a and 15b referred to languages spoken at home in an effort to measure the current use of languages other than English. Persons who knew languages other than English but did not use them at home or who only used them elsewhere were excluded. Persons who reported speaking a language other than English at home may also speak English; however, the questions did not permit determination of the main or dominant language of persons who spoke both English and another language. (For more information, see discussion below on "Ability to Speak English.")

For persons who indicated that they spoke a language other than English at home in question 15a, but failed to specify the name of the language in question 15b, the language was assigned based on the language of other speakers in the household; on the language of a person of the same Spanish origin or detailed race group living in the same or a nearby area; or on a person of the same ancestry or place of birth. In all cases where a person was assigned a non-English language, it was assumed that the language was spoken at home. Persons for whom the name of a language other than English was entered in question 15b, and for whom question 15a was blank were assumed to speak that language at home.

The write-in responses listed in question 15b (specific language spoken) were transcribed onto computer files and coded into more than 380 detailed language categories using an automated coding system. The automated procedure compared write-in responses reported by respondents with entries in a computer dictionary, which initially contained approximately 2,000 language names. The dictionary was updated with a large number of new names, variations in spelling, and a small number of residual categories. Each write-in response was given a numeric code that was associated with one of the detailed categories in the dictionary. If the respondent listed more than one non-English language, only the first was coded.

The write-in responses represented the names people used for languages they speak. They may not match the names or categories used by linguists. The sets of categories used are sometimes geographic and sometimes linguistic. Figure 1 provides an illustration of the content of the classification schemes used to present language data. For more information, write to the Chief, Population Division, U.S. Bureau of the Census, Washington, DC 20233.

Household Language—In households where one or more persons (age 5 years old or over) speak a language other than English, the household language assigned to all household members is the non-English language spoken by the first person with a non-English

language in the following order: householder, spouse, parent, sibling, child, grandchild, other relative, step-child, unmarried partner, housemate or roommate, roomer, boarder, or foster child, or other nonrelative. Thus, persons who speak only English may have a non-English household language assigned to them in tabulations of persons by household language.

Figure 1. **Four- and Twenty-Five-Group Classifications of 1990 Census Languages Spoken at Home with Illustrative Examples**

Four-Group Classification	Twenty-Five-Group Classification	Examples	
Spanish	Spanish	Spanish, Ladino	
	Other Indo-European	French	French, Cajun, French Creole
		Italian	
		Portuguese	
		German	
Languages of Asia and the Pacific	Yiddish		
	Other West Germanic	Afrikaans, Dutch, Pennsylvania Dutch	
	Scandinavian	Danish, Norwegian, Swedish	
	Polish		
	Russian		
	South Slavic	Serbocroatian, Bulgarian, Macedonian, Slovene	
	Other Slavic	Czech, Slovak, Ukrainian	
	Greek		
	Indic	Hindi, Bengali, Gujarathi, Punjabi, Romany, Sinhalese	
	Other Indo-European, not elsewhere classified	Armenian, Gaelic, Lithuanian, Persian	
All other languages	Chinese		
	Japanese		
	Mon-Khmer	Cambodian	
	Tagalog		
	Korean		
Other languages (part)	Vietnamese	Chamorro, Dravidian languages, Hawaiian, Ilocano, Thai, Turkish	
	Other languages (part)		
	Arabic		
Other languages (part)	Hungarian		
	Native North American languages		
	Other languages (part)	Amharic, Syriac, Finnish, Hebrew, languages of Central and South America, Other languages of Africa	

Ability to Speak English

Persons 5 years old and over who reported that they spoke a language other than English in question 15a were also asked in question 15c to indicate their ability to speak English based on one of the following categories: "Very well," "Well," "Not well," or "Not at all."

The data on ability to speak English represent the person's own perception about his or her own ability or, because census questionnaires are usually completed

by one household member, the responses may represent the perception of another household member. The instruction guides and questionnaires that were mailed to households did not include any information on how to interpret the response categories in question 15c.

Persons who reported that they spoke a language other than English at home but whose ability to speak English was not reported, were assigned the English-language ability of a randomly selected person of the same age, Spanish origin, nativity and year of entry, and language group.

Linguistic Isolation—A household in which no person age 14 years or over speaks only English and no person age 14 years or over who speaks a language other than English speaks English “Very well” is classified as “linguistically isolated.” All the members of a linguistically isolated household are tabulated as linguistically isolated, including members under age 14 years who may speak only English.

Limitation of the Data—Persons who speak a language other than English at home may have first learned that language at school. However, these persons would be expected to indicate that they spoke English “Very well.” Persons who speak a language other than English, but do not do so *at home*, should have been reported as not speaking a language other than English at home.

The extreme detail in which language names were coded may give a false impression of the linguistic precision of these data. The names used by speakers of a language to identify it may reflect ethnic, geographic, or political affiliations and do not necessarily respect linguistic distinctions. The categories shown in the tabulations were chosen on a number of criteria, such as information about the number of speakers of each language that might be expected in a sample of the United States population.

Comparability—Information on language has been collected in every census since 1890. The comparability of data among censuses is limited by changes in question wording, by the subpopulations to whom the question was addressed, and by the detail that was published.

The same question on language was asked in the 1980 and 1990 censuses. This question on the current language spoken at home replaced the questions asked in prior censuses on mother tongue; that is, the language other than English spoken in the person’s home when he or she was a child; one’s first language; or the language spoken before immigrating to the United States. The censuses of 1910-1940, 1960 and 1970 included questions on mother tongue. A change in coding procedure from 1980 to 1990 should have improved accuracy of coding and may affect the number of persons reported in some of the 380 plus categories. It should

not greatly affect the 4-group or 25-group lists. In 1980, coding clerks supplied numeric codes for the written entries on each questionnaire using a 2,000 name reference list. In 1990 written entries were transcribed to a computer file and matched to a computer dictionary which began with the 2,000 name list, but expanded as unmatched names were referred to headquarters specialists for resolution.

The question on ability to speak English was asked for the first time in 1980. In tabulations from 1980, the categories “Very well” and “Well” were combined. Data from other surveys suggested a major difference between the category “Very well” and the remaining categories. In tabulations showing ability to speak English, persons who reported that they spoke English “Very well” are presented separately from persons who reported their ability to speak English as less than “Very well.”

MARITAL STATUS

The data on marital status were derived from answers to questionnaire item 6, which was asked of all persons. The marital status classification refers to the status at the time of enumeration. Data on marital status are tabulated only for persons 15 years old and over.

All persons were asked whether they were “now married,” “widowed,” “divorced,” “separated,” or “never married.” Couples who live together (unmarried persons, persons in common-law marriages) were allowed to report the marital status they considered the most appropriate.

Never Married—Includes all persons who have never been married, including persons whose only marriage(s) was annulled.

Ever Married—Includes persons married at the time of enumeration (including those separated), widowed, or divorced.

Now Married, Except Separated—Includes persons whose current marriage has not ended through widowhood, divorce, or separation (regardless of previous marital history). The category may also include couples who live together or persons in common-law marriages if they consider this category the most appropriate. In certain tabulations, currently married persons are further classified as “spouse present” or “spouse absent.”

Separated—Includes persons legally separated or otherwise absent from their spouse because of marital discord. Included are persons who have been deserted or who have parted because they no longer want to live together but who have not obtained a divorce.

Widowed—Includes widows and widowers who have not remarried.

Divorced—Includes persons who are legally divorced and who have not remarried.

In selected sample tabulations, data for married and separated persons are reorganized and combined with information on the presence of the spouse in the same household.

Now Married—All persons whose current marriage has not ended by widowhood or divorce. This category includes persons defined above as “separated.”

Spouse Present—Married persons whose wife or husband was enumerated as a member of the same household, including those whose spouse may have been temporarily absent for such reasons as travel or hospitalization.

Spouse Absent—Married persons whose wife or husband was not enumerated as a member of the same household. This category also includes all married persons living in group quarters.

Separated—Defined above.

Spouse Absent, Other—Married persons whose wife or husband was not enumerated as a member of the same household, excluding separated. Included is any person whose spouse was employed and living away from home or in an institution or absent in the Armed Forces.

Differences between the number of currently married males and the number of currently married females occur because of reporting differences and because some husbands and wives have their usual residence in different areas. In sample tabulations, these differences can also occur because different weights are applied to the individual's data. Any differences between the number of “now married, spouse present” males and females are due solely to sample weighting. By definition, the numbers would be the same.

When marital status was not reported, it was imputed according to the relationship to the householder and sex and age of the person. (For more information on imputation, see Appendix C, Accuracy of the Data.)

Comparability—The 1990 marital status definitions are the same as those used in 1980 with the exception of the term “never married” which replaces the term “single” in tabulations. A general marital status question has been asked in every census since 1880.

MOBILITY LIMITATION STATUS

The data on mobility limitation status were derived from answers to questionnaire item 19a, which was asked of a sample of persons 15 years old and over.

Persons were identified as having a mobility limitation if they had a health condition that had lasted for 6 or more months and which made it difficult to go outside the home alone. Examples of outside activities on the questionnaire included shopping and visiting the doctor's office.

The term “health condition” referred to both physical and mental conditions. A temporary health problem, such as a broken bone that was expected to heal normally, was not considered a health condition.

Comparability—This was the first time that a question on mobility limitation was included in the census.

PLACE OF BIRTH

The data on place of birth were derived from answers to questionnaire item 8, which was asked on a sample basis. The place-of-birth question asked respondents to report the U.S. State, commonwealth or territory, or the foreign country where they were born. Persons born outside the United States were asked to report their place of birth according to current international boundaries. Since numerous changes in boundaries of foreign countries have occurred in the last century, some persons may have reported their place of birth in terms of boundaries that existed at the time of their birth or emigration, or in accordance with their own national preference.

Persons not reporting place of birth were assigned the birthplace of another family member or were allocated the response of another person with similar characteristics. Persons allocated as foreign born were not assigned a specific country of birth but were classified as “Born abroad, country not specified.”

Nativity—Information on place of birth and citizenship were used to classify the population into two major categories: native and foreign born. When information on place of birth was not reported, nativity was assigned on the basis of answers to citizenship, if reported, and other characteristics.

Native—Includes persons born in the United States, Puerto Rico, or an outlying area of the United States. The small number of persons who were born in a foreign country but have at least one American parent also are included in this category.

The native population is classified in the following groups: persons born in the State in which they resided at the time of the census; persons born in a different State, by region; persons born in Puerto Rico or an outlying area of the U.S.; and persons born abroad with at least one American parent.

Foreign Born—Includes persons not classified as “Native.” Prior to the 1970 census, persons not reporting place of birth were generally classified as native.

The foreign-born population is shown by selected area, country, or region of birth: the places of birth shown in data products were selected based on the number of respondents who reported that area or country of birth.

Comparability—Data on the State of birth of the native population have been collected in each census beginning with that of 1850. Similar data were shown in tabulations for the 1980 census and other recent censuses. Nonresponse was allocated in a similar manner in 1980; however, prior to 1980, nonresponse to the place of birth question was not allocated. Prior to the 1970 census, persons not reporting place of birth were generally classified as native.

The questionnaire instruction to report mother's State of residence instead of the person's actual State of birth (if born in a hospital in a different State) was dropped in 1990. Evaluation studies of 1970 and 1980 census data demonstrated that this instruction was generally either ignored or misunderstood. Since the hospital and the mother's residence is in the same State for most births, this change may have a slight effect on State of birth data for States with large metropolitan areas that straddle State lines.

POVERTY STATUS IN 1989

The data on poverty status were derived from answers to the same questions as the income data, questionnaire items 32 and 33. (For more information, see the discussion under "Income in 1989.") Poverty statistics presented in census publications were based on a definition originated by the Social Security Administration in 1964 and subsequently modified by Federal interagency committees in 1969 and 1980 and prescribed by the Office of Management and Budget in Directive 14 as the standard to be used by Federal agencies for statistical purposes.

At the core of this definition was the 1961 economy food plan, the least costly of four nutritionally adequate food plans designed by the Department of Agriculture. It was determined from the Agriculture Department's 1955 survey of food consumption that families of three or more persons spend approximately one-third of their income on food; hence, the poverty level for these families was set at three times the cost of the economy food plan. For smaller families and persons living alone, the cost of the economy food plan was multiplied by factors that were slightly higher to compensate for the relatively larger fixed expenses for these smaller households.

The income cutoffs used by the Census Bureau to determine the poverty status of families and unrelated individuals included a set of 48 thresholds arranged in a two-dimensional matrix consisting of family size (from one person to nine or more persons) cross-classified by presence and number of family members under 18 years old (from no children present to eight or more children present). Unrelated individuals and two-person families were further differentiated by age of the householder (under 65 years old and 65 years old and over).

The total income of each family or unrelated individual in the sample was tested against the appropriate poverty threshold to determine the poverty status of that family or unrelated individual. If the total income was less than the corresponding cutoff, the family or unrelated individual was classified as "below the poverty level." The number of persons below the poverty level was the sum of the number of persons in families with incomes below the poverty level and the number of unrelated individuals with incomes below the poverty level.

The poverty thresholds are revised annually to allow for changes in the cost of living as reflected in the Consumer Price Index. The average poverty threshold for a family of four persons was \$12,674 in 1989. (For

Table A. Poverty Thresholds in 1989 by Size of Family and Number of Related Children Under 18 Years

Size of Family Unit	Weighted average thresholds	Related children under 18 years									
		None	One	Two	Three	Four	Five	Six	Seven	Eight or more	
One person (unrelated individual).	\$6,310										
Under 65 years.....	6,451	\$6,451									
65 years and over.....	5,947	5,947									
Two persons.....	8,076										
Householder under 65 years...	8,343	8,303	\$8,547								
Householder 65 years and over.....	7,501	7,495	8,515								
Three persons.....	9,885	9,699	9,981	\$9,990							
Four persons.....	12,674	12,790	12,999	12,575	\$12,619						
Five persons.....	14,990	15,424	15,648	15,169	14,798	\$14,572					
Six persons.....	16,921	17,740	17,811	17,444	17,092	16,569	\$16,259				
Seven persons.....	19,162	20,412	20,540	20,101	19,794	19,224	18,558	\$17,828			
Eight persons.....	21,328	22,830	23,031	22,617	22,253	21,738	21,084	20,403	\$20,230		
Nine or more persons.....	25,480	27,463	27,596	27,229	26,921	26,415	25,719	25,089	24,933	\$23,973	

more information, see table A below.) Poverty thresholds were applied on a national basis and were not adjusted for regional, State or local variations in the cost of living. For a detailed discussion of the poverty definition, see U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 171, *Poverty in the United States: 1988 and 1989*.

Persons for Whom Poverty Status is Determined— Poverty status was determined for all persons except institutionalized persons, persons in military group quarters and in college dormitories, and unrelated individuals under 15 years old. These groups also were excluded from the denominator when calculating poverty rates.

Specified Poverty Levels— Since the poverty levels currently in use by the Federal Government do not meet all the needs of data users, some of the data are presented for alternate levels. These specified poverty levels are obtained by multiplying the income cutoffs at the poverty level by the appropriate factor. For example, the average income cutoff at 125 percent of poverty level was \$15,843 ($\$12,674 \times 1.25$) in 1989 for a family of four persons.

Weighted Average Thresholds at the Poverty Level— The average thresholds shown in the first column of table A are weighted by the presence and number of children. For example, the weighted average threshold for a given family size is obtained by multiplying the threshold for each presence and number of children category within the given family size by the number of families in that category. These products are then aggregated across the entire range of presence and number of children categories, and the aggregate is divided by the total number of families in the group to yield the weighted average threshold at the poverty level for that family size.

Since the basic thresholds used to determine the poverty status of families and unrelated individuals are applied to all families and unrelated individuals, the weighted average poverty thresholds are derived using all families and unrelated individuals rather than just those classified as being below the poverty level. To obtain the weighted poverty thresholds for families and unrelated individuals below alternate poverty levels, the weighted thresholds shown in table A may be multiplied directly by the appropriate factor. The weighted average thresholds presented in the table are based on the March 1990 Current Population Survey. However, these thresholds would not differ significantly from those based on the 1990 census.

Income Deficit— Represents the difference between the total income of families and unrelated individuals below the poverty level and their respective poverty thresholds. In computing the income deficit, families reporting a net income loss are assigned zero dollars and for such cases the deficit is equal to the poverty threshold.

This measure provided an estimate of the amount which would be required to raise the incomes of all poor families and unrelated individuals to their respective poverty thresholds. The income deficit is thus a measure of the degree of impoverishment of a family or unrelated individual. However, caution must be used in comparing the average deficits of families with different characteristics. Apparent differences in average income deficits may, to some extent, be a function of differences in family size.

Mean Income Deficit— Represents the amount obtained by dividing the total income deficit of a group below the poverty level by the number of families (or unrelated individuals) in that group.

Comparability— The poverty definition used in the 1990 and 1980 censuses differed slightly from the one used in the 1970 census. Three technical modifications were made to the definition used in the 1970 census as described below:

1. The separate thresholds for families with a female householder with no husband present and all other families were eliminated. For the 1980 and 1990 censuses, the weighted average of the poverty thresholds for these two types of families was applied to all types of families, regardless of the sex of the householder.
2. Farm families and farm unrelated individuals no longer had a set of poverty thresholds that were lower than the thresholds applied to nonfarm families and unrelated individuals. The farm thresholds were 85 percent of the corresponding levels for nonfarm families in the 1970 census. The same thresholds were applied to all families and unrelated individuals regardless of residence in 1980 and 1990.
3. The thresholds by size of family were extended from seven or more persons in 1970 to nine or more persons in 1980 and 1990.

These changes resulted in a minimal increase in the number of poor at the national level. For a complete discussion of these modifications and their impact, see the Current Population Reports, Series P-60, No. 133.

The population covered in the poverty statistics derived from the 1980 and 1990 censuses was essentially the same as in the 1970 census. The only difference was that in 1980 and 1990, unrelated individuals under 15 years old were excluded from the poverty universe, while in 1970, only those under 14 years old were excluded. The poverty data from the 1960 census excluded all persons in group quarters and included all unrelated individuals regardless of age. It was unlikely that these differences in population coverage would have had significant impact when comparing the poverty data for persons since the 1960 censuses.

Current Population Survey—Because of differences in the questionnaires and data collection procedures, estimates of the number of persons below the poverty level by various characteristics from the 1990 census may differ from those reported in the March 1990 Current Population Survey.

RACE

The data on race were derived from answers to questionnaire item 4, which was asked of all persons. The concept of race as used by the Census Bureau reflects self-identification; it does not denote any clear-cut scientific definition of biological stock. The data for race represent self-classification by people according to the race with which they most closely identify. Furthermore, it is recognized that the categories of the race item include both racial and national origin or socio-cultural groups.

During direct interviews conducted by enumerators, if a person could not provide a single response to the race question, he or she was asked to select, based on self-identification, the group which best described his or her racial identity. If a person could not provide a single race response, the race of the mother was used. If a single race response could not be provided for the person's mother, the first race reported by the person was used. In all cases where occupied housing units, households, or families are classified by race, the race of the householder was used.

The racial classification used by the Census Bureau generally adheres to the guidelines in Federal Statistical Directive No. 15, issued by the Office of Management and Budget, which provides standards on ethnic and racial categories for statistical reporting to be used by all Federal agencies. The racial categories used in the 1990 census data products are provided below.

White—Includes persons who indicated their race as "White" or reported entries such as Canadian, German, Italian, Lebanese, Near Easterner, Arab, or Polish.

Black—Includes persons who indicated their race as "Black or Negro" or reported entries such as African American, Afro-American, Black Puerto Rican, Jamaican, Nigerian, West Indian, or Haitian.

American Indian, Eskimo, or Aleut—Includes persons who classified themselves as such in one of the specific race categories identified below.

American Indian—Includes persons who indicated their race as "American Indian," entered the name of an Indian tribe, or reported such entries as Canadian Indian, French-American Indian, or Spanish-American Indian.

American Indian Tribe—Persons who identified themselves as American Indian were asked to report their enrolled or principal tribe. Therefore, tribal data in tabulations reflect the written tribal entries reported on the questionnaires. Some of the entries (for example, Iroquois, Sioux, Colorado River, and Flathead) represent nations or reservations.

The information on tribe is based on self-identification and therefore does not reflect any designation of Federally- or State-recognized tribe. Information on American Indian tribes is presented in summary tape files and special data products. The information is derived from the American Indian Detailed Tribal Classification List for the 1990 census. The classification list represents all tribes, bands, and clans that had a specified number of American Indians reported on the census questionnaire.

Eskimo—Includes persons who indicated their race as "Eskimo" or reported entries such as Arctic Slope, Inupiat, and Yupik.

Aleut—Includes persons who indicated their race as "Aleut" or reported entries such as Alutiiq, Egegik, and Pribilofian.

Asian or Pacific Islander—Includes persons who reported in one of the Asian or Pacific Islander groups listed on the questionnaire or who provided write-in responses such as Thai, Nepali, or Tongan. A more detailed listing of the groups comprising the Asian or Pacific Islander population is presented in figure 2 below. In some data products, information is presented separately for the Asian population and the Pacific Islander population.

Asian—Includes "Chinese," "Filipino," "Japanese," "Asian Indian," "Korean," "Vietnamese," and "Other Asian." In some tables, "Other Asian" may not be shown separately, but is included in the total Asian population.

Chinese—Includes persons who indicated their race as "Chinese" or who identified themselves as Cantonese, Tibetan, or Chinese American. In standard census reports, persons who reported as "Taiwanese" or "Formosan" are included here with Chinese. In special reports on the Asian or Pacific Islander population, information on persons who identified themselves as Taiwanese are shown separately.

Filipino—Includes persons who indicated their race as "Filipino" or reported entries such as Filipino, Philippine, or Filipino American.

Japanese—Includes persons who indicated their race as "Japanese" and persons who identified themselves as Nipponese or Japanese American.

Asian Indian—Includes persons who indicated their race as “Asian Indian” and persons who identified themselves as Bengalese, Bharat, Dravidian, East Indian, or Goanese.

Korean—Includes persons who indicated their race as “Korean” and persons who identified themselves as Korean American.

Vietnamese—Includes persons who indicated their race as “Vietnamese” and persons who identified themselves as Vietnamese American.

Cambodian—Includes persons who provided a write-in response such as Cambodian or Cambodia.

Hmong—Includes persons who provided a write-in response such as Hmong, Laohmong, or Mong.

Laotian—Includes persons who provided a write-in response such as Laotian, Laos, or Lao.

Thai—Includes persons who provided a write-in response such as Thai, Thailand, or Siamese.

Other Asian—Includes persons who provided a write-in response of Bangladeshi, Burmese, Indonesian, Pakistani, Sri Lankan, Amerasian, or Eurasian. See figure 2 for other groups comprising “Other Asian.”

Pacific Islander—Includes persons who indicated their race as “Pacific Islander” by classifying themselves into one of the following groups or identifying themselves as one of the Pacific Islander cultural groups of Polynesian, Micronesian, or Melanesian.

Hawaiian—Includes persons who indicated their race as “Hawaiian” as well as persons who identified themselves as Part Hawaiian or Native Hawaiian.

Samoan—Includes persons who indicated their race as “Samoan” or persons who identified themselves as American Samoan or Western Samoan.

Guamanian—Includes persons who indicated their race as “Guamanian” or persons who identified themselves as Chamorro or Guam.

Other Pacific Islander—Includes persons who provided a write-in response of a Pacific Islander group such as Tahitian, Northern Mariana Islander, Palauan, Fijian, or a cultural group such as Polynesian, Micronesian, or Melanesian. See figure 2 for other groups comprising “Other Pacific Islander.”

Other Race—Includes all other persons not included in the “White,” “Black,” “American Indian, Eskimo, or Aleut,” and the “Asian or Pacific Islander” race categories described above. Persons reporting in the “Other race” category and providing write-in entries such as multiracial, multiethnic, mixed, interracial, Wesort, or a Spanish/Hispanic origin group (such as Mexican, Cuban, or Puerto Rican) are included here.

Written entries to three categories on the race item—“Indian (Amer.),” “Other Asian or Pacific Islander (API),” and “Other race”—were reviewed, edited, and coded by subject matter specialists. (For more information on the coding operation, see the section below that discusses “Comparability.”)

The written entries under “Indian (Amer.)” and “Other Asian or Pacific Islander (API)” were reviewed and coded during 100-percent processing of the 1990 census questionnaires. A substantial portion of the entries for the “Other race” category also were reviewed, edited, and coded during the 100-percent processing. The remaining entries under “Other race” underwent review and coding during sample processing. Most of the written entries reviewed and coded during sample processing were those indicating Hispanic origin such as Mexican, Cuban, or Puerto Rican.

If the race entry for a member of a household was missing on the questionnaire, race was assigned based upon the reported entries of race by other household members using specific rules of precedence of household relationship. For example, if race was missing for the daughter of the householder, then the race of her mother (as female householder or female spouse) would be assigned. If there was no female householder or spouse in the household, the daughter would be assigned her father’s (male householder) race. If race was not reported for anyone in the household, the race of a householder in a previously processed household was assigned. This procedure is a variation of the general imputation procedures described in Appendix C, Accuracy of the Data.

Limitation of the Data—In the 1980 census, a relatively high proportion (20 percent) of American Indians did not report any tribal entry in the race item. Evaluation of the pre-census tests indicated that changes made for the 1990 race item should improve the reporting of tribes in the rural areas (especially on reservations) for the 1990 census. The results for urban areas were inconclusive. Also, the precensus tests indicated that there may be overreporting of the Cherokee tribe. An evaluation of 1980 census data showed overreporting of Cherokee in urban areas or areas where the number of American Indians was sparse.

In the 1990 census, respondents sometimes did not fill in a circle or filled the “Other race” circle and wrote in a response, such as Arab, Polish, or African American in the shared write-in box for “Other race” and “Other

API" responses. During the automated coding process, these responses were edited and assigned to the appropriate racial designation. Also, some Hispanic origin persons did not fill in a circle, but provided entries such as Mexican or Puerto Rican. These persons were classified in the "Other race" category during the coding and editing process. There may be some minor differences between sample data and 100-percent data because sample processing included additional edits not included in the 100-percent processing.

Figure 2. **Asian or Pacific Islander Groups Reported in the 1990 Census**

Asian	Pacific Islander
Chinese	Hawaiian
Filipino	Samoan
Japanese	Guamanian
Asian Indian	Other Pacific Islander ¹
Korean	Carolinian
Vietnamese	Fijian
Cambodian	Kosraean
Hmong	Melanesian ³
Laotian	Micronesian ³
Thai	Northern Mariana Islander
Other Asian ¹	Palauan
Bangladeshi	Papua New Guinean
Bhutanese	Ponapean (Pohnpeian)
Borneo	Polynesian ³
Burmese	Solomon Islander
Celebesian	Tahitian
Ceram	Tarawa Islander
Indochinese	Tokelauan
Indonesian	Tongan
Iwo-Jiman	Trukese (Chuukese)
Javanese	Yapese
Malayan	Pacific Islander, not specified
Maldivian	
Nepali	
Okinawan	
Pakistani	
Sikkim	
Singaporean	
Sri Lankan	
Sumatran	
Asian, not specified ²	

¹In some data products, specific groups listed under "Other Asian" or "Other Pacific Islander" are shown separately. Groups not shown are tabulated as "All other Asian" or "All other Pacific Islander," respectively.

²Includes entries such as Asian American, Asian, Asiatic, Amerasian, and Eurasian.

³Polynesian, Micronesian, and Melanesian are Pacific Islander cultural groups.

Comparability—Differences between the 1990 census and earlier censuses affect the comparability of data for certain racial groups and American Indian tribes. The 1990 census was the first census to undertake, on a 100-percent basis, an automated review, edit, and coding operation for written responses to the race item. The automated coding system used in the 1990 census greatly reduced the potential for error associated with a clerical review. Specialists with a thorough knowledge of the race subject matter reviewed, edited, coded, and

resolved inconsistent or incomplete responses. In the 1980 census, there was only a limited clerical review of the race responses on the 100-percent forms with a full clerical review conducted only on the sample questionnaires.

Another major difference between the 1990 and preceding censuses is the handling of the write-in responses for the Asian or Pacific Islander populations. In addition to the nine Asian or Pacific Islander categories shown on the questionnaire under the spanner "Asian or Pacific Islander (API)," the 1990 census race item provided a new residual category, "Other API," for Asian or Pacific Islander persons who did not report in one of the listed Asian or Pacific Islander groups. During the coding operation, write-in responses for "Other API" were reviewed, coded, and assigned to the appropriate classification. For example, in 1990, a write-in entry of Laotian, Thai, or Javanese is classified as "Other Asian," while a write-in entry of Tongan or Fijian is classified as "Other Pacific Islander." In the 1990 census, these persons were able to identify as "Other API" in both the 100-percent and sample operations.

In the 1980 census, the nine Asian or Pacific Islander groups were also listed separately. However, persons not belonging to these nine groups wrote in their specific racial group under the "Other" race category. Persons with a written entry such as Laotian, Thai, or Tongan, were tabulated and published as "Other race" in the 100-percent processing operation in 1980, but were reclassified as "Other Asian and Pacific Islander" in 1980 sample tabulations. In 1980 special reports on the Asian or Pacific Islander populations, data were shown separately for "Other Asian" and "Other Pacific Islander."

The 1970 questionnaire did not have separate race categories for Asian Indian, Vietnamese, Samoan, and Guamanian. These persons indicated their race in the "Other" category and later, through the editing process, were assigned to a specific group. For example, in 1970, Asian Indians were reclassified as "White," while Vietnamese, Guamanians, and Samoans were included in the "Other" category.

Another difference between 1990 and preceding censuses is the approach taken when persons of Spanish/Hispanic origin did not report in a specific race category but reported as "Other race" or "Other." These persons commonly provided a write-in entry such as Mexican, Venezuelan, or Latino. In the 1990 and 1980 censuses, these entries remained in the "Other race" or "Other" category, respectively. In the 1970 census, most of these persons were included in the "White" category.

REFERENCE WEEK

The data on labor force status and journey to work were related to the reference week; that is, the calendar week preceding the date on which the respondents

completed their questionnaires or were interviewed by enumerators. This week is not the same for all respondents since the enumeration was not completed in one week. The occurrence of holidays during the enumeration period could affect the data on actual hours worked during the reference week, but probably had no effect on overall measurement of employment status (see the discussion below on "Comparability").

Comparability—The reference weeks for the 1990 and 1980 censuses differ in that Passover and Good Friday occurred in the first week of April 1980, but in the second week of April 1990. Many workers presumably took time off for those observances. The differing occurrence of these holidays could affect the comparability of the 1990 and 1980 data on actual hours worked for some areas if the respective weeks were the reference weeks for a significant number of persons. The holidays probably did not affect the overall measurement of employment status since this information was based on work activity during the entire reference week.

RESIDENCE IN 1985

The data on residence in 1985 were derived from answers to question 14b, which asked for the State (or foreign country), county, and place of residence on April 1, 1985, for those persons reporting in question 14a that on that date they lived in a different house than their current residence. Residence in 1985 is used in conjunction with location of current residence to determine the extent of residential mobility of the population and the resulting redistribution of the population across the various States, metropolitan areas, and regions of the country.

When no information on residence in 1985 was reported for a person, information for other family members, if available, was used to assign a location of residence in 1985. All cases of nonresponse or incomplete response that were not assigned a previous residence based on information from other family members were allocated the previous residence of another person with similar characteristics who provided complete information.

The tabulation category, "Same house," includes all persons 5 years old and over who did not move during the 5 years as well as those who had moved but by 1990 had returned to their 1985 residence. The category, "Different house in the United States," includes persons who lived in the United States in 1985 but in a different house or apartment from the one they occupied on April 1, 1990. These movers are then further subdivided according to the type of move.

In most tabulations, movers are divided into three groups according to their 1985 residence: "Different house, same county," "Different county, same State," and "Different State." The last group may be further

subdivided into region of residence in 1985. The category, "Abroad," includes those persons who were residing in a foreign country, Puerto Rico, or an outlying area of the U.S. in 1985, including members of the Armed Forces and their dependents. Some tabulations show movers who were residing in Puerto Rico or an outlying area in 1985 separately from those residing in other countries.

In tabulations for metropolitan areas, movers are categorized according to the metropolitan status of their current and previous residences, resulting in such groups as movers within an MSA/PMSA, movers between MSA/PMSA's, movers from nonmetropolitan areas to MSA/PMSA, and movers from central cities to the remainder of an MSA/PMSA. In some tabulations, these categories are further subdivided by size of MSA/PMSA, region of current or previous residence, or movers within or between central cities and the remainder of the same or a different MSA/PMSA.

The size categories used in some tabulations for both 1985 and 1990 residence refer to the populations of the MSA/PMSA on April 1, 1990; that is, at the end of the migration interval.

Some tabulations present data on immigrants, outmigrants, and net migration. "Immigrants" are generally defined as those persons who entered a specified area by crossing its boundary from some point outside the area. In some tabulations, movers from abroad are included in the number of immigrants; in others, only movers within the United States are included.

"Outmigrants" are persons who depart from a specific area by crossing its boundary to a point outside it, but without leaving the United States. "Net migration" is calculated by subtracting the number of outmigrants from the number of immigrants and, depending upon the particular tabulation, may or may not include movers from abroad. The net migration for the area is net immigration if the result was positive and net outmigration if the result was negative. In the tabulations, net outmigration is indicated by a minus sign (-).

Immigrants and outmigrants for States include only those persons who did not live in the same State in 1985 and 1990; that is, they exclude persons who moved between counties within the same State. Thus, the sum of the immigrants to (or outmigrants from) all counties in any State is greater than the number of immigrants to (or outmigrants from) that State. However, in the case of net migration, the sum of the nets for all the counties within a State equal the net for the State. In the same fashion, the net migration for a division or region equals the sum of the nets for the States comprising that division or region, while the number of immigrants and outmigrants for that division or region is less than the sum of the immigrants or outmigrants for the individual States.

The number of persons who were living in a different house in 1985 is somewhat less than the total number of moves during the 5-year period. Some persons in the

same house at the two dates had moved during the 5-year period but by the time of the census had returned to their 1985 residence. Other persons who were living in a different house had made one or more intermediate moves. For similar reasons, the number of persons living in a different county, MSA/PMSA, or State or moving between nonmetropolitan areas may be understated.

Comparability—Similar questions were asked on all previous censuses beginning in 1940, except the questions in 1950 referred to residence 1 year earlier rather than 5 years earlier. Although the questions in the 1940 census covered a 5-year period, comparability with that census was reduced somewhat because of different definitions and categories of tabulation. Comparability with the 1960 and 1970 census is also somewhat reduced because nonresponse was not allocated in those earlier censuses. For the 1980 census, nonresponse was allocated in a manner similar to the 1990 allocation scheme.

SCHOOL ENROLLMENT AND LABOR FORCE STATUS

Tabulation of data on enrollment, educational attainment, and labor force status for the population 16 to 19 years old allows for calculation of the proportion of the age group who are not enrolled in school and not high school graduates or "dropouts" and an unemployment rate for the "dropout" population. Definitions of the three topics and descriptions of the census items from which they were derived are presented in "Educational Attainment," "Employment Status," and "School Enrollment and Type of School." The published tabulations include both the civilian and Armed Forces populations, but labor force status is provided for the civilian population only. Therefore, the component labor force statuses may not add to the total lines *enrolled in school, high school graduate, and not high school graduate*. The difference is Armed Forces.

Comparability—The tabulation of school enrollment by labor force status is similar to that published in 1980 census reports. The 1980 census tabulation included a single data line for Armed Forces; however, enrollment, attainment, and labor force status data were shown for the civilian population only. In 1970, a tabulation was included for 16 to 21 year old males not attending school.

SCHOOL ENROLLMENT AND TYPE OF SCHOOL

Data on school enrollment were derived from answers to questionnaire item 11, which was asked of a sample of persons. Persons were classified as enrolled in

school if they reported attending a "regular" public or private school or college at any time between February 1, 1990, and the time of enumeration. The question included instructions to "include only nursery school, kindergarten, elementary school, and schooling which would lead to a high school diploma or a college degree" as regular school. Instructions included in the 1990 respondent instruction guide, which was mailed with the census questionnaire, further specified that enrollment in a trade or business school, company training, or tutoring were not to be included unless the course would be accepted for credit at a regular elementary school, high school, or college. Persons who did not answer the enrollment question were assigned the enrollment status and type of school of a person with the same age, race or Hispanic origin, and, at older ages, sex, whose residence was in the same or a nearby area.

Public and Private School—Includes persons who attended school in the reference period and indicated they were enrolled by marking one of the questionnaire categories for either "public school, public college" or "private school, private college." The instruction guide defines a public school as "any school or college controlled and supported by a local, county, State, or Federal Government." "Schools supported and controlled primarily by religious organizations or other private groups" are defined as private. Persons who filled both the "public" and "private" circles are edited to the first entry, "public."

Level of School in Which Enrolled—Persons who were enrolled in school were classified as enrolled in "preprimary school," "elementary or high school," or "college" according to their response to question 12 (years of school completed or highest degree received). Persons who were enrolled and reported completing nursery school or less were classified as enrolled in "preprimary school," which includes kindergarten. Similarly, enrolled persons who had completed at least kindergarten, but not high school, were classified as enrolled in elementary or high school. Enrolled persons who reported completing high school or some college or having received a post-secondary degree were classified as enrolled in "college." Enrolled persons who reported completing the twelfth grade but receiving "NO DIPLOMA" were classified as enrolled in high school. (For more information on level of school, see the discussion under "Educational Attainment.")

Comparability—School enrollment questions have been included in the census since 1840; grade attended was first asked in 1940; type of school was first asked in 1960. Before 1940, the enrollment question in various censuses referred to attendance in the preceding six months or the preceding year. In 1940, the reference was to attendance in the month preceding the census,

and in the 1950 and subsequent censuses, the question referred to attendance in the two months preceding the census date.

Until the 1910 census, there were no instructions limiting the kinds of schools in which enrollment was to be counted. Starting in 1910, the instructions indicated that attendance at "school, college, or any educational institution" was to be counted. In 1930 an instruction to include "night school" was added. In the 1940 instructions, night school, extension school, or vocational school were included only if the school was part of the regular school system. Correspondence school work of any kind was excluded. In the 1950 instructions, the term "regular school" was introduced, and it was defined as schooling which "advances a person towards an elementary or high school diploma or a college, university, or professional school degree." Vocational, trade, or business schools were excluded unless they were graded and considered part of a regular school system. On-the-job training was excluded, as was nursery school. Instruction by correspondence was excluded unless it was given by a regular school and counted towards promotion.

In 1960, the question used the term "regular school or college" and a similar, though expanded, definition of "regular" was included in the instructions, which continued to exclude nursery school. Because of the census' use of mailed questionnaires, the 1960 census was the first in which instructions were written for the respondent as well as enumerators. In the 1970 census, the questionnaire used the phrase "regular school or college" and included instructions to "count nursery school, kindergarten, and schooling which leads to an elementary school certificate, high school diploma, or college degree." Instructions in a separate document specified that to be counted as regular school, nursery school must include instruction as an important and integral phase of its program, and continued the exclusion of vocational, trade, and business schools. The 1980 census question was very similar to the 1970 question, but the separate instruction booklet did not require that nursery school include substantial instructional content in order to be counted.

The age range for which enrollment data have been obtained and published has varied over the censuses. Information on enrollment was recorded for persons of all ages in the 1930 and 1940 and 1970 through 1990; for persons under age 30, in 1950; and for persons age 5 to 34, in 1960. Most of the published enrollment figures referred to persons age 5 to 20 in the 1930 census, 5 to 24 in 1940, 5 to 29 in 1950, 5 to 34 in 1960, 3 to 34 in 1970, and 3 years old and over in 1980. This growth in the age group whose enrollment was reported reflects increased interest in the number of children in preprimary schools and in the number of older persons attending colleges and universities.

In the 1950 and subsequent censuses, college students were enumerated where they lived while attending college, whereas in earlier censuses, they generally were enumerated at their parental homes. This change should not affect the comparability of national figures on college enrollment since 1940; however, it may affect the comparability over time of enrollment figures at sub-national levels.

Type of school was first introduced in the 1960 census, where a separate question asked the enrolled persons whether they were in a "public" or "private" school. Since the 1970 census, the type of school was incorporated into the response categories for the enrollment question and the terms were changed to "public," "parochial," and "other private." In the 1980 census, "private, church related" and "private, not church related" replaced "parochial" and "other private."

Grade of enrollment was first available in the 1940 census, where it was obtained from responses to the question on highest grade of school completed. Enumerators were instructed that "for a person still in school, the last grade completed will be the grade preceding the one in which he or she was now enrolled." From 1950 to 1980, grade of enrollment was obtained from the highest grade attended in the two-part question used to measure educational attainment. (For more information, see the discussion under "Educational Attainment.") The form of the question from which level of enrollment was derived in the 1990 census most closely corresponds to the question used in 1940. While data from prior censuses can be aggregated to provide levels of enrollment comparable to the 1990 census, 1990 data cannot be disaggregated to show single grade of enrollment as in previous censuses.

Data on school enrollment were also collected and published by other Federal, State, and local government agencies. Where these data were obtained from administrative records of school systems and institutions of higher learning, they were only roughly comparable with data from population censuses and household surveys because of differences in definitions and concepts, subject matter covered, time references, and enumeration methods. At the local level, the difference between the location of the institution and the residence of the student may affect the comparability of census and administrative data. Differences between the boundaries of school districts and census geographic units also may affect these comparisons.

SELF-CARE LIMITATION STATUS

The data on self-care limitation status were derived from answers to questionnaire item 19b, which was asked of a sample of persons 15 years old and over. Persons were identified as having a self-care limitation if they had a health condition that had lasted for 6 or more months and which made it difficult to take care of their own personal needs, such as dressing, bathing, or getting around inside the home.

The term "health condition" referred to both physical and mental conditions. A temporary health problem, such as a broken bone that was expected to heal normally, was not considered a health condition.

Comparability—This was the first time that a question on self-care limitation was included in the census.

SEX

The data on sex were derived from answers to questionnaire item 3, which was asked of all persons. For most cases in which sex was not reported, it was determined by the appropriate entry from the person's given name and household relationship. Otherwise, sex was imputed according to the relationship to the household and the age and marital status of the person. For more information on imputation, see Appendix C, Accuracy of the Data.

Sex Ratio—A measure derived by dividing the total number of males by the total number of females and multiplying by 100.

Comparability—A question on the sex of individuals was asked of the total population in every census.

VETERAN STATUS

Data on veteran status, period of military service, and years of military service were derived from answers to questionnaire item 17, which was asked of a sample of persons.

Veteran Status—The data on veteran status were derived from responses to question 17a. For census data products, a "civilian veteran" is a person 16 years old or over who had served (even for a short time) but is not now serving on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard, or who served as a Merchant Marine seaman during World War II. Persons who served in the National Guard or military Reserves are classified as veterans only if they were ever called or ordered to active duty not counting the 4-6 months for initial training or yearly summer camps. All other civilians 16 years old and over are classified as nonveterans.

Period of Military Service—Persons who indicated in question 17a that they had served on active duty (civilian veterans) or were now on active duty were asked to indicate in question 17b the period or periods in which they served. Persons serving in at least one wartime period are classified in their most recent wartime period. For example, persons who served both during the Korean conflict and the post-Korean peacetime era between February 1955 and July 1964 are

classified in one of the two "Korean conflict" categories. If the same person had also served during the Vietnam era, he or she would instead be included in the "Vietnam era and Korean conflict" category. The responses were edited to eliminate inconsistencies between reported period(s) of service and the age of the person and to cancel out reported combinations of periods containing unreasonable gaps (for example, a person could not serve during World War I and the Korean conflict without serving during World War II). Note that the period of service categories shown in this report are mutually exclusive.

Years of Military Service—Persons who indicated in question 17a that they had served on active duty (civilian veterans) or were now on active duty were asked to report the total number of years of active-duty service in question 17c. The data were edited for consistency with responses to question 17b (Period of Military Service) and with the age of the person.

Limitation of the Data—There may be a tendency for the following kinds of persons to report erroneously that they served on active duty in the Armed Forces: (a) persons who served in the National Guard or military Reserves but were never called to active duty; (b) civilian employees or volunteers for the USO, Red Cross, or the Department of Defense (or its predecessor Departments, War and Navy); and (c) employees of the Merchant Marine or Public Health Service. There may also be a tendency for persons to erroneously round up months to the nearest year in question 17c (for example, persons with 1 year 8 months of active duty military service may mistakenly report "2 years").

Comparability—Since census data on veterans were based on self-reported responses, they may differ from data from other sources such as administrative records of the Department of Defense. Census data may also differ from Veterans Administration data on the benefits-eligible population, since factors determining eligibility for veterans benefits differ from the rules for classifying veterans in the census.

The wording of the question on veteran status (17a) for 1990 was expanded from the veteran/not veteran question in 1980 to include questions on current active duty status and service in the military Reserves and the National Guard. The expansion was intended to clarify the appropriate response for persons in the Armed Forces and for persons who served in the National Guard or military Reserve units only. For the first time in a census, service during World War II as a Merchant Marine Seaman was considered active-duty military service and persons with such service were counted as veterans. An additional period of military service, "September 1980 or later" was added in 1990. As in 1970

and 1980, persons reporting more than one period of service are shown in the most recent wartime period of service category. Question 17c (Years of Military Service) was new for 1990.

WORK DISABILITY STATUS

The data on work disability were derived from answers to questionnaire item 18, which was asked of a sample of persons 15 years old and over. Persons were identified as having a work disability if they had a health condition that had lasted for 6 or more months and which limited the kind or amount of work they could do at a job or business. A person was limited in the kind of work he or she could do if the person had a health condition which restricted his or her choice of jobs. A person was limited in the amount of work if he or she was not able to work full-time. Persons with a work disability were further classified as "Prevented from working" or "Not prevented from working."

The term "health condition" referred to both physical and mental conditions. A temporary health problem, such as a broken bone that was expected to heal normally, was not considered a health condition.

Comparability—The wording of the question on work disability was the same in 1990 as in 1980. Information on work disability was first collected in 1970. In that census, the work disability question did not contain a clause restricting the definition of disability to limitations caused by a health condition that had lasted 6 or more months; however, it did contain a separate question about the duration of the disability.

WORK STATUS IN 1989

The data on work status in 1989 were derived from answers to questionnaire item 31, which was asked of a sample of persons. Persons 16 years old and over who worked 1 or more weeks according to the criteria described below are classified as "Worked in 1989." All other persons 16 years old and over are classified as "Did not work in 1989." Some tabulations showing work status in 1989 include 15 year olds; these persons, by definition, are classified as "Did not work in 1989."

Weeks Worked in 1989

The data on weeks worked in 1989 were derived from responses to questionnaire item 31b. Question 31b (Weeks Worked in 1989) was asked of persons 16 years old and over who indicated in question 31a that they worked in 1989.

The data pertain to the number of weeks during 1989 in which a person did any work for pay or profit (including paid vacation and paid sick leave) or worked without pay on a family farm or in a family business. Weeks of active service in the Armed Forces are also included.

Usual Hours Worked Per Week Worked in 1989

The data on usual hours worked per week worked in 1989 were derived from answers to questionnaire item 31c. This question was asked of persons 16 years old and over who indicated that they worked in 1989.

The data pertain to the number of hours a person usually worked during the weeks worked in 1989. The respondent was to report the number of hours worked per week in the majority of the weeks he or she worked in 1989. If the hours worked per week varied considerably during 1989, the respondent was to report an approximate average of the hours worked per week. The statistics on usual hours worked per week in 1989 are not necessarily related to the data on actual hours worked during the census reference week (question 21b).

Persons 16 years old and over who reported that they usually worked 35 or more hours each week during the weeks they worked are classified as "Usually worked full time;" persons who reported that they usually worked 1 to 34 hours are classified as "Usually worked part time."

Year-Round Full-Time Workers—All persons 16 years old and over who usually worked 35 hours or more per week for 50 to 52 weeks in 1989.

Number of Workers in Family in 1989—The term "worker" as used for these data is defined based on the criteria for Work Status in 1989.

Limitation of the Data—It is probable that the number of persons who worked in 1989 and the number of weeks worked are understated since there was some tendency for respondents to forget intermittent or short periods of employment or to exclude weeks worked without pay. There may also be a tendency for persons not to include weeks of paid vacation among their weeks worked; one result may be that the census figures may understate the number of persons who worked "50 to 52 weeks."

Comparability—The data on weeks worked collected in the 1990 census were comparable with data from the 1980, 1970, and 1960 censuses, but may not be entirely comparable with data from the 1940 and 1950 censuses. Since the 1960 census, two separate questions have been used to obtain this information. The first identified persons with any work experience during the year and, thus, indicated those persons for whom the questions on number of weeks worked applied. In 1940 and 1950, however, the questionnaires contained only a single question on number of weeks worked.

In 1970, persons responded to the question on weeks worked by indicating one of six weeks-worked intervals. In 1980 and 1990, persons were asked to enter the specific number of weeks they worked.

YEAR OF ENTRY

The data on year of entry were derived from answers to questionnaire item 10, which was asked of a sample of persons. The question, "When did this person come to the United States to stay?" was asked of persons who indicated in the question on citizenship that they were not born in the United States. (For more information, see the discussion under "Citizenship.")

The 1990 census questions, tabulations, and census data products about citizenship and year of entry include no reference to immigration. All persons who were born and resided outside the United States before becoming residents of the United States have a date of entry. Some of these persons are U.S. citizens by birth (e.g., persons born in Puerto Rico or born abroad of American parents). To avoid any possible confusion concerning the date of entry of persons who are U.S. citizens by birth, the term, "year of entry" is used in this report instead of the term "year of immigration."

Limitation of the Data—The census questions on nativity, citizenship, and year of entry were not designed to measure the degree of permanence of residence in the United States. The phrase, "to stay" was used to obtain the year in which the person became a resident of the United States. Although the respondent was directed to indicate the year he or she entered the country "to stay," it was difficult to ensure that respondents interpreted the phrase correctly.

Comparability—A question on year of entry, (alternately called "year of immigration") was asked in each decennial census from 1890 to 1930, 1970, and 1980. In 1980, the question on year of entry included six arrival time intervals. The number of arrival intervals was expanded to ten in 1990. In 1980, the question on year of entry was asked only of the foreign-born population. In 1990, all persons who responded to the long-form questionnaire and were not born in the United States were to complete the question on year of entry.

HOUSING CHARACTERISTICS

LIVING QUARTERS

Living quarters are classified as either housing units or group quarters. (For more information, see the discussion of "Group Quarters" under Population Characteristics.) Usually, living quarters are in structures intended for residential use (for example, a one-family home, apartment house, hotel or motel, boarding house, or mobile home). Living quarters also may be in structures intended for nonresidential use (for example, the rooms in a warehouse where a guard lives), as well as in places such as tents, vans, shelters for the homeless, dormitories, barracks, and old railroad cars.

Housing Units—A housing unit is a house, an apartment, a mobile home or trailer, a group of rooms or a single room occupied as separate living quarters or, if vacant, intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from outside the building or through a common hall.

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 persons who share living arrangements. 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, except that recreational vehicles, boats, vans, tents, railroad cars, and the like are included 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' sales lots, at the factory, or in storage yards are excluded from the housing inventory.

If the living quarters contains nine or more persons unrelated to the householder or person in charge (a total of at least 10 unrelated persons), it is classified as group quarters. If the living quarters contains eight or fewer persons unrelated to the householder or person in charge, it is classified as a housing unit.

Occupied Housing Units—A housing unit is classified as occupied if it is the usual place of residence of the person or group of persons living in it at the time of enumeration, or if the occupants are only temporarily absent; that is, away on vacation or business. If all the persons staying in the unit at the time of the census have their usual place of residence elsewhere, the unit is classified as vacant. A household includes all the persons who occupy a housing unit as their usual place of residence. By definition, the count of occupied housing units for 100-percent tabulations is the same as the count of households or householders. In sample tabulations, the counts of household and occupied housing units may vary slightly because of different sample weighting methods.

Vacant Housing Units—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 persons who have a usual residence elsewhere also are classified as vacant. (For more information, see discussion under "Usual Home Elsewhere.")

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 if they are open to the elements; that is, the roof, walls, windows, and/or doors no longer protect the interior from the elements, or if there is positive evidence (such as a sign on the house or in the block) that the unit is condemned or is to be demolished. Also excluded 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.

Hotels, Motels, Rooming Houses, Etc.—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, persons who consider the hotel as their usual place of residence or have no usual place of residence elsewhere. Vacant rooms or suites of rooms are classified as housing units only in those hotels, motels, and similar places in which 75 percent or more of the accommodations are occupied by permanent residents.

If any of the occupants in a rooming or boarding house live and eat separately from others in the building and have direct access, their quarters are classified as separate housing units.

Staff Living Quarters—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.

Comparability—The first Census of Housing in 1940 established the “dwelling unit” concept. Although the term became “housing unit” and the definition has been modified slightly in succeeding censuses, the 1990 definition is essentially comparable to previous censuses. There was no change in the housing unit definition between 1980 and 1990.

ACREAGE

The data on acreage were obtained from questionnaire items H5a and H19a. Question H5a was asked at all occupied and vacant one-family houses and mobile homes. Question H19a was asked on a sample basis at occupied and vacant one-family houses and mobile homes.

Question H5a asks whether the house or mobile home is located on a place of 10 or more acres. The intent of this item is to exclude owner-occupied and renter-occupied one-family houses on 10 or more acres from the specified owner- and renter-occupied universes for value and rent tabulations.

Question H19a provides data on whether the unit is located on less than 1 acre. The main purpose of this item, in conjunction with question H19b on agricultural sales, is to identify farm units. (For more information, see discussion under “Farm Residence.”)

For both items, the land may consist of more than one tract or plot. These tracts or plots are usually adjoining; however, they may be separated by a road, creek, another piece of land, etc.

Comparability—Question H5a is similar to that asked in 1970 and 1980. This item was asked for the first time of mobile home occupants in 1990. Question H19a is an abbreviated form of a question asked on a sample basis in 1980. In previous censuses, information on city or suburban lot and number of acres was obtained also.

AGRICULTURAL SALES

Data on the sales of agricultural crops were obtained from questionnaire item H19b, which was asked on a sample basis at occupied one-family houses and mobile homes located on lots of 1 acre or more. Data for this item exclude units on lots of less than 1 acre, units located in structures containing 2 or more units, and all vacant units. This item refers to the total amount (before taxes and expenses) received in 1989 from the sale of crops, vegetables, fruits, nuts, livestock and livestock products, and nursery and forest products, produced on “this property.” Respondents new to a unit were asked to estimate total agricultural sales in 1989 even if some portion of the sales had been made by other occupants of the unit.

This item is used mainly to classify housing units as farm or nonfarm residences, not to provide detailed information on the sale of agricultural products. Detailed information on the sale of agricultural products is provided by the Census Bureau’s *Census of Agriculture (Factfinder for the Nation: Agricultural Statistics, Bureau of the Census, 1989)*. (For more information, see the discussion under “Farm Residence.”)

BEDROOMS

The data on bedrooms were obtained from questionnaire item H9, which was asked at both occupied and vacant housing units. This item was asked on a sample basis. The number of bedrooms is the count of rooms designed to be used as bedrooms; that is, the number of rooms that would be listed as bedrooms if the house or apartment were on the market for sale or for rent. Included are all rooms intended to be used as bedrooms even if they currently are being used for some other purpose. A housing unit consisting of only one room, such as a one-room efficiency apartment, is classified, by definition, as having no bedroom.

Comparability—Data on bedrooms have been collected in every census since 1960. In 1970 and 1980, data for bedrooms were shown only for year-round units. In past censuses, a room was defined as a bedroom if it was used mainly for sleeping even if also

used for other purposes. Rooms that were designed to be used as bedrooms but used mainly for other purposes were not considered to be bedrooms. A distribution of housing units by number of bedrooms calculated from data collected in a 1986 test showed virtually no differences in the two versions except in the two bedroom category, where the previous "use" definition showed a slightly lower proportion of units.

BOARDED-UP STATUS

Boarded-up status was obtained from questionnaire item C2 and was determined for all vacant units. Boarded-up units have windows and doors covered by wood, metal, or masonry to protect the interior and to prevent entry into the building. A single-unit structure, a unit in a multi-unit structure, or an entire multi-unit structure may be boarded-up in this way. For certain census data products, boarded-up units are shown only for units in the "Other vacant" category. A unit classified as "Usual home elsewhere" can never be boarded up. (For more information, see the discussion under "Usual Home Elsewhere.")

Comparability—This item was first asked in the 1980 census and was shown only for year-round vacant housing units. In 1990, data are shown for all vacant housing units.

BUSINESS ON PROPERTY

The data for business on property were obtained from questionnaire item H5b, which was asked at all occupied and vacant one-family houses and mobile homes. This question is used to exclude owner-occupied one-family houses with business or medical offices on the property from certain statistics on financial characteristics.

A business must be easily recognizable from the outside. It usually will have a separate outside entrance and have the appearance of a business, such as a grocery store, restaurant, or barber shop. It may be either attached to the house or mobile home or be located elsewhere on the property. Those housing units in which a room is used for business or professional purposes and have no recognizable alterations to the outside are *not* considered as having a business. Medical offices are considered businesses for tabulation purposes.

Comparability—Data on business on property have been collected since 1940.

CONDOMINIUM FEE

The data on condominium fee were obtained from questionnaire item H25, which was asked at owner-occupied condominiums. This item was asked on a

sample basis. A condominium fee normally is charged monthly to the owners of the individual condominium units by the condominium owners association to cover operating, maintenance, administrative, and improvement costs of the common property (grounds, halls, lobby, parking areas, laundry rooms, swimming pool, etc.) The costs for utilities and/ or fuels may be included in the condominium fee if the units do not have separate meters.

Data on condominium fees may include real estate tax and/ or insurance payments for the common property, but do not include real estate taxes or fire, hazard, and flood insurance for the individual unit already reported in questions H21 and H22.

Amounts reported were the regular monthly payment, even if paid by someone outside the household or remain unpaid. Costs were estimated as closely as possible when exact costs were not known.

The data from this item were added to payments for mortgages (both first and junior mortgages and home equity loans); real estate taxes; fire, hazard, and flood insurance payments; and utilities and fuels to derive "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for condominium owners.

Comparability—This is a new item in 1990.

CONDOMINIUM STATUS

The data on condominium housing units were obtained from questionnaire item H18, which was asked on a sample basis at both occupied and vacant housing units. Condominium is a type of ownership that enables a person to own an apartment or house in a development of similarly owned units and to hold a common or joint ownership in some or all of the common areas and facilities such as land, roof, hallways, entrances, elevators, swimming pool, etc. Condominiums may be single-family houses as well as units in apartment buildings. A condominium unit need not be occupied by the owner to be counted as such. A unit classified as "mobile home or trailer" or "other" (see discussion under "Units in Structure") cannot be a condominium unit.

Limitation of the Data—Testing done prior to the 1980 and 1990 censuses indicated that the number of condominiums may be slightly overstated.

Comparability—In 1970, condominiums were grouped together with cooperative housing units, and the data were reported only for owner-occupied cooperatives and condominiums. Beginning in 1980, the census identified all condominium units and the data were shown for renter-occupied and vacant year-round condominiums as well as owner occupied. In 1970 and 1980, the question on condominiums was asked on a 100-percent basis. In 1990, it was asked on a sample basis.

CONTRACT RENT

The data on contract rent (also referred to as "rent asked" for vacant units) were obtained from questionnaire item H7a, which was asked at all occupied housing units that were rented for cash rent and all vacant housing units that were for rent at the time of enumeration.

Housing units that are renter occupied without payment of cash rent are shown separately as "No cash rent" in census data products. The unit may be owned by friends or relatives who live elsewhere and who allow occupancy without charge. Rent-free houses or apartments may be provided to compensate caretakers, ministers, tenant farmers, sharecroppers, or others.

Contract rent is the monthly rent agreed to or contracted for, regardless of any furnishings, utilities, fees, meals, or services that may be included. For vacant units, it is the monthly rent asked for the rental unit at the time of enumeration.

If the contract rent includes rent for a business unit or for living quarters occupied by another household, the respondent was instructed to report that part of the rent estimated to be for his or her unit only. Respondents were asked to report rent only for the housing unit enumerated and to exclude any rent paid for additional units or for business premises.

If a renter pays rent to the owner of a condominium or cooperative, and the condominium fee or cooperative carrying charge is also paid by the renter to the owner, the respondent was instructed to include the fee or carrying charge.

If a renter receives payments from lodgers or roomers who are listed as members of the household, the respondent was instructed to report the rent without deduction for any payments received from the lodgers or roomers. The respondent was instructed to report the rent agreed to or contracted for even if paid by someone else such as friends or relatives living elsewhere, or a church or welfare agency.

In some tabulations, contract rent is presented for all renter-occupied housing units, as well as specified renter-occupied and vacant-for-rent units. Specified renter-occupied and specified vacant-for-rent units exclude one-family houses on 10 or more acres. (For more information on rent, see the discussion under "Gross Rent.")

Median and Quartile Contract Rent—The median divides the rent distribution into two equal parts. Quartiles divide the rent distribution into four equal parts. In computing median and quartile contract rent, units reported as "No cash rent" are excluded. Median and quartile rent calculations are rounded to the nearest whole dollar. (For more information on medians and quartiles, see the discussion under "Derived Measures.")

Aggregate Contract Rent—To calculate aggregate contract rent, the amount assigned for the category "Less than \$80" is \$50. The amount assigned to the category "\$1,000 or more" is \$1,250. Mean contract rent is rounded to the nearest whole dollar. (For more information on aggregates and means, see the discussion under "Derived Measures.")

Limitation of the Data—In the 1970 and 1980 censuses, contract rent for vacant units had high allocation rates, about 35 percent.

Comparability—Data on this item have been collected since 1930. For 1990, quartiles were added because the range of rents and values in the United States has increased in recent years. Upper and lower quartiles can be used to note large rent and value differences among various geographic areas.

DURATION OF VACANCY

The data for duration of vacancy (also referred to as "months vacant") were obtained from questionnaire item D, which was completed by census enumerators. The statistics on duration of vacancy refer to the length of time (in months and years) between the date the last occupants moved from the unit and the time of enumeration. The data, therefore, do not provide a direct measure of the total length of time units remain vacant.

For newly constructed units which have never been occupied, the duration of vacancy is counted from the date construction was completed. For recently converted or merged units, the time is reported from the date conversion or merger was completed. Units occupied by an entire household with a usual home elsewhere are assigned to the "Less than 1 month" interval.

Comparability—Similar data have been collected since 1960. In 1970 and 1980, these data were shown only for year-round vacant housing units. In 1990, these data are shown for all vacant housing units.

FARM RESIDENCE

The data on farm residence were obtained from questionnaire items H19a and H19b. An occupied one-family house or mobile home is classified as a farm residence if: (1) the housing unit is located on a property of 1 acre or more, and (2) at least \$1,000 worth of agricultural products were sold from the property in 1989. Group quarters and housing units that are in multi-unit buildings or vacant are not included as farm residences.

A one-family unit occupied by a tenant household paying cash rent for land and buildings is enumerated as a farm residence only if sales of agricultural products from its yard (as opposed to the general property on

which it is located) amounted to at least \$1,000 in 1989. A one-family unit occupied by a tenant household that does not pay cash rent is enumerated as a farm residence if the remainder of the farm (including its yard) qualifies as a farm.

Farm residence is provided as an independent data item only for housing units located in rural areas. It may be derived for housing units in urban areas from the data items on acreage and sales of agricultural products on the public-use microdata sample (PUMS) files. (For more information on PUMS, see Appendix F, Data Products and User Assistance.)

The farm population consists of persons in households living in farm residences. Some persons who are counted on a property classified as a farm (including in some cases farm workers) are excluded from the farm population. Such persons include those who reside in multi-unit buildings or group quarters.

Comparability—These are the same criteria that were used to define a farm residence in 1980. In 1960 and 1970, a farm was defined as a place of 10 or more acres with at least \$50 worth of agricultural sales or a place of less than 10 acres with at least \$250 worth of agricultural sales. Earlier censuses used other definitions. Note that the definition of a farm residence differs from the definition of a farm in the Census of Agriculture (*Factfinder for the Nation: Agricultural Statistics*, Bureau of the Census, 1989).

GROSS RENT

Gross rent is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials which result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment. The estimated costs of utilities and fuels are reported on a yearly basis but are converted to monthly figures for the tabulations. Renter units occupied without payment of cash rent are shown separately as "No cash rent" in the tabulations. Gross rent is calculated on a sample basis.

Comparability—Data on gross rent have been collected since 1940 for renter-occupied housing units. In 1980, costs for electricity and gas were collected as average monthly costs. In 1990, all utility and fuel costs were collected as yearly costs and divided by 12 to provide an average monthly cost.

GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989

Gross rent as a percentage of household income in 1989 is a computed ratio of monthly gross rent to monthly household income (total household income in

1989 divided by 12). The ratio was computed separately for each unit and was rounded to the nearest whole percentage. Units for which no cash rent is paid and units occupied by households that reported no income or a net loss in 1989 comprise the category "Not computed." This item is calculated on a sample basis.

HOUSE HEATING FUEL

The data on house heating fuel were obtained from questionnaire item H14, which was asked at occupied housing units. This item was asked on a sample basis. The data show the type of fuel used most to heat the house or apartment.

Utility Gas—Includes gas piped through underground pipes from a central system to serve the neighborhood.

Bottled, Tank, or LP Gas—Includes liquid propane gas stored in bottles or tanks which are refilled or exchanged when empty.

Fuel Oil, Kerosene, Etc.—Includes fuel oil, kerosene, gasoline, alcohol, and other combustible liquids.

Wood—Includes purchased wood, wood cut by household members on their property or elsewhere, driftwood, sawmill or construction scraps, or the like.

Solar Energy—Includes heat provided by sunlight which is collected, stored, and actively distributed to most of the rooms.

Other Fuel—Includes all other fuels not specified elsewhere.

No Fuel Used—Includes units that do not use any fuel or that do not have heating equipment.

Comparability—Data on house heating fuel have been collected since 1940. The category, "Solar energy" is new for 1990.

INSURANCE FOR FIRE, HAZARD, AND FLOOD

The data on fire, hazard, and flood insurance were obtained from questionnaire item H22, which was asked at a sample of owner-occupied one-family houses, condominiums, and mobile homes. The statistics for this item refer to the annual premium for fire, hazard, and flood insurance on the property (land and buildings); that is, policies that protect the property and its contents against loss due to damage by fire, lightning, winds, hail, flood, explosion, and so on.

Liability policies are included only if they are paid with the fire, hazard, and flood insurance premiums and the amounts for fire, hazard, and flood cannot be separated. Premiums are included even if paid by someone outside

the household or remain unpaid. When premiums are paid on other than a yearly basis, the premiums are converted to a yearly basis.

The payment for fire, hazard, and flood insurance is added to payments for real estate taxes, utilities, fuels, and mortgages (both first and junior mortgages and home equity loans) to derive "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989."

A separate question (H23d) determines whether insurance premiums are included in the mortgage payment to the lender(s). This makes it possible to avoid counting these premiums twice in the computations.

Comparability—Data on payment for fire and hazard insurance were collected for the first time in 1980. Flood insurance was not specifically mentioned in the wording of the question in 1980. The question was asked only at owner-occupied one-family houses. Excluded were mobile homes, condominiums, houses with a business or medical office on the property, houses on 10 or more acres, and housing units in multi-unit buildings. In 1990, the question was asked of all one-family owner-occupied houses, including houses on 10 or more acres. It also was asked at mobile homes, condominiums, and one-family houses with a business or medical office on the property.

KITCHEN FACILITIES

Data on kitchen facilities were obtained from questionnaire item H11, which was asked at both occupied and vacant housing units. A unit has complete kitchen facilities when it has all of the following: (1) an installed sink with piped water, (2) a range, cook top and convection or microwave oven, or cookstove, and (3) a refrigerator. All kitchen facilities must be located in the structure. They need not be in the same room. Portable cooking equipment is not considered a range or cookstove. An ice box is not considered to be a refrigerator.

Comparability—Data on complete kitchen facilities were collected for the first time in 1970. Earlier censuses collected data on individual components, such as kitchen sink and type of refrigeration equipment. In 1970 and 1980, data for kitchen facilities were shown only for year-round units. In 1990, data are shown for all housing units.

MEALS INCLUDED IN RENT

The data on meals included in the rent were obtained from questionnaire item H7b, which was asked of all occupied housing units that were rented for cash and all vacant housing units that were for rent at the time of enumeration.

The statistics on meals included in rent are presented for specified renter-occupied and specified vacant-for-rent units. Specified renter-occupied and specified vacant-for-rent units exclude one-family houses on 10 or more acres. (For more information, see the discussion under "Contract Rent.")

Comparability—This is a new item in 1990. It is intended to measure "congregate" housing, which generally is considered to be housing units where the rent includes meals and other services, such as transportation to shopping and recreation.

MOBILE HOME COSTS

The data on mobile home costs were obtained from questionnaire item H26, which was asked at owner-occupied mobile homes. This item was asked on a sample basis.

These data include the total yearly costs for personal property taxes, land or site rent, registration fees, and license fees on all owner-occupied mobile homes. The instructions are to not include real estate taxes already reported in question H21.

Costs are estimated as closely as possible when exact costs are not known. Amounts are the total for an entire 12-month billing period, even if they are paid by someone outside the household or remain unpaid.

The data from this item are added to payments for mortgages, real estate taxes, fire, hazard, and flood insurance payments, utilities, and fuels to derive selected monthly owner costs for mobile homes owners.

Comparability—This item is new for 1990.

MORTGAGE PAYMENT

The data on mortgage payment were obtained from questionnaire item H23b, which was asked at owner-occupied one-family houses, condominiums, and mobile homes. This item was asked on a sample basis. Question H23b provides the regular monthly amount required to be paid the lender for the first mortgage (deed of trust, contract to purchase, or similar debt) on the property. Amounts are included even if the payments are delinquent or paid by someone else. The amounts reported are included in the computation of "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for units with a mortgage.

The amounts reported include everything paid to the lender including principal and interest payments, real estate taxes, fire, hazard, and flood insurance payments, and mortgage insurance premiums. Separate questions determine whether real estate taxes and fire, hazard, and flood insurance payments are included in

the mortgage payment to the lender. This makes it possible to avoid counting these components twice in the computation of "Selected Monthly Owner Costs."

Comparability—Information on mortgage payment was collected for the first time in 1980. It was collected only at owner-occupied one-family houses. Excluded were mobile homes, condominiums, houses with a business or medical office on the property, one-family houses on 10 or more acres, and housing units in multi-unit buildings. In 1990, the questions on monthly mortgage payments were asked of all owner-occupied one-family houses, including one-family houses on 10 or more acres. They were also asked at mobile homes, condominiums, and one-family houses with a business or medical office.

The 1980 census obtained total regular monthly mortgage payments, including payments on second or junior mortgages, from a single question. Two questions were used in 1990; one for regular monthly payments on first mortgages, and one for regular monthly payments on second or junior mortgages or home equity loans. (For more information, see the discussion under "Second or Junior Mortgage Payment.")

MORTGAGE STATUS

The data on mortgage status were obtained from questionnaire items H23a and H24a, which were asked at owner-occupied one-family houses, condominiums, and mobile homes. "Mortgage" refers to all forms of debt where the property is pledged as security for repayment of the debt. It includes such debt instruments as deeds of trust, trust deeds, contracts to purchase, land contracts, junior mortgages and home equity loans.

A mortgage is considered a first mortgage if it has prior claim over any other mortgage or if it is the only mortgage on the property. All other mortgages, (second, third, etc.) are considered junior mortgages. A home equity loan is generally a junior mortgage. If no first mortgage is reported, but a junior mortgage or home equity loan is reported, then the loan is considered a first mortgage.

In most census data products, the tabulations for "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" usually are shown separately for units "with a mortgage" and for units "not mortgaged." The category "not mortgaged" is comprised of housing units owned free and clear of debt.

Comparability—A question on mortgage status was included in the 1940 and 1950 censuses, but not in the 1960 and 1970 censuses. The item was reinstated in 1980 along with a separate question dealing with the existence of second or junior mortgages. In 1980, the mortgage status questions were asked at owner-occupied

one-family houses on less than 10 acres. Excluded were mobile homes, condominiums, houses with a business or medical office, houses on 10 or more acres, and housing units in multi-unit buildings. In 1990, the questions were asked of all one-family owner-occupied housing units, including houses on 10 or more acres. They were also asked at mobile homes, condominiums, and houses with a business or medical office.

PERSONS IN UNIT

This item is based on the 100-percent count of persons in occupied housing units. All persons occupying the housing unit are counted, including the householder, occupants related to the householder, and lodgers, roomers, boarders, and so forth.

The data on "persons in unit" show the number of housing units occupied by the specified number of persons. The phrase "persons in unit" is used for housing tabulations, "persons in households" for population items. Figures for "persons in unit" match those for "persons in household" for 100-percent data products. In sample products, they may differ because of the weighting process.

Median Persons in Unit—In computing median persons in unit, a whole number is used as the midpoint of an interval; thus, a unit with 4 persons is treated as an interval ranging from 3.5 to 4.5 persons. Median persons is rounded to the nearest hundredth. (For more information on medians, see the discussion under "Derived Measures.")

Persons in Occupied Housing Units—This is the total population minus those persons living in group quarters. "Persons per occupied housing unit" is computed by dividing the population living in housing units by the number of occupied housing units.

PERSONS PER ROOM

"Persons per room" is obtained by dividing the number of persons in each occupied housing unit by the number of rooms in the unit. Persons per room is rounded to the nearest hundredth. The figures shown refer, therefore, to the number of occupied housing units having the specified ratio of persons per room.

Mean Persons Per Room—This is computed by dividing persons in housing units by the aggregate number of rooms. This is intended to provide a measure of utilization. A higher mean may indicate a greater degree of utilization or crowding; a low mean may indicate underutilization. (For more information on means, see the discussion under "Derived Measures.")

PLUMBING FACILITIES

The data on plumbing facilities were obtained from questionnaire item H10, which was asked at both occupied and vacant housing units. This item was asked on a sample basis. Complete plumbing facilities include hot and cold piped water, a flush toilet, and a bathtub or shower. All three facilities must be located inside the house, apartment, or mobile home, but not necessarily in the same room. Housing units are classified as lacking complete plumbing facilities when any of the three facilities are not present.

Comparability—The 1990 data on complete plumbing facilities are not strictly comparable with the 1980 data. In 1980, complete plumbing facilities were defined as hot and cold piped water, a bathtub or shower, and a flush toilet in the housing unit for the exclusive use of the residents of that unit. In 1990, the Census Bureau dropped the requirement of exclusive use from the definition of complete plumbing facilities. Of the 2.3 million year-round housing units classified in 1980 as lacking complete plumbing for exclusive use, approximately 25 percent of these units had complete plumbing but the facilities were also used by members of another household. From 1940 to 1970, separate and more detailed questions were asked on piped water, bathing, and toilet facilities. In 1970 and 1980, the data on plumbing facilities were shown only for year-round units.

POVERTY STATUS OF HOUSEHOLDS IN 1989

The data on poverty status of households were derived from answers to the income questions. The income items were asked on a sample basis. Households are classified below the poverty level when the total 1989 income of the family or of the nonfamily householder is below the appropriate poverty threshold. The income of persons living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the household size in determining the appropriate poverty threshold. The poverty thresholds vary depending upon three criteria: size of family, number of children, and age of the family householder or unrelated individual for one and two-persons households. (For more information, see the discussion of "Poverty Status in 1989" and "Income in 1989" under Population Characteristics.)

REAL ESTATE TAXES

The data on real estate taxes were obtained from questionnaire item H21, which was asked at owner-occupied one-family houses, condominiums, and mobile homes. The statistics from this question refer to the total amount of all real estate taxes on the entire

property (land and buildings) payable in 1989 to all taxing jurisdictions, including special assessments, school taxes, county taxes, and so forth.

Real estate taxes include State, local, and all other real estate taxes even if delinquent, unpaid, or paid by someone who is not a member of the household. However, taxes due from prior years are not included. If taxes are paid on other than a yearly basis, the payments are converted to a yearly basis.

The payment for real estate taxes is added to payments for fire, hazard, and flood insurance; utilities and fuels; and mortgages (both first and junior mortgages and home equity loans) to derive "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989." A separate question (H23c) determines whether real estate taxes are included in the mortgage payment to the lender(s). This makes it possible to avoid counting taxes twice in the computations.

Comparability—Data for real estate taxes were collected for the first time in 1980. The question was asked only at owner-occupied one-family houses. Excluded were mobile homes or trailers, condominiums, houses with a business or medical office on the property, houses on 10 or more acres, and housing units in multi-unit buildings. In 1990, the question was asked of all one-family owner-occupied houses, including houses on 10 or more acres. It also was asked at mobile homes, condominiums, and one-family houses with a business or medical office on the property.

ROOMS

The data on rooms were obtained from questionnaire item H3, which was asked at both occupied and vacant housing units. The statistics on rooms are in terms of the number of housing units with a specified number of rooms. The intent of this question is to count the number of whole rooms used for living purposes.

For each unit, rooms include living rooms, dining rooms, kitchens, bedrooms, finished recreation rooms, enclosed porches suitable for year-round use, and lodger's rooms. Excluded are strip or pullman kitchens, bathrooms, open porches, balconies, halls or foyers, half-rooms, utility rooms, unfinished attics or basements, or other unfinished space used for storage. A partially divided room is a separate room only if there is a partition from floor to ceiling, but not if the partition consists solely of shelves or cabinets.

Median Rooms—This measure divides the room distribution into two equal parts, one-half of the cases falling below the median number of rooms and one-half above the median. In computing median rooms, the whole number is used as the midpoint of the interval; thus, the category "3 rooms" is treated as an interval ranging

from 2.5 to 3.5 rooms. Median rooms is rounded to the nearest tenth. (For more information on medians, see the discussion under "Derived Measures.")

Aggregate Rooms—To calculate aggregate rooms, an arbitrary value of "10" is assigned to rooms for units falling within the terminal category, "9 or more." (For more information on aggregates and means, see the discussion under "Derived Measures.")

Comparability—Data on rooms have been collected since 1940. In 1970 and 1980, these data were shown only for year-round housing units. In 1990, these data are shown for all housing units.

SECOND OR JUNIOR MORTGAGE PAYMENT

The data on second or junior mortgage payments were obtained from questionnaire items H24a and H24b, which were asked at owner-occupied one-family houses, condominiums, and mobile homes. Question H24a asks whether a second or junior mortgage or a home equity loan exists on the property. Question H24b provides the regular monthly amount required to be paid to the lender on all second or junior mortgages and home equity loans. Amounts are included even if the payments are delinquent or paid by someone else. The amounts reported are included in the computation of "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for units with a mortgage.

All mortgages other than first mortgages are classified as "junior" mortgages. A second mortgage is a junior mortgage that gives the lender a claim against the property that is second to the claim of the holder of the first mortgage. Any other junior mortgage(s) would be subordinate to the second mortgage. A home equity loan is a line of credit available to the borrower that is secured by real estate. It may be placed on a property that already has a first or second mortgage, or it may be placed on a property that is owned free and clear.

If the respondents answered that no first mortgage existed, but a second mortgage did (as in the above case with a home equity loan), a computer edit assigned the unit a first mortgage and made the first mortgage monthly payment the amount reported in the second mortgage. The second mortgage data were then made "No" in question H24a and blank in question H24b.

Comparability—The 1980 census obtained total regular monthly mortgage payments, including payments on second or junior mortgages, from one single question. Two questions were used in 1990: one for regular monthly payments on first mortgages, and one for regular monthly payments on second or junior mortgages and home equity loans.

SELECTED MONTHLY OWNER COSTS

The data on selected monthly owner costs were obtained from questionnaire items H20 through H26 for a sample of owner-occupied one-family houses, condominiums, and mobile homes. Selected monthly owner costs is the sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property (including payments for the first mortgage, second or junior mortgages, and home equity loans); real estate taxes; fire, hazard, and flood insurance on the property; utilities (electricity, gas, and water); and fuels (oil, coal, kerosene, wood, etc.). It also includes, where appropriate, the monthly condominium fee for condominiums and mobile home costs (personal property taxes, site rent, registration fees, and license fees) for mobile homes.

In certain tabulations, selected monthly owner costs are presented separately for specified owner-occupied housing units (owner-occupied one-family houses on fewer than 10 acres without a business or medical office on the property), owner-occupied condominiums, and owner-occupied mobile homes. Data usually are shown separately for units "with a mortgage" and for units "not mortgaged."

Median Selected Monthly Owner Costs—This measure is rounded to the nearest whole dollar.

Comparability—The components of selected monthly owner costs were collected for the first time in 1980. The 1990 tabulations of selected monthly owner costs for specified owner-occupied housing units are virtually identical to 1980, the primary difference was the amounts of the first and second mortgages were collected in separate questions in 1990, while the amounts were collected in a single question in 1980. The component parts of the item were tabulated for mobile homes and condominiums for the first time in 1990.

In 1980, costs for electricity and gas were collected as average monthly costs. In 1990, all utility and fuel costs were collected as yearly costs and divided by 12 to provide an average monthly cost.

SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989

The information on selected monthly owner costs as a percentage of household income in 1989 is the computed ratio of selected monthly owner costs to monthly household income in 1989. The ratio was computed separately for each unit and rounded to the nearest whole percentage. The data are tabulated separately for specified owner-occupied units, condominiums, and mobile homes.

Separate distributions are often shown for units "with a mortgage" and for units "not mortgaged." Units occupied by households reporting no income or a net loss in 1989 are included in the "not computed" category. (For more information, see the discussion under "Selected Monthly Owner Costs.")

Comparability—The components of selected monthly owner costs were collected for the first time in 1980. The tabulations of "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for specified owner-occupied housing units are comparable to 1980.

SEWAGE DISPOSAL

The data on sewage disposal were obtained from questionnaire item H16, which was asked at both occupied and vacant housing units. This item was asked on a sample basis. Housing units are either connected to a public sewer, to a septic tank or cesspool, or they dispose of sewage by other means. A public sewer may be operated by a government body or by a private organization. A housing unit is considered to be connected to a septic tank or cesspool when the unit is provided with an underground pit or tank for sewage disposal. The category, "Other means" includes housing units which dispose of sewage in some other way.

Comparability—Data on sewage disposal have been collected since 1940. In 1970 and 1980, data were shown only for year-round housing units. In 1990, data are shown for all housing units.

SOURCE OF WATER

The data on source of water were obtained from questionnaire item H15, which was asked at both occupied and vacant housing units. Housing units may receive their water supply from a number of sources. A common source supplying water to five or more units is classified as a "Public system or private company." The water may be supplied by a city, county, water district, water company, etc., or it may be obtained from a well which supplies water to five or more housing units. If the water is supplied from a well serving four or fewer housing units, the units are classified as having water supplied by either an "Individual drilled well" or an "Individual dug well." Drilled wells or small diameter wells are usually less than 1-1/2 feet in diameter. Dug wells are usually larger than 1-1/2 feet wide and generally hand dug. The category, "Some other source" includes water obtained from springs, creeks, rivers, lakes, cisterns, etc.

Comparability—Data on source of water have been collected since 1940. In 1970 and 1980, data were shown only for year-round housing units. In 1990, data are shown for all housing units.

TELEPHONE IN HOUSING UNIT

The data on telephones were obtained from questionnaire item H12, which was asked at occupied housing units. This item was asked on a sample basis. A telephone must be inside the house or apartment for the unit to be classified as having a telephone. Units where the respondent uses a telephone located inside the building but not in the respondent's living quarters are classified as having no telephone.

Comparability—Data on telephones in 1980 are comparable to 1990. The 1960 and 1970 censuses collected data on telephone availability. A unit was classified as having a telephone available if there was a telephone number on which occupants of the unit could be reached. The telephone could have been in another unit, in a common hall, or outside the building.

TENURE

The data for tenure were obtained from questionnaire item H4, which was asked at all occupied housing units. All occupied housing units are classified as either owner occupied or renter occupied.

Owner Occupied—A housing unit is owner occupied if the owner or co-owner lives in the unit even if it is mortgaged or not fully paid for. The owner or co-owner must live in the unit and usually is the person listed in column 1 of the questionnaire. The unit is "Owned by you or someone in this household with a mortgage or loan" if it is being purchased with a mortgage or some other debt arrangement such as a deed of trust, trust deed, contract to purchase, land contract, or purchase agreement. The unit is also considered owned with a mortgage if it is built on leased land and there is a mortgage on the unit.

A housing unit is "Owned by you or someone in this household free and clear (without a mortgage)" if there is no mortgage or other similar debt on the house, apartment, or mobile home including units built on leased land if the unit is owned outright without a mortgage. Although owner-occupied units are divided between mortgaged and owned free and clear on the questionnaire, census data products containing 100-percent data show only total owner-occupied counts. More extensive mortgage information was collected on the long-form questionnaire and are shown in census products containing sample data. (For more information, see the discussion under "Mortgage Status.")

Renter Occupied—All occupied housing units which are not owner occupied, whether they are rented for cash rent or occupied without payment of cash rent, are classified as renter occupied. "No cash rent" units are separately identified in the rent tabulations. Such units

are generally provided free by friends or relatives or in exchange for services such as resident manager, caretaker, minister, or tenant farmer. Housing units on military bases also are classified in the "No cash rent" category. "Rented for cash rent" includes units in continuing care, sometimes called life care arrangements. These arrangements usually involve a contract between one or more individuals and a health services provider guaranteeing the individual shelter, usually a house or apartment, and services, such as meals or transportation to shopping or recreation.

Comparability—Data on tenure have been collected since 1890. In 1970, the question on tenure also included a category for condominium and cooperative ownership. In 1980, condominium units and cooperatives were dropped from the tenure item, and since 1980, only condominium units are identified in a separate question.

For 1990, the response categories were expanded to allow the respondent to report whether the unit was owned with a mortgage or free and clear (without a mortgage). The distinction between units owned with a mortgage and units owned free and clear was added in 1990 to improve the count of owner-occupied units. Research after the 1980 census indicated some respondents did not consider their units owned if they had a mortgage.

UNITS IN STRUCTURE

The data on units in structure (also referred to as "type of structure") were obtained from questionnaire item H2, which was asked at all housing units. A structure is a separate building that either has open spaces on all sides or is separated from other structures by dividing walls that extend from ground to roof. In determining the number of units in a structure, all housing units, both occupied and vacant, are counted. Stores and office space are excluded.

The statistics are presented for the number of housing units in structures of specified type and size, not for the number of residential buildings.

1-Unit, Detached—This is a 1-unit structure detached from any other house; that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached as long as the building has open space on all four sides. Mobile homes or trailers to which one or more permanent rooms have been added or built also are included.

1-Unit, Attached—This is a 1-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses

attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

2 or More Units—These are units in structures containing 2 or more housing units, further categorized as units in structures with 2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more units.

Mobile Home or Trailer—Both occupied and vacant mobile homes to which no permanent rooms have been added are counted in this category. Mobile homes or trailers used only for business purposes or for extra sleeping space and mobile homes or trailers for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.

Other—This category is for any living quarters occupied as a housing unit that does not fit the previous categories. Examples that fit this category are houseboats, railroad cars, campers, and vans.

Comparability—Data on units in structure have been collected since 1940 and on mobile homes and trailers since 1950. In 1970 and 1980, these data were shown only for year-round housing units. In 1990, these data are shown for all housing units. In 1980, the data were collected on a sample basis. The category, "Boat, tent, van, etc." was replaced in 1990 by the category "Other." In some areas, the proportion of units classified as "Other" is far larger than the number of units that were classified as "Boat, tent, van, etc." in 1980.

USUAL HOME ELSEWHERE

The data for usual home elsewhere are obtained from questionnaire item B, which was completed by census employees. A housing unit temporarily occupied at the time of enumeration entirely by persons with a usual residence elsewhere is classified as vacant. The occupants are classified as having a "Usual home elsewhere" and are counted at the address of their usual place of residence. Typical examples are people in a vacation home, persons renting living quarters temporarily for work, and migrant workers.

Limitation of the Data—Evidence from previous censuses suggests that in some areas enumerators marked units as "vacant—usual home elsewhere" when they should have marked "vacant—regular."

Comparability—Data for usual home elsewhere was tabulated for the first time in 1980.

UTILITIES

The data on utility costs were obtained from questionnaire items H20a through H20d, which were asked of occupied housing units. These items were asked on a sample basis.

Questions H20a through H20d asked for the yearly cost of utilities (electricity, gas, water) and other fuels (oil, coal, wood, kerosene, etc.). For the tabulations, these yearly amounts are divided by 12 to derive the average monthly cost and are then included in the computation of "Gross Rent," "Gross Rent as a Percentage of Household Income in 1989," "Selected Monthly Owner Costs," and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989."

Costs are recorded if paid by or billed to occupants, a welfare agency, relatives, or friends. Costs that are paid by landlords, included in the rent payment, or included in condominium or cooperative fees are excluded.

Limitation of the Data—Research has shown that respondents tended to overstate their expenses for electricity and gas when compared to utility company records. There is some evidence that this overstatement is reduced when yearly costs are asked rather than monthly costs. Caution should be exercised in using these data for direct analysis because costs are not reported for certain kinds of units such as renter-occupied units with all utilities included in the rent and owner-occupied condominium units with utilities included in the condominium fee.

Comparability—The data on utility costs have been collected since 1980 for owner-occupied housing units, and since 1940 for renter-occupied housing units. In 1980, costs for electricity and gas were collected as average monthly costs. In 1990, all utility and fuel costs were collected as yearly costs and divided by 12 to provide an average monthly cost.

VACANCY STATUS

The data on vacancy status were obtained from questionnaire item C1, which was completed by census enumerators. Vacancy status and other characteristics of vacant units were determined by enumerators obtaining information from landlords, owners, neighbors, rental agents, and others. Vacant units are subdivided according to their housing market classification as follows:

For Rent—These are vacant units offered "for rent," and vacant units offered either "for rent" or "for sale."

For Sale Only—These are vacant units being offered "for sale only," including units in cooperatives and condominium projects if the individual units are offered "for sale only."

Rented or Sold, Not Occupied—If any money rent has been paid or agreed upon but the new renter has not moved in as of the date of enumeration, or if the unit has recently been sold but the new owner has not yet moved in, the vacant unit is classified as "rented or sold, not occupied."

For Seasonal, Recreational, or Occasional Use—These are vacant units used or intended for use only in certain seasons or for weekend or other occasional use throughout the year.

Seasonal units include those used for summer or winter sports or recreation, such as beach cottages and hunting cabins. Seasonal units also may include quarters for such workers as herders and loggers. Interval ownership units, sometimes called shared-ownership or time-sharing condominiums, also are included here.

For Migrant Workers—These include vacant units intended for occupancy by migratory workers employed in farm work during the crop season. (Work in a cannery, a freezer plant, or a food-processing plant is not farm work.)

Other Vacant—If a vacant unit does not fall into any of the classifications specified above, it is classified as "other vacant." For example, this category includes units held for occupancy by a caretaker or janitor, and units held for personal reasons of the owner.

Homeowner Vacancy Rate—This is the percentage relationship between the number of vacant units for sale and the total homeowner inventory. It is computed by dividing the number of vacant units for sale only by the sum of the owner-occupied units and the number of vacant units that are for sale only.

Rental Vacancy Rate—This is the percentage relationship of the number of vacant units for rent to the total rental inventory. It is computed by dividing the number of vacant units for rent by the sum of the renter-occupied units and the number of vacant units for rent.

Comparability—Data on vacancy status have been collected since 1940. For 1990, the category, "seasonal/recreational/occasional use" combined vacant units classified in 1980 as "seasonal or migratory" and "held for occasional use." Also, in 1970 and 1980, housing characteristics generally were presented only for year-round units. In 1990, housing characteristics are shown for all housing units.

VALUE

The data on value (also referred to as "price asked" for vacant units) were obtained from questionnaire item H6, which was asked at housing units that were owned, being bought, or vacant for sale at the time of enumeration. Value is the respondent's estimate of how much the property (house and lot, mobile home and lot, or condominium unit) would sell for if it were for sale. If the house or mobile home was owned or being bought, but the land on which it sits was not, the respondent was

asked to estimate the combined value of the house or mobile home and the land. For vacant units, value was the price asked for the property.

Value was tabulated separately for all owner-occupied and vacant-for-sale housing units, owner-occupied and vacant-for-sale mobile homes or trailers, and specified owner-occupied and specified vacant-for-sale housing units. Specified owner-occupied and specified vacant-for-sale housing units include only one-family houses on fewer than 10 acres without a business or medical office on the property. The data for "specified units" exclude mobile homes, houses with a business or medical office, houses on 10 or more acres, and housing units in multi-unit buildings.

Median and Quartile Value—The median divides the value distribution into two equal parts. Quartiles divide the value distribution into four equal parts. These measures are rounded to the nearest hundred dollars. (For more information on medians and quartiles, see the discussion under "Derived Measures.")

Aggregate Value—To calculate aggregate value, the amount assigned for the category "Less than \$10,000" is \$9,000. The amount assigned to the category "\$500,000 or more" is \$600,000. Mean value is rounded to the nearest hundred dollars. (For more information on aggregates and means, see the discussion under "Derived Measures.")

Comparability—In 1980, value was asked only at owner-occupied or vacant-for-sale one-family houses on fewer than 10 acres with no business or medical office on the property and at all owner-occupied or vacant-for-sale condominium housing units. Mobile homes were excluded. Value data were presented for specified owner-occupied housing units, specified vacant-for-sale-only housing units, and owner-occupied condominium housing units.

In 1990, the question was asked at all owner-occupied or vacant-for-sale-only housing units with no exclusions. Data presented for specified owner-occupied and specified vacant-for-sale-only housing units will include one-family condominium houses but not condominiums in multi-unit structures since condominium units are now identified only in long-form questionnaires.

For 1990, quartiles have been added because the range of values and rents in the United States has increased in recent years. Upper and lower quartiles can be used to note large value and rent differences among various geographic areas.

VEHICLES AVAILABLE

The data on vehicles available were obtained from questionnaire item H13, which was asked at occupied housing units. This item was asked on a sample basis. These data show the number of households with a

specified number of passenger cars, vans, and pickup or panel trucks of one-ton capacity or less kept at home and available for the use of household members. Vehicles rented or leased for one month or more, company vehicles, and police and government vehicles are included if kept at home and used for nonbusiness purposes. Dismantled or immobile vehicles are excluded. Vehicles kept at home but used only for business purposes also are excluded.

Vehicles Per Household—This is computed by dividing aggregate vehicles available by the number of occupied housing units.

Limitation of the Data—The 1980 census evaluations showed that the number of automobiles was slightly overreported; the number of vans and trucks slightly underreported. The statistics do not measure the number of vehicles privately owned or the number of households owning vehicles.

Comparability—Data on automobiles available were collected from 1960 to 1980. In 1980, a separate question also was asked on the number of trucks and vans. The data on automobiles and trucks and vans were presented separately and also as a combined vehicles available tabulation. The 1990 data are comparable to the 1980 vehicles available tabulations.

YEAR HOUSEHOLDER MOVED INTO UNIT

The data on year householder moved into unit were obtained from questionnaire item H8, which was asked at occupied housing units. This item was asked on a sample basis. These data refer to the year of the latest move by the householder. If a householder moved back into a housing unit he or she previously occupied, the year of the latest move was reported. If the householder moved from one apartment to another within the same building, the year the householder moved into the present apartment was reported. The intent is to establish the year the present occupancy by the householder began. The year that the householder moved in is not necessarily the same year other members of the household moved, although in the great majority of cases an entire household moves at the same time.

Comparability—In 1960 and 1970, this question was asked of every person and included in population reports. This item in housing tabulations refers to the year the householder moved in. In 1980 and 1990, the question was asked only of the householder.

YEAR STRUCTURE BUILT

The data on year structure built were obtained from questionnaire item H17, which was asked at both occupied and vacant housing units. This item was asked on

a sample basis. Data on year structure built refer to when the building was first constructed, not when it was remodeled, added to, or converted. For housing units under construction that met the housing unit definition—that is, all exterior windows, doors, and final usable floors were in place—the category “1989 or March 1990” was used. For a houseboat or a mobile home or trailer, the manufacturer’s model year was assumed to be the year built. The figures shown in census data products relate to the number of units built during the specified periods that were still in existence at the time of enumeration.

Median Year Structure Built—The median divides the distribution into two equal parts. The median is rounded to the nearest calendar year. Median age of housing can be obtained by subtracting median year structure built from 1990. For example, if the median year structure built is 1957, the median age of housing in that area is 33 years (1990 minus 1957).

Limitation of the Data—Data on year structure built are more susceptible to errors of response and nonreporting than data on many other items because respondents must rely on their memory or on estimates by persons who have lived in the neighborhood a long time. Available evidence indicates there is underreporting in the older-year-structure-built categories, especially “Built in 1939 or earlier.” The introduction of the “Don’t know” category (see the discussion on “Comparability”) may have resulted in relatively higher allocation rates. Data users should refer to the discussion in Appendix C, Accuracy of the Data, and to the allocation tables.

Comparability—Data on year structure built were collected for the first time in the 1940 census. Since then, the response categories have been modified to accommodate the 10-year period between each census. In 1990, the category, “Don’t Know,” was added in an effort to minimize the response error mentioned in the paragraph above on limitation of the data.

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. In printed reports, zero is indicated by a dash (-).

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. It is used by the Census Bureau in calculating median income within intervals wider than \$2,500. In Pareto interpolation, the median is derived by interpolating between the logarithms of the upper and lower income limits of the median category.

Mean

This measure represents an arithmetic average of a set of values. It is derived by dividing the sum of a group of numerical items (or aggregate) by the total number of items. Aggregates are used in computing mean values. For example, mean family income is obtained by dividing the aggregate of all income reported by persons in families by the total number of families. (Additional information on means and aggregates is included in the separate explanations of many population and housing subjects.)

Median

This measure represents the middle value in a distribution. The median divides the total frequency into two equal parts: one-half of the cases fall below the median and one-half of the cases exceed the median. The median is computed on the basis of the distribution as tabulated, which is sometimes more detailed than the distribution shown in specific census publications and other data products.

In reports, if the median falls within the upper interval of the tabulation distribution, the median is shown as the initial value of the interval followed by a plus sign (+); if within the lower interval, the median is shown as the upper value of the category followed by a minus sign (-). For summary tape files, if the median falls within the upper or lower interval, it is set to a specified value. (Additional information on medians is included in the separate explanations of many population and housing subjects.)

Percentages, Rates, and Ratios

These measures are frequently presented in census products to compare two numbers or two sets of measurements. These comparisons are made in two ways: (1) subtraction, which provides an absolute measure of the difference between two items, and (2) the quotient of two numbers, which provides a relative measure of difference.

Quartile

This measure divides a distribution into four equal parts. The first quartile (or lower quartile) is the value that defines the upper limit of the lowest one-quarter of the cases. The second quartile is the median. The third quartile (or upper quartile) defines the lower limit of the

upper one-quarter of the cases in the distribution. The difference between the upper and lower quartiles is called the interquartile range. This interquartile range is

less affected by wide variations than is the mean. Quartiles are presented for certain financial characteristics such as housing value and rent.

APPENDIX C. Notes on Selected Data Items

This section primarily contains explanations for the treatment of certain variables in PUMS, and should be used in conjunction with the data dictionary and appendix B.

H18-19 Type of Area (Areatype)

Areatype is a description of the geographic characteristics in a PUMA. For 1990, separate codes describe PUMAs on the 1% and 5% samples. Any county, county equivalent, place, etc., which had more than 200,000 persons could be subdivided into more than one PUMA as long as the resultant grouping had a minimum of 100,000 persons.

Codes 10-50 define 1% (B) sample areas, and codes 60-82 define 5% (A) sample areas.

H20-23 MSA/PMSA Residence

Appendix G indicates those MAs shown in their entirety on each PUMS file. In addition, MA codes also appear in H20-23 for PUMAs entirely within an MA, even where the total MA is not shown.

H29-32 HOUSING WEIGHT

We are including weights for each housing unit. These weights can be summed to get estimates of specific housing unit characteristics. See chapter 3 for a discussion on the proper use of these weights.

H33-34 Number of Person Records Following This Housing Unit Record

Users interested in tabulating household size or the number of persons in the housing unit unit may use this item, provided that records for persons in group quarters are first screened out. Persons-in-group-quarters records are identified by codes of 1-2 in H35 (Group Quarters Institution) or by codes 12-13 in P9-10 (Relationship).

H35 (Group Quarters Institution)

Because of disclosure concerns, the only characteristic that will be shown describing group quarters is whether it is an institutional or noninstitutional group quarters.

H69-115 and P127-182 Most economic items were topcoded on a national basis. The criteria used was whether the topcode protected either 1/2 of 1% of the total universe or 3% of the cases with the characteristic. In most instances, we used the value that was more favorable to the user. In all topcoded situations; if there were at least 30 cases above the topcoded amount we provided the state median of all values above the topcode. Pay close attention to the period covered by the estimate (some are monthly, others annual). A complete list of topcoded variables and respective state medians is in the User Note chapter.

Appendix C: Notes on Selected Data Items (continued)

H111-128 GROSS RENT as a % of HH Income
and
H124-128 Selected Monthly Owners Costs as a % of HH Income.

These variables are calculated from the topcoded components, and, in those cases where original amounts were topcoded, either the topcode or the medians were used. In those situations, the proportion of income represented may not match distributions found on other products from sample data.

For those components which required monthly averages, we computed, and rounded the monthly average from the reported annual data.

The following Recodes are provided for the users convenience. They can be constructed from original data through manipulation of related items. See the data dictionary for values for items.

H134 Family Income
H141 Household Income
H148 Workers in Family in 1989
H149 Household Language
H150 Linguistic Isolation
H151 Household Family Type
H153 Number of Natural Born/Adopted
H155 Number of Own Stepchildren
H157 Number of Persons in Family
H159 Number of Related Children in Household
H161 Presence of Nonrelatives in Household
H162 Presence of Persons under 18 in Household
H163 Presence of Persons over 60 in Household
H164 Presence of Persons over 65 in Household
H165 Presence of Subfamilies in Household

Appendix C: Notes on Selected Data Items (continued)

Number Title

P12-14 Race

For 1990 PUMS, we are showing 62 detailed race codes; the same distribution as shown in STF 2 matrix amended with codes for 25 larger American Indian Tribes. Check appendix I for specific descriptions of these race groups included in codes not separately identified here, (e.g., All other Asian (602, 620-652, 985)).

VALUE	RACE(62) DESCRIPTION
001	White (800-869, 971)
002	Black (870-934, 972)
004	Eskimo (935-940, 974)
005	Aleut (941-970, 975)
	Asian or Pacific Islander (600-699, 976-985):
	Asian (600-652, 976, 977, 979-982, 985):
	Chinese (605-607, 976):
006	Chinese, except Taiwanese (605, 976)
007	Taiwanese (606, 607)
008	Filipino (608, 977)
009	Japanese (611, 981)
010	Asian Indian (600, 982)
011	Korean (612, 979)
012	Vietnamese (619, 980)
013	Cambodian (604)
014	Hmong (609)
015	Laotian (613)
016	Thai (618)
	Other Asian (601-603, 610, 614-617, 620-652, 985):
017	Bangladeshi (601)
018	Burmese (603)
019	Indonesian (610)
020	Malayan (614)
021	Okinawan (615)
022	Pakistani (616)
023	Sri Lankan (617)
024	All other Asian (602, 620-652, 985)
	Pacific-Islander (653-699, 978, 983, 984):
	Polynesian (653-659, 978, 983):
025	Hawaiian (653, 654, 978)
026	Samoan (655, 983)
027	Tahitian (656)
028	Tongan (657)
029	Other Polynesian (658, 659)
	Micronesian (660-675, 984):
030	Guamanian (660, 984)
031	Northern Mariana Islander (661, 671, 673)
032	Palauan (663)

Appendix C: Notes on Selected Data Items (continued)

033	Other Micronesian (662, 664-670, 672, 674, 675)
	Melanesian (676-680):
034	Fijian (676)
035	Other Melanesian (677-680)
036	Pacific Islander, not specified (681-699)
037	Other race (700-799, 986-999)
	American Indian (000-599, 973):
301	Alaskan Athabaskan (000, 001, 008, 009, 014)
302	Apache (255-264)
303	Blackfoot (360)
304	Cherokee (416-422, 555-557, 562)
305	Cheyenne (361-363)
306	Chickasaw (436)
307	Chippewa (330-353, 355, 544)
308	Choctaw (226, 228, 404, 434, 520, 559)
309	Comanche (325, 523)
310	Creek (423, 425, 426, 429-432, 449, 540, 541, 558, 560)
311	Crow (322)
312	Iroquois (405-415)
313	Kiowa (276, 522)
314	Lumbee (464)
315	Navajo (275)
316	Osage (320)
317	Paiute (175-192, 542)
318	Pima (217)
319	Potawatomi (367-374)
320	Pueblo (229-254, 506, 573)
321	Seminole (428, 438-443)
322	Shoshone (195-206, 494, 518)
323	Sioux (282-312, 326, 327)
324	Tlingit (017)
325	Tohono O'Odham (218-222)
326	All other tribes (002-007, 010-013, 015, 016, 018-174, 193, 194, 207-216, 223-225, 227, 265-274, 277-281, 313-319, 321, 323, 324, 328, 329, 354, 356-359, 364-366, 375-403, 424, 427, 433, 435, 437, 444-448, 450-463, 465-493, 495-505, 507-517, 519, 521, 524-539, 543, 545-547, 550-554, 561, 563-572, 574, 575, 599)
327	Tribe not specified (548, 549, 576-598) Tribe not reported (973)

P22-25 PERSON WEIGHT

We are providing weights for each person in the housing unit. Estimates for characteristics are made by summing the weights for those persons with the characteristic. See chapter 3 for a discussion on how to use the weights.

P26-37 The following variables are recodes and were derived for user convenience, Employment Status of Parents, Place of Birth, Married, Spouse Present/Spouse Absent, Own Child, Presence and age of own Children, Related Child, Detailed Relationship.

Appendix C: Notes on Selected Data Items (continued)

P62-66 Migration PUMA (MIGPUMA)
and
P97-101 Place of Work PUMA (POWPUMA)

Unlike current residence, the PUMAs for migration and place-of-work data are defined only to the whole county, county equivalent, or place level for PUMS. Therefore, it is not possible to tabulate either migration or place of work to the "group of census tracts level".

P85, P86, Work Limitation Status (DISABL1), Work Prevented Status (DISABL2), Mobility Limitation Status (MOBILLIM), P87, and P88 Personal Care Limitation Status (PERSCARE)

The following categories of persons are included in the (N/A) category for the variables P85 thru P88:

- Under 16 years;
- In wards in general and military hospitals for patients who have no usual home elsewhere;
- In hospitals or wards for the chronically ill;
- In military stockades or jails;
- In crews of civilian vessels;
- In transient quarters for temporary residents;
- In military quarters on base;
- On military ships.

P183 Augmented Person

In rare instances during the implementation of the sample weighting process, the sample size was considered inadequate to make estimates of sample data. In collection block groups with a designated 1-in-2 sampling rate, augmentation was employed if the 100% housing unit count was at least 6 and the observed sampling rate was less than 1-in-12. In collection block groups with a designated 1-in-6 or 1-in-8 sampling rate, augmentation was employed if the 100% housing unit was at least 12 and the observed sampling rate was less than 1-in-30. Augmentation was performed separately for group quarters persons using the same criteria as for the 1-in-6 or 1-in-8 designated sampling rates. Augmentation was achieved by selecting a sample of housing units (or group quarters persons) to increase the observed sampling rates to at least 1-in-12 or 1-in-30. Using the 100% characteristics, the selected households (or group quarters persons) were matched by a hot deck procedure to similar housing units (or group quarters persons) with sample data. The sample data were then copied to the augmented housing units (or group quarters persons). The augmentation rate was very small. Most augmentation occurred for group quarters persons.

Allocation of . . .

See the discussion of allocation flags beginning on page 3-16.

For other data items

See appendix B. Many common derived variables are explained.

Comparing Estimates from PUMS to other census data

Users of the PUMS files should be aware that estimates derived from these files are subject to sampling variability as with statistics derived from any sample.

Sampling variability increases as the sample size decreases. Therefore, estimates derived from the full census sample are more reliable than the corresponding estimates from the PUMS data products. Estimates in standard sample data products, such as summary tape files (STF 3 and 4) and the reports from the characteristics of population and housing series (CPH-3, 4, and 5) are more adequate than the corresponding estimates from the PUMS files, particularly for rare populations and population subgroups.

The PUMS files are produced by processing the full census sample through a second sampling operation. Given the census sample, the PUMS estimates are unbiased. This means that the average value of the estimated characteristic over all possible PUMS samples would match the estimate from the full census sample. In general, the PUMS estimates are no more biased than the census sample estimates. Subsampling the census sample to produce the PUMS files increases the variance of the estimates derived from these data products. In general, the variance of an estimate derived from the 5-percent PUMS is about 4 times the variance of the same estimate derived from the full census sample. For the 1-percent PUMS, the variance increases by a factor of about 20.

As an example, consider the census sample and the 1-percent PUMS estimate for the characteristic Number of families with 1 worker for a given metropolitan area. The total number of families is 200,000.

Census sample estimate	- 69,124
PUMS estimate	- 73,570

Computing the variance of the estimates shows that the variance of the PUMS estimate is about 20 times that of the full census estimate. The standard error of an estimate is the square root of the variance. The variance of the full census estimate is the square root of the variance. The variance of the full census estimate is $(714)^2$, while the corresponding PUMS estimate has variance $(3219)^2$. The figure in parenthesis is the standard error of the estimate. The user should refer to Chapter 3 - Accuracy of the Data - of the PUMS technical documentation for a detailed explanation on how to compute variance estimates. It is important to note that although the ratio of the variances is about 20, the coefficient of variation (CV) of the PUMS estimate is about 4.4 percent. The CV measures the reliability (or adequacy) of an estimate. A CV of less than 20 percent is considered adequate in most cases.

SHOULD THE ESTIMATES BE EQUAL? Is the difference between the estimate derived from the full census sample and that derived from the PUMS -- 4,446 families with 1 worker -- due to sampling?

Confidence intervals and hypothesis testing are used to answer the above questions. We want to address the question as to whether we should be concerned by the size of the difference between the two estimates.

If we add and subtract two standard errors from the PUMS estimate, we develop a 95-percent confidence interval. If the full census sample estimate falls in the interval, then it can be concluded that the difference is within sampling variability. In this case, the 95-percent confidence interval around the PUMS estimate is 67,132 to 80,008, which includes the census sample estimate, 69,124. This suggests that the difference should not be cause for concern.

Data users should be especially cautious in using estimates for rare populations or population subgroups since these estimates can be expected to vary widely from the figures derived from the full census sample.

APPENDIX D.

Collection and Processing Procedures

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ENUMERATION AND RESIDENCE RULES

In accordance with census practice dating back to the first United States census in 1790, each person was to be enumerated as an inhabitant of his or her "usual residence" in the 1990 census. Usual residence is the place where the person lives and sleeps most of the time or considers to be his or her usual residence. 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 persons whose usual place of residence is not immediately apparent. Furthermore, this practice means that persons were not always counted as residents of the place where they happened to be staying on Census Day (April 1, 1990).

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. In a departure from earlier censuses, foreign diplomatic personnel participated voluntarily in the census, regardless of their residence on or off the premises of an embassy. As in previous censuses, persons in the United States specifically excluded from the census were foreign travelers who had not established a residence.

Americans with a usual residence outside the United States were not enumerated in the 1990 census. United States military and Federal civilian employees, and their dependents overseas, are included in the population counts for States for purposes of Congressional apportionment, but are excluded from all other tabulations for States and their subdivisions. The counts of United States military and Federal civilian employees, and their dependents, were obtained from administrative records maintained by Federal departments and agencies. Other

Americans living overseas, such as employees of international agencies and private businesses and students, were not enumerated, nor were their counts obtained from administrative sources. On the other hand, Americans temporarily overseas were to be enumerated at their usual residence in the United States.

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 or the place where the person considers to be his or her usual home. If a person had no usual residence, the person was to be counted where he or she was staying on April 1, 1990.

Persons temporarily away from their usual residence, whether in the United States or overseas, on a vacation or on a business trip, were counted at their usual residence. Persons who occupied more than one residence during the year were counted at the one they considered to be their usual residence. Persons who moved on or near Census Day were counted at the place they considered to be their usual residence.

Persons in the Armed Forces—Members of the Armed Forces were counted as residents of the area in which the installation was located, either on the installation or in the surrounding community. Family members of Armed Forces personnel were counted where they were living on Census Day (for example, with the Armed Forces person or at another location).

Each Navy ship not deployed to the 6th or 7th Fleet was attributed to the municipality that the Department of the Navy designated as its homeport. If the homeport included more than one municipality, ships berthed there on Census Day were assigned by the Bureau of the Census to the municipality in which the land immediately adjacent to the dock or pier was actually located. Ships attributed to the homeport, but not physically present and not deployed to the 6th or 7th Fleet, were assigned to the municipality named on the Department of the Navy's homeport list. These rules also apply to Coast Guard vessels.

Personnel assigned to each Navy and Coast Guard ship were given the opportunity to report a residence off the ship. Those who did report an off-ship residence in the communities surrounding the homeport were counted there; those who did not were counted as residents of

the ship. Personnel on Navy ships deployed to the 6th or 7th Fleet on Census Day were considered to be part of the overseas population.

Persons on Maritime Ships—Persons aboard maritime ships who reported an off-ship residence were counted at that residence. Those who did not were counted as residents of the ship, and were attributed as follows:

1. The port where the ship was docked on Census Day, if that port was in the United States or its territories.
2. The port of departure if the ship was at sea, provided the port was in the United States or its territories.
3. The port of destination in the United States or its territories, if the port of departure of a ship at sea was a foreign port.
4. The overseas population if the ship was docked at a foreign port or at sea between foreign ports. (These persons were not included in the overseas population for apportionment purposes.)

Persons 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.

Persons in Institutions—Persons under formally authorized, supervised care or custody, such as in Federal or State prisons; local jails; Federal detention centers; juvenile institutions; nursing, convalescent, and rest homes for the aged and dependent; or homes, schools, hospitals, or wards for the physically handicapped, mentally retarded, or mentally ill, were counted at these places.

Persons Away From Their Usual Residence on Census Day—Migrant agricultural workers who did not report a usual residence elsewhere were counted as residents of the place where they were on Census Day. Persons in worker camps who did not report a usual residence elsewhere were counted as residents of the camp where they were on Census Day.

In some parts of the country, natural disasters displaced significant numbers of households from their usual place of residence. If these persons reported a destroyed or damaged residence as their usual residence, they were counted at that location.

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

DATA COLLECTION PROCEDURES

The 1990 census was conducted primarily through self-enumeration. The questionnaire packet included general information about the 1990 census and an

instruction guide explaining how to complete the questionnaire. Spanish-language questionnaires and instruction guides were available on request. Instruction guides also were available in 32 other languages.

Enumeration of Housing Units

Each housing unit in the country received one of two versions of the census questionnaire:

1. A short-form questionnaire that contained a limited number of basic population and housing questions; these questions were asked of all persons and housing units and are often referred to as 100-percent questions.
2. A long-form questionnaire that contained the 100-percent items and a number of additional questions; a sampling procedure was used to determine those housing units that were to receive the long-form questionnaire.

Three sampling rates were employed. For slightly more than one-half of the country, one in every six housing units (about 17 percent) received the long-form or sample questionnaire. In functioning local governmental units (counties and incorporated places, and in some parts of the country, towns and townships) estimated to have fewer than 2,500 inhabitants, every other housing unit (50 percent) received the sample questionnaire in order to enhance the reliability of the sample data for these small areas. For census tracts and block numbering areas having more than 2,000 housing units in the Census Bureau's address files, one in every eight housing units (about 13 percent) received a sample questionnaire, providing reliable statistics for these areas while permitting the Census Bureau to stay within a limit of 17.7 million sample questionnaires, or a one-in-six sample, nationwide.

The mail-out/mail-back procedure was used mainly in cities, suburban areas, towns, and rural areas where mailing addresses consisted of a house number and street name. In these areas, the Census Bureau developed mailing lists that included about 88.4 million addresses. The questionnaires were delivered through the mail and respondents were to return them by mail. Census questionnaires were delivered 1 week before Census Day (April 1, 1990).

The update/leave/mail-back method was used mainly in densely populated rural areas where it was difficult to develop mailing lists because mailing addresses did not use house number and street name. The Census Bureau compiled lists of housing units in advance of the census. Enumerators delivered the questionnaires, asked respondents to return them by mail, and added housing units not on the mailing lists. This method was used mainly in the South and Midwest, and also included some high-rise, low-income urban areas. A variation of this method

was used in urban areas having large numbers of boarded-up buildings. About 11 million housing units were enumerated using this method.

The list/enumerate method (formerly called conventional or door-to-door enumeration) was used mainly in very remote and sparsely-settled areas. The United States Postal Service delivered unaddressed short-form questionnaires before Census Day. Starting a week before Census Day, enumerators canvassed these areas, checked that all housing units received a questionnaire, created a list of all housing units, completed long-form questionnaires, and picked up the completed short-form questionnaires. This method was used mainly in the West and Northeast to enumerate an estimated 6.5 million housing units.

Followup

Nonresponse Followup—In areas where respondents were to mail back their questionnaires, an enumerator visited each address from which a questionnaire was not received.

Coverage and Edit-Failure Followup—In the mail-back areas, some households returned a questionnaire that did not meet specific quality standards because of incomplete or inconsistent information, or the respondent had indicated difficulty in deciding who was to be listed on the questionnaire. These households were contacted by telephone or by personal visit to obtain the missing information or to clarify who was to be enumerated in the household. In areas where an enumerator picked up the questionnaires, the enumerator checked the respondent-filled questionnaire for completeness and consistency.

Special Enumeration Procedures

Special procedures and questionnaires were used for the enumeration of persons in group quarters, such as college dormitories, nursing homes, prisons, military barracks, and ships. The questionnaires (Individual Census Reports, Military Census Reports, and Shipboard Census Reports) included the 100-percent population questions but did not include any housing questions. In all group quarters, all persons were asked the basic population questions; in most group quarters, additional questions were asked of a sample (one-in-six) of persons.

Shelter and Street Night (S-Night)

The Census Bureau collected data for various components of the homeless population at different stages in the 1990 census. "Shelter and Street Night" (S-Night) was a special census operation to count the population in four types of locations where homeless people are

found. On the evening of March 20, 1990, and during the early morning hours of March 21, 1990, enumerators counted persons in pre-identified locations:

1. Emergency shelters for the homeless population (public and private; permanent and temporary).
2. Shelters with temporary lodging for runaway youths.
3. Shelters for abused women and their children.
4. Open locations in streets or other places not intended for habitation.

Emergency shelters include all hotels and motels costing \$12 or less (excluding taxes) per night regardless of whether persons living there considered themselves to be homeless, hotels and motels (regardless of cost) used entirely to shelter homeless persons, and pre-identified rooms in hotels and motels used for homeless persons and families. Enumeration in shelters usually occurred from 6 p.m. to midnight; street enumeration, from 2 a.m. to 4 a.m.; abandoned and boarded-up buildings from 4 a.m. to 8 a.m.; and shelters for abused women, from 6 p.m. on March 20 to noon on March 21.

Other components, which some consider as part of the homeless population, were enumerated as part of regular census operations. These include persons doubled up with other families, as well as persons with no other usual home living in transient sites, such as commercial campgrounds, maternity homes for unwed mothers, and drug/alcohol abuse detoxification centers. In institutions, such as local jails and mental hospitals, the Census Bureau does not know who has a usual home elsewhere; therefore, even though some are literally homeless, these persons cannot be identified separately as a component of the homeless population.

There is no generally agreed-upon definition of "the homeless," and there are limitations in the census count that prevent obtaining a total count of the homeless population under any definition. As such, the Census Bureau does not have a definition and will not provide a total count of "the homeless." Rather, the Census Bureau will provide counts and characteristics of persons found at the time of the census in *selected* types of living arrangements. These selected components can be used as building blocks to construct a count of homeless persons appropriate to particular purposes as long as the data limitations are taken into account.

In preparation for "Shelter-and-Street-Night" enumeration, the regional census centers (RCC's) mailed a certified letter (Form D-33 (L)) to the highest elected official of each active functioning government of the United States (more than 39,000) requesting them to identify:

1. All shelters with sleeping facilities (permanent and temporary, such as church basements, armories, public buildings, and so forth, that could be open on March 20).

2. Hotels and motels used to house homeless persons and families.
3. A list of outdoor locations where homeless persons tend to be at night.
4. Places such as bus or train stations, subway stations, airports, hospital emergency rooms, and so forth, where homeless persons seek shelter at night.
5. The specific addresses of abandoned or boarded-up buildings where homeless persons were thought to stay at night.

The letter from the RCC's to the governmental units emphasized the importance of listing night-time congregating sites. The list of shelters was expanded using information from administrative records and informed local sources. The street sites were limited to the list provided by the jurisdictions. All governmental units were eligible for "Shelter and Street Night." For cities with 50,000 or more persons, the Census Bureau took additional steps to update the list of shelter and street locations if the local jurisdiction did not respond to the certified letter. Smaller cities and rural areas participated if the local jurisdiction provided the Census Bureau a list of shelters or open public places to visit or if shelters were identified through our inventory development, local knowledge update, or during the Special Place Prelist operation.

The Census Bureau encouraged persons familiar with homeless persons and the homeless themselves to apply as enumerators. This recruiting effort was particularly successful in larger cities.

For shelters, both long- and short-form Individual Census Reports (ICR's) were distributed. For street enumeration, only short-form ICR's were used. Persons in shelters and at street locations were asked the basic population questions. Additional questions about social and economic characteristics were asked of a sample of persons in shelters only.

Enumerators were instructed *not* to ask who was homeless; rather, they were told to count all persons (including children) staying overnight at the shelters, and everyone they saw on the street except the police, other persons in uniform, and persons engaged in employment or obvious money-making activities other than begging and panhandling.

At both shelter and street sites, persons found sleeping were not awakened to answer questions. Rather, the enumerator answered the sex and race questions by observation and estimated the person's age to the best of his or her ability. In shelters, administrative records and information from the shelter operator were used, when available, for persons who were already asleep.

Less than 1 percent of shelters refused to participate in the census count at first. By the end of the census period, most of those eventually cooperated and the

number of refusals had been reduced to a few. For the final refusals, head counts and population characteristics were obtained by enumerators standing outside such shelters and counting people as they left in the morning.

The "street" count was restricted to persons who were visible when the enumerator came to the open, public locations that had been identified by local jurisdictions. Homeless persons who were well hidden, moving about, or in locations other than those identified by the local governments were likely missed. The number missed will never be known and there is no basis to make an estimate of the number missed from census data. The count of persons in open, public places was affected by many factors, including the extra efforts made to encourage people to go to shelters for "Shelter and Street Night," the weather (which was unusually cold in many parts of the country), the presence of the media, and distrust of the census. Expectations of the number of homeless persons on the street cannot be based on the number seen during the day because the night-time situation is normally very different as more homeless persons are in shelters or very well hidden.

For both "Shelter-and-Street-Night" locations, the Census Bureau assumed that the usual home of those enumerated was in the block where they were found (shelter or street).

The "Shelter-and-Street-Night" operation replaced and expanded the 1980 Mission Night (M-Night) and Casual Count operations. These two operations were aimed at counting the population who reported having no usual residence. M-Night was conducted a week after Census Day, in April 1980. Enumerators visited hotels, motels, and similar places costing \$4 or less each night; missions, flophouses, local jails and similar places at which the average length of stay was 30 days or less; and nonshelter locations, such as bus depots, train stations, and all night movie theaters. Questions were asked of everyone, regardless of age. Enumerators conducted M-Night up to midnight on April 8, 1980, and returned the next morning to collect any forms completed after midnight.

The Casual Count operation was conducted in May 1980 at additional nonshelter locations, such as street corners, pool halls, welfare and employment offices. This operation lasted for approximately 2 weeks. Casual Count was conducted during the day only in selected large central cities. Only persons who appeared to be at least 15 years of age were asked if they had been previously enumerated. Casual Count was actually a coverage-improvement operation. It was not specifically an operation to count homeless persons living in the streets. Persons were excluded if they said they had a usual home outside the city because it was not cost effective to check through individual questionnaires in another city to try to find the person.

PROCESSING PROCEDURES

Respondents returned many census questionnaires by mail to 1 of over 344 census district offices or to one of six processing offices. In these offices, the questionnaires were "checked in" and edited for completeness and consistency of the responses. After this initial processing had been performed, all questionnaires were sent to the processing offices.

In the processing offices, the household questionnaires were microfilmed and processed by the Film Optical Sensing Device for Input to Computers (FOSDIC). For most items on the questionnaire, the information supplied by the respondent was indicated by filling circles in predesignated positions. FOSDIC electronically "read" these filled circles from the microfilm copy of the questionnaire and transferred the information to computer tape. The computer tape did not include individual names, addresses, or handwritten responses.

The data processing was performed in several stages. All questionnaires were microfilmed, "read" by FOSDIC,

and transferred to computer disk. Selected written entries in the race question on both the short and long forms were keyed from the microfilm and coded using the data base developed from the 1980 census and subsequent content and operational tests. Keying of other written entries on the long forms occurred in the seven processing offices.

The information (for example, income dollar amounts or homeowner shelter costs) on these keyed files was merged with the FOSDIC data or processed further through one of three automated coding programs. The codes for industry, occupation, place-of-birth, migration, place-of-work, ancestry, language, relationship, race, and Hispanic origin were merged with the FOSDIC data for editing, weighting, and tabulating operations at Census Bureau headquarters. All responses to the questions on Individual Census Reports (ICR's), Military Census Reports (MCR's), and Shipboard Census Reports (SCR's) were keyed, not processed by microfilm or FOSDIC.

APPENDIX E.

Facsimiles of Respondent Instructions and Questionnaire Pages

Your Guide for the

1990 U.S. Census Form

This guide gives helpful information on filling out your census form. If you need more help, call the local U.S. census office. **The telephone number is on the cover of the questionnaire.** After you have filled out your form, please return it in the **envelope** we have provided.

On the inside	Page
How to fill out your census form	2
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Your answers are confidential	2
Instructions for the census questions	3-11
What the census is about	12
Why the census asks certain questions	12

CENSUS '90



U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

D4

How to Fill Out Your Census Form

Please use a black lead pencil only. Black lead pencil is better to use than ballpoint or other pens. Most questions ask you to fill in the circle, or to print the information. See Example below.

Make sure you print answers for everyone in this household. If someone in the household, such as a roomer or boarder, does not want to give you all the information for the form, print at least the person's name and answer questions 2 and 3. A census taker will call to get the other information directly from the person.

There may be a question you cannot answer exactly. For example, you might not know the age of an elderly person or the price for which your house would sell. Ask someone else in your household; if no one knows, give your best estimate.

Instructions for individual questions begin on page 3 of this guide. They will help you to understand the questions and answer them correctly.

If you have a question about filling out the census form or need assistance, call the local U.S. census office. The telephone number is given on the cover of the questionnaire.

If you do not mail back your census form, a census taker will be sent out to assist you. But it saves time and your taxpayer dollars if you fill out the form yourself and mail it back.

Example

a. Age		b. Year of birth		a. Age		b. Year of birth	
<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 9	<input type="radio"/> 0	<input type="radio"/> 9	<input type="radio"/> 1	<input type="radio"/> 9
<input type="radio"/> 2	<input type="radio"/> 0	<input type="radio"/> 8	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 0	<input type="radio"/> 8	<input type="radio"/> 0
<input type="radio"/> 3	<input type="radio"/> 0	<input type="radio"/> 9	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 0	<input type="radio"/> 9	<input type="radio"/> 1
<input type="radio"/> 4	<input checked="" type="radio"/> 4	<input type="radio"/> 2	<input type="radio"/> 0	<input type="radio"/> 3	<input type="radio"/> 0	<input type="radio"/> 2	<input type="radio"/> 0
<input type="radio"/> 5	<input type="radio"/> 0	<input type="radio"/> 3	<input type="radio"/> 0	<input type="radio"/> 4	<input type="radio"/> 0	<input type="radio"/> 3	<input type="radio"/> 0
<input type="radio"/> 6	<input type="radio"/> 0	<input type="radio"/> 4	<input type="radio"/> 0	<input type="radio"/> 5	<input type="radio"/> 0	<input type="radio"/> 4	<input type="radio"/> 0
<input type="radio"/> 7	<input type="radio"/> 0	<input type="radio"/> 5	<input type="radio"/> 0	<input type="radio"/> 6	<input type="radio"/> 0	<input type="radio"/> 5	<input type="radio"/> 0
<input type="radio"/> 8	<input type="radio"/> 0	<input type="radio"/> 6	<input type="radio"/> 0	<input type="radio"/> 7	<input type="radio"/> 0	<input type="radio"/> 6	<input type="radio"/> 0
<input type="radio"/> 9	<input type="radio"/> 0	<input type="radio"/> 7	<input type="radio"/> 0	<input type="radio"/> 8	<input type="radio"/> 0	<input type="radio"/> 7	<input type="radio"/> 0
		<input type="radio"/> 8	<input type="radio"/> 0	<input type="radio"/> 9	<input type="radio"/> 0	<input type="radio"/> 8	<input type="radio"/> 0
		<input type="radio"/> 9	<input type="radio"/> 0	<input type="radio"/> 0	<input type="radio"/> 9	<input type="radio"/> 9	<input type="radio"/> 0

Your Answers Are Confidential

The law authorizing the census (Title 13, U.S. Code) also provides that your answers are confidential. No one except census workers may see your completed form and they can be fined and/or imprisoned for any disclosure of your answers. Only after 72 years can your individual census form become available to other government agencies (whether federal, state, county, or local). Until then, no other person or business can see your individual report.

The same law that protects the confidentiality of your answers requires that you provide the information asked in this census to the best of your knowledge.

Information collected from the decennial census is used for a variety of statistical purposes. Census information is used to find out where funding is most needed for schools, health centers, highways, and other services. Census results are used by members of public and private groups—including community organizations—and by businesses and industries, as well as by agencies at all levels of government.

Instructions for Questions 1a through 7

- 1a. List everyone who lives at this address in question 1a. If you are not sure if you should list a person, see the rules on page 1 of the census form. If you are still not sure, answer as best you can and fill in "Yes" for question H1a or H1b, as appropriate.

If there are more than seven people in your household, please list all the persons in question 1a, complete the form for seven people, and mail it back in the enclosed envelope. A census taker will call to obtain the information for the additional persons.

- b. If everyone listed in question 1a usually lives at another address(es), print the address(es) in 1b.

2. Fill one circle to show how each person is related to the person in column 1. If Other relative of the person in column 1, print the exact relationship such as son-in-law, daughter-in-law, grandparent, nephew, niece, mother-in-law, father-in-law, cousin, and so on.

- If the Stepson/stepdaughter of the person in column 1 also has been legally adopted by the person in column 1, mark Stepson/stepdaughter but do not mark Natural-born or adopted son/daughter. In other words, Stepson/stepdaughter takes precedence over Adopted son/daughter.

4. Fill ONE circle for the race each person considers himself/herself to be. If you fill the Indian (Amer.) circle, print the name of the tribe or tribes in which the person is enrolled. If the person is not enrolled in a tribe, print the name of the principal tribe(s).

- If you fill the Other API circle [under Asian or Pacific Islander (API)], only print the name of the group to which the person belongs. For example, the Other API category includes persons who identify as Burmese, Fijian, Hmong, Indonesian, Laotian, Bangladeshi, Pakistani, Tongan, Thai, Cambodian, Sri Lankan, and so on.

- If you fill the Other race circle, be sure to print the name of the race. If the person considers himself/herself to be White, Black or Negro, Eskimo or Aleut, fill one circle only. Please do not print the race in the boxes.

- The Black or Negro category also includes persons who identify as African-American, Afro-American, Haitian, Jamaican, West Indian, Nigerian, and so on.
- All persons, regardless of citizenship status, should answer this question.

5. Print age at last birthday in the space provided (print "00" for babies less than 1 year old). Fill in the matching circle below each box. Also, print year of birth in the space provided. Then fill in the matching circle below each box. For an illustration of how to complete question 5, see the Example on page 2 of this guide.
6. If the person's only marriage was annulled, mark Never married.
7. A person is of Spanish/Hispanic origin if the person's origin (ancestry) is Mexican, Mexican-Am., Chicano, Puerto Rican, Cuban, Argentinean, Colombian, Costa Rican, Dominican, Ecuadoran, Guatemalan, Honduran, Nicaraguan, Peruvian, Salvadoran, from other Spanish-speaking countries of the Caribbean or Central or South America, or from Spain.

- If you fill the Yes, other Spanish/Hispanic circle, print one group. A person who is not of Spanish/Hispanic origin should answer this question by filling the No (not Spanish/Hispanic) circle. Note that the term "Mexican-Am." refers only to persons of Mexican origin or ancestry.
- All persons, regardless of citizenship status, should answer this question.

Instructions for Question H1a through H1b

- H1a. Refer to the list of persons you entered in question 1a on page 1. If you left anyone out of your list because you were not sure if the person(s) should be listed, answer question H1a as Yes. Then enter the name(s) and reason(s) why you did not list the person(s) on the lines provided. Otherwise, answer question H1a as No.

- b. If you included anyone on your list even though you were not sure that you should list the person(s), answer question H1b as Yes. Then enter the name(s) and reason(s) why you listed the person(s) on the lines provided. Otherwise, answer question H1b as No.

Instructions for Questions H2 through H7b

- H2.** Fill only one circle.
- Count all occupied and vacant apartments in the house or building. Do not count stores or office space.
- Detached* means there is open space on all sides, or the house is joined only to a shed or garage. *Attached* means that the house is joined to another house or building by at least one wall that goes from ground to roof. An example of **A one-family house attached to one or more houses** is a house in a row of houses attached to one another.
- A mobile home or trailer that has had one or more rooms added or built onto it should be counted as a *one-family detached house*; a porch or shed is not considered a room.
- H3.** Count only whole rooms in your house, apartment, or mobile home used for living purposes, such as living rooms, dining rooms, kitchens, bedrooms, finished recreation rooms, family rooms, etc. Do not count bathrooms, kitchenettes, strip or pullman kitchens, utility rooms, foyers, halls, half-rooms, porches, balconies, unfinished attics, unfinished basements, or other unfinished space used for storage.
- H4.** Housing is owned if the owner or co-owner lives in it. Mark **Owned by you or someone in this household with a mortgage or loan** if the house, apartment, or mobile home is mortgaged or there is a contract to purchase. Mark **Owned by you or someone in this household free and clear (without a mortgage)** if there is no mortgage or other debt. If the house, apartment, or mobile home is owned but the land is rented, mark this question to show the status of the house, apartment, or mobile home.
- Mark **Rented for cash rent** if any money rent is paid, even if the rent is paid by persons who are not members of your household, or by a federal, state, or local government agency.
- Mark **Occupied without payment of cash rent** if the unit is not owned or being bought by the occupants and if money rent is not paid or contracted. The unit may be owned by friends or relatives who live elsewhere and who allow occupancy without charge. A house or apartment may be provided as part of wages or salary. Examples are: caretaker's or janitor's house or apartment; parsonages; tenant farmer or sharecropper houses for which the occupants do not pay cash rent; or military housing.
- H5a.** Answer H5a and H5b if you live in a one-family house or a mobile home; include only land that you own or rent.
- b.** A business is easily recognized from the outside; for example, a grocery store or barber shop. A medical office is a doctor's or dentist's office regularly visited by patients.
- H6.** If this is a house, include the value of the house, the land it is on, and any other structures on the same property. If the house is owned but the land is rented, estimate the combined value of the house and the land. If this is a condominium unit, estimate the value for your house or apartment including your share of the common elements. If this is a mobile home, include the value of the mobile home and the value of the land. If you rent the land, estimate the value of the rented land and add it to the value of the mobile home:
- H7a.** Report the rent agreed to or contracted for, even if the rent for your house, apartment, or mobile home is unpaid or paid by someone else.
- | | | | |
|----------------------------|-------------------|--------------------------|-----------------|
| If rent is paid: | Multiply rent by: | If rent is paid: | Divide rent by: |
| By the day | 30 | 4 times a year | 3 |
| By the week | 4 | 2 times a year | 6 |
| Every other week | 2 | Once a year | 12 |
- b.** Answer **Yes** if meals are included in the monthly rent payment, or you must contract for meals or a meal plan in order to live in this building.

Instructions for Questions H8 through H19b

- H8.** The person listed in column 1 refers to the person listed in the first column on page 2. This person should be the household member (or one of the members) in whose name the house, apartment, or mobile home is owned, being bought, or rented. If there is no such person, any adult household member can be the person in column 1. Mark when this person last moved into this house, apartment, or mobile home.
- H9.** Include all rooms intended to be used as bedrooms in this house, apartment, or mobile home, even if they are currently being used for other purposes.
- H10.** Mark **Yes**, have all three facilities if you have all the facilities mentioned; all facilities must be in your house, apartment, or mobile home, but not necessarily in the same room. Consider that you have hot water even if you have it only part of the time. Mark **No** if any of the three facilities is not present.
- H11.** The kitchen sink, stove, and refrigerator must be located in the building but do not have to be in the same room. Portable cooking equipment is not considered as a range or cookstove.
- H12.** Answer **Yes** only if the telephone is located in your house, apartment, or mobile home.
- H13.** Count company cars (including police cars and taxicabs) and company trucks of one-ton capacity or less that are regularly kept at home and used by household members for nonbusiness purposes. Do not count cars or trucks permanently out of working order.
- H14.** Fill the circle for the fuel used most to heat your house, apartment, or mobile home. In buildings containing more than one apartment you may obtain this information from the owner, manager, or janitor.
- Solar energy** is provided by a system that collects, stores, and distributes heat from the sun. **Other fuel** includes any fuel not separately listed; for example, purchased steam, fuel briquettes, waste material, etc.
- H15.** If a well provides water for five or more houses, apartments, or mobile homes, mark **A public system**. If a well provides water for four or fewer houses, apartments, or mobile homes, fill one of the circles for **Individual well**.
- Drilled wells**, or small diameter wells, are usually less than 1½ feet in diameter. **Dug wells** are generally hand dug and are larger than 1½ feet wide.
- H16.** A **public sewer** may be operated by a government body or private organization. A **septic tank** or **cesspool** is an underground tank or pit used for disposal of sewage.
- H17.** Fill the circle corresponding to the period in which the original construction was completed, not the time of any later remodeling, additions, or conversions. In buildings containing more than one apartment, the owner, manager, or janitor may be of help in determining when the building was built.
- If you live in a houseboat or a trailer or mobile home, fill the circle corresponding to the model year in which it was manufactured.
- If you do not know the period when the building was first constructed, fill the circle for **Don't know**.
- H18.** A **condominium** is a type of ownership in which the apartments, houses, or mobile homes in a building or development are individually owned, but the common areas, such as lobbies, halls, etc., are jointly owned. Cooperative occupants should mark **No**.
- H19a.** Answer H19a and H19b if you live in a one-family house or mobile home.
- b.** **This property** is the acreage on which the house is located; it includes adjoining land you rent for your use. Report sales made in 1989 from this property by you or previous occupants.

Instructions for Questions H20 through H26

H20. If your house or apartment is rented, enter the costs for utilities and fuels only if you pay for them in addition to the rent entered in H7a.

If you live in a condominium, enter the costs for utilities and fuels only if you pay for them in addition to your condominium fee.

If your fuel and utility costs are already included in your rent or condominium fee, fill the *Included in rent or in condominium fee* circle. Do not enter any dollar amounts.

The amounts to be reported should be the total amount for the past 12 months. Estimate as closely as possible when exact costs are not known. If you have lived in this house or apartment less than 1 year, estimate the yearly cost.

Report amounts even if your bills are unpaid or paid by someone else. If the bills include utilities or fuel used also by another apartment or a business establishment, estimate the amounts for your own house or apartment. If gas and electricity are billed together, enter the combined amount on the electricity line and bracket [] the two utilities.

H21. Report taxes for all taxing jurisdictions (city or town, county, state, school district, etc.) even if they are included in your mortgage payment, not yet paid or paid by someone else, or are delinquent. Do not include taxes past due from previous years.

H22. When premiums are paid on other than a yearly basis, convert to a yearly basis. Enter the yearly amount even if no payment was made during the past 12 months.

H23a. The word *mortgage* is used as a general term to indicate all types of loans that are secured by real estate.

b. Enter a monthly amount even if it is unpaid or paid by someone else. If the amount is paid on some other periodic basis, see the instructions for H7a to change it to a monthly amount.

Include payments on first mortgages and contracts to purchase only. Payments for second or junior mortgages and home equity loans should be reported in H24b.

H24a. A second or junior mortgage or home equity loan is secured by real estate.

b. Enter a monthly amount even if it is unpaid or paid by someone else. If the amount is paid on some other periodic basis, see instructions for H7a and change it to a monthly amount. Include payments on all second or junior mortgages or home equity loans.

H25. A *condominium fee* is normally assessed by the condominium owners' association for the purpose of improving and maintaining the common areas. Enter a monthly amount even if it is unpaid or paid by someone else. If the amount is paid on some other periodic basis, see the instructions for H7a on how to change it to a monthly amount.

H26. Report amount even if your bills are unpaid or paid by someone else. Include payments for personal property taxes, land or site rent, registration fees and license fees. Do not include real estate taxes already reported in H21. The amount to be reported should be the total amount for an entire 12-month billing period even if made in two or more installments. Estimate as closely as possible when exact costs are not known.

Instructions for Question 8

8. For persons born in the United States:

Print the name of the State in which this person was born. If the person was born in Washington, D.C., print District of Columbia. If the person was born in a U.S. territory or commonwealth, print Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, or Northern Marianas.

For persons born outside the United States:

Print the name of the foreign country or area where the person was born. Use current boundaries, not boundaries at the time of the person's birth. Specify whether Northern Ireland or the Republic of Ireland (Eire); East or West Germany; North or South Korea; England, Scotland, or Wales (not Great Britain or United Kingdom). Specify the particular country or island in the Caribbean (not, for example, West Indies).

Instructions for Questions 9 through 13

9. A person should fill the *Yes, U.S. citizen by naturalization* circle only if he/she has completed the naturalization process and is now a United States citizen. If the person was born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas, he/she should fill the *Yes, born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas* circle. If the person was born outside the United States (or at sea) and has at least one American parent, he/she should fill the *Yes, born abroad of American parent or parents* circle.

10. If the person has entered the United States (that is, the 50 states and the District of Columbia) more than once, fill the circle for the latest year he/she came to stay.

11. Do not include enrollment in a trade or business school, company training, or tutoring unless the course would be accepted for credit at a regular elementary school, high school, or college.

A *public school* is any school or college that is controlled and supported primarily by a local, county, State, or Federal Government. Schools are private if supported and controlled primarily by religious organizations or other private groups.

12. Mark the category for the highest grade or level of schooling the person has successfully completed or the highest degree the person received. If the person is enrolled in school, mark the category containing the highest grade completed (the grade previous to the grade in which enrolled). Schooling completed in foreign or ungraded schools should be reported as the equivalent level of schooling in the regular American school system.

Persons who completed high school by passing an equivalency test, such as the General Educational Development (GED) examination, and did not attend college, should fill the circle for high school graduate.

Do not include vocational certificates or diplomas from vocational, trade, or business schools or colleges unless they were college level associate degrees or higher.

Some examples of *professional school degrees* include medicine, dentistry, chiropractic, optometry, osteopathic medicine, pharmacy, podiatry, veterinary medicine, law, and theology. Do not include barber school, cosmetology, or other training for a specific trade.

Do not include honorary degrees awarded by colleges and universities to individuals for their accomplishments. Include only "earned" degrees.

13. Print the ancestry group. Ancestry refers to the person's ethnic origin or descent, "roots," or heritage. Ancestry also may refer to the country of birth of the person or the person's parents or ancestors before their arrival in the United States. All persons, regardless of citizenship status, should answer this question.

Persons who have more than one origin and cannot identify with a single ancestry group may report two ancestry groups (for example, German-Irish).

Be specific. For example, print whether West Indian, Asian Indian, or American Indian. West Indian includes persons whose ancestors came from Jamaica, Trinidad, Haiti, etc. Distinguish Cape Verdean from Portuguese; French Canadian from Canadian; and Dominican Republic from Dominica Island.

A religious group should not be reported as a person's ancestry.

Instructions for Questions 14a through 19

- 14a.** Mark **Yes** if this person lived in this same house or apartment on April 1, 1985, even if he/she moved away and came back since then. Mark **No** if this person lived in the same building but in a different apartment (or in the same mobile home or trailer but on a different lot or trailer site).
- b.** If this person lived in a different house or apartment on April 1, 1985, give the location of this person's usual home at that time.

Part (1)

If the person lived in the United States on April 1, 1985, print the name of the State (or District of Columbia) where he or she lived. Continue with parts (2) through (4).

If the person lived in a U.S. territory or commonwealth, print the name of the territory or commonwealth, such as Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, or Northern Marianas. Then go to question 15a.

If the person lived outside the United States, print the name of the foreign country or area where he or she lived. Specify whether Northern Ireland or the Republic of Ireland (Eire); East or West Germany; North or South Korea; England, Scotland or Wales (not Great Britain or United Kingdom). Specify the particular country or island in the Caribbean (not, for example, West Indies). Then go to question 15a.

Part (2)

If the person lived in Louisiana, print the parish name. If the person lived in Alaska, print the borough name. If the person lived in New York city and the county name is not known, print the borough name. If the person lived in an independent city (not in any county) or in Washington, D.C., leave blank and enter the city name in part (3).

Part (3)

If the person lived in New England, print the name of the town rather than the village name, unless the name of the town is not known. If the person lived outside the limits or boundaries of any city or town, print the name of the post office or the nearest town and mark **No**, lived outside the city/town limits in part (4).

Part (4)

Mark **Yes** if the location is now inside the city/town limits even if it was not inside the limits on April 1, 1985; that is, if the area was annexed by the city/town since that time.

- 15.** Mark **Yes** if the person sometimes or always speaks a language other than English at home.
- Do not mark **Yes** for a language spoken only at school or if speaking is limited to a few expressions or slang.
- Print the name of the language spoken at home. If this person speaks more than one non-English language and cannot determine which is spoken more often, report the first language the person learned to speak.
- 17a.** For a person with service in the National Guard or a military reserve unit, fill one of the two **Yes**, active duty circles if and only if the person has ever been called up for active duty other than training; otherwise, mark **Yes**, service in Reserves or National Guard only. For a person whose only service was as a civilian employee or volunteer for the Red Cross, USO, Public Health Service, or War or Defense Department, mark **No**. Count World War II Merchant Marine Seaman service as active duty; do not count other Merchant Marine service as active duty.
- 18.** Mark **Yes** to part (a) if a health condition substantially limits this person in his or her choice of occupation or if the condition limits the amount of work that can be accomplished in a given period of time. Mark **Yes** to part (b) if the health condition prevents this person from holding any significant employment.
- 19.** Consider a person to have difficulty with these activities if any of the following situations apply: (1) it takes extra time or extra effort for the person to perform one or more of the activities, (2) there are times when the person cannot perform one or more of the activities, or (3) the person is completely unable to perform one or more of the activities.

Instructions for Questions 20 through 23b

- 20.** Count all children born alive, including any who have died (even shortly after birth) or who no longer live with you. Do not include miscarriages or stillborn children or any adopted, foster, or stepchildren.
- 21a.** Count as work — Mark **Yes**:
- Work for someone else for wages, salary, piece rate, commission, tips, or payments "in kind" (for example, food, lodging received as payment for work performed).
 - Work in own business, professional practice, or farm.
 - Any work in a family business or farm, paid or not.
 - Any part-time work including babysitting, paper routes, etc.
 - Active duty in Armed Forces.
- Do not count as work — Mark **No**:
- Housework or yard work at home.
 - Unpaid volunteer work.
 - School work.
 - Work done as a resident of an institution.
- 22a.** Include the street type (for example, St., Road, Ave.) and the street direction (if a direction such as "North" is part of the address). For example, print 1239 N. Main St. or 1239 Main St., N.W. not just 1239 Main.
- If the only known address is a post office box, give a description of the work location. For example, print the name of the building or shopping center where the person works, the nearest intersection, the nearest street where the workplace is located, etc. DO NOT GIVE A POST OFFICE BOX NUMBER.
- If the person worked at a military installation or military base that has no street address, report the name of the military installation or base.
- If the person worked at several locations, but reported to the same location each day to begin work, print the address of the location where he or she reported. If the person did not report to the same location each day to begin work, print the address of the location where he or she worked most last week.
- If the person's employer operates in more than one location (such as a grocery store chain or public school system), print the exact address of the location or branch where the person worked. If the exact address of a school is not known, print the name of the school.
- If the person worked on a college or university campus and the exact address of the workplace is not known, print the name of the building where he or she worked.
- d.** If the person worked in New York city and the county is not known, print the name of the borough where the person worked.
- If the person worked in Louisiana, print the name of the parish where the person worked.
- If the person worked in Alaska, print the name of the borough where the person worked.
- e.** If the person worked in a foreign country or Puerto Rico, Guam, etc., print the name of the country in 22e and leave the other parts of question 22 blank.
- 23a.** If the person usually used more than one type of transportation to get to work (for example, rode the bus and transferred to the subway), fill the circle of the one method of transportation that he/she used for most of the distance during the trip.
- b.** If the person was driven to work by someone who then drove back home or to a nonwork destination, fill the circle for Drove alone.
- DO NOT include persons who rode to school or some other nonwork destination in the count of persons who rode in the vehicle.

Instructions for Questions 24a through 30

- 24a.** Give the time of day the person usually *left home to go to work*. DO NOT give the time that the person usually began his or her work.
If the person usually left home to go to work sometime between 12:00 o'clock midnight and 12:00 o'clock noon, fill the a.m. circle.
If the person usually left home to go to work sometime between 12:00 o'clock noon and 12:00 o'clock midnight, fill the p.m. circle.
- b.** Travel time is from door to door. Include time taken waiting for public transportation or picking up passengers in a carpool.
- 25.** If the person works only during certain seasons or on a day-by-day basis when work is available, mark **No**.
- 26a.** Mark **Yes** if the person tried to get a job or to start a business or professional practice at any time in the last 4 weeks; for example, registered at an employment office, went to a job interview, placed or answered ads, or did anything toward starting a business or professional practice.
- b.** Mark **No**, **already has a job** if the person was on layoff or was expecting to report to a job within 30 days.
Mark **No**, **temporarily ill** if the person expects to be able to work within 30 days.
Mark **No**, **other reasons** if the person could not have taken a job because he or she was going to school, taking care of children, etc.
- 27.** Look at the instructions for question 21a to see what to count as work. Mark **Never worked** if the person: (1) never worked at any kind of job or business, either full or part time, (2) never did any work, with or without pay, in a family business or farm, and (3) never served in the Armed Forces.
- 28a.** If the person worked for a company, business, or government agency, print the name of the company, not the name of the person's supervisor. If the person worked for an individual or a business that had no company name, print the name of the individual worked for. If the person worked in his/her own business, print "self-employed."
- b.** Print two or more words to tell what the business, industry, or individual employer named in 28a did. If there is more than one activity, describe only the major activity at the place where the person worked. Enter what is made, what is sold, or what service is given.
Some examples of what to enter:
- | | |
|--|------------------------|
| Enter a description like the following -- | Do not enter -- |
| Metal furniture manufacturing | Furniture company |
| Retail grocery store | Grocery store |
| Petroleum refining | Oil company |
| Cattle ranch | Ranch |
- 29.** Print two or more words to describe the kind of work the person did. If the person was a trainee, apprentice, or helper, include that in the description.
Some examples of what to enter:
- | | |
|--|------------------------|
| Enter a description like the following -- | Do not enter -- |
| Production clerk | Clerk |
| Carpenter's helper | Helper |
| Auto engine mechanic | Mechanic |
| Registered nurse | Nurse |
- 30.** Mark **Employee of a PRIVATE NOT-FOR-PROFIT . . . organization** if the person worked for a cooperative, credit union, mutual insurance company, or similar organization.
Employees of foreign governments, the United Nations, and other international organizations should mark **PRIVATE NOT-FOR-PROFIT . . . organization**.
For persons who worked at a public school, college or university, mark the appropriate *government* category; for example, mark **State GOVERNMENT employee** for a state university, or mark **Local GOVERNMENT employee** for a county-run community college or a city-run public school.

Instructions for Questions 31a through 32h

- 31a.** Look at the instructions for question 21a to see what to count as work.
- b.** Count every week in which the person did any work at all, even for an hour.
- 32.** Fill the **Yes** or **No** circle for each part and enter the amount received during 1989.
If income from any source was received jointly by household members, report, if possible, the appropriate share for each person; otherwise, report the whole amount for only one person and fill the **No** circle for the other person.
- a.** Include wages and salaries from *all jobs before deductions*. Be sure to include any tips, commissions, or bonuses. Owners of *incorporated* businesses should enter their salary here. Military personnel should include base pay plus cash housing and/or subsistence allowance, flight pay, uniform allotments, reenlistment bonuses, etc.
- b.** Include *NONFARM* profit (or loss) from self-employment in sole proprietorships and partnerships. *Exclude* profit (or loss) of incorporated businesses you own.
- c.** Include *FARM* profit (or loss) from self-employment in sole proprietorships and partnerships. *Exclude* profit (or loss) of incorporated farm businesses you own. Also *exclude* amounts from land rented for cash but include amounts from land rented for shares.
- d.** Include interest received or credited to checking and savings accounts, money market funds, certificates of deposit (CDs), IRAs, KEOGHs, and government bonds.
Include dividends received, credited, or reinvested from ownership of stocks or mutual funds.
Include profit (or loss) from royalties and the rental of land, buildings or real estate, or from roomers or boarders. Income received by self-employed persons whose *primary* source of income is from renting property or from royalties should be included in questions 32b or 32c above. Include regular payments from an estate or trust fund.
- e.** Include Social Security (and/or Railroad Retirement) payments to retired persons, to dependents of deceased insured workers, and to disabled workers before Medicare deductions.
- f.** Include Supplemental Security Income received by aged, blind, or disabled persons, Aid to Families with Dependent Children, or income from other government programs such as general or emergency assistance. Do not include assistance received from private charities. *Exclude* assistance to pay for heating (cooling) costs.
- g.** Include retirement, disability, or survivor benefits received from companies and unions; Federal, State, and local governments, and the U.S. military. Include regular income from annuities and IRA or KEOGH retirement plans.
- h.** Include Veterans' (VA) disability compensation and educational assistance payments (VEAP), unemployment compensation, child support or alimony, and all other regular payments such as Armed Forces transfer payments; assistance from private charities; regular contributions from persons not living in the household, etc.
Do not include the following as income in any item:
- Refunds or rebates of any kind
 - Withdrawals from savings of any kind
 - Capital gains or losses from the sale of homes, shares of stock, etc.
 - Inheritances or insurance settlements
 - Any type of loan
 - Pay in-kind such as food, free rent, etc.

What the Census Is About — Some Questions and Answers

Why are we taking a census?

The most important reason for taking a decennial census is to determine how many representatives each state will have in Congress.

What does the Census Bureau do with the information you provide?

The individual information collected in the census is grouped together into statistical totals. Information such as the number of persons in a given area, their ages, educational background, the characteristics of their housing, etc., enable government, business, and industry to plan more effectively.

How long have we been taking the census?

The first census was taken in 1790 in accordance with the requirement in the first article of the constitution. A census has been taken every 10 years since. The 1990 Decennial Census marks the 200th anniversary of the census.

How are you being counted?

Census forms are delivered to all households a few days before census day. Households are requested to fill out the form and mail it back to the census office.

Why the Census Asks Certain Questions

Here are a few reasons for asking some of the questions.

It is as important to get information about people and their houses as it is to count them.

Name?

Names help make sure that everyone in a household is counted, but that no one is counted twice.

Value or rent?

Government and planning agencies use answers to these questions in combination with other information to develop housing programs to meet the needs of people at different economic levels.

Complete plumbing?

This question gives information on the quality of housing. The data are used with other statistics to show how the "level of living" compares in various areas and how it has changed over time.

Place of birth?

This question provides information used to study long-term trends as to where people move and to study migration patterns and differences in growth patterns.

Job?

Answers to the questions about the jobs people hold provide information on the extent and types of employment in different areas of the country. From this information, training programs can be developed and the need for new industries can be determined.

Income?

Income, more than anything else, determines how families or persons live. Income information makes it possible to compare the economic levels of different areas.

CENSUS '90

OFFICIAL 1990 U.S. CENSUS FORM



Thank you for taking time to complete and return this census questionnaire. It's important to you, your community, and the Nation.

The law requires answers but guarantees privacy.

By law (Title 13, U.S. Code), you're required to answer the census questions to the best of your knowledge. However, the same law guarantees that your census form remains confidential. For 72 years—or until the year 2062—only Census Bureau employees can see your form. No one else—no other government body, no police department, no court system or welfare agency—is permitted to see this confidential information under any circumstances.

How to get started—and get help.

Start by listing on the next page the names of all the people who live in your home. Please answer all questions with a black lead pencil. You'll find detailed instructions for answering the census in the enclosed guide. If you need additional help, call the toll-free telephone number to the left, near your address.

Please answer and return your form promptly.

Complete your form and return it by April 1, 1990 in the postage-paid envelope provided. Avoid the inconvenience of having a census taker visit your home.

Again, thank you for answering the 1990 Census.
Remember: Return the completed form by April 1, 1990.

Para personas de habla hispana --
(For Spanish-speaking persons)

Si usted desea un cuestionario del censo en español, llame sin cargo alguno al siguiente número: **1-800-CUENTAN**
(o sea 1-800-283-6826)

U.S. Department of Commerce
BUREAU OF THE CENSUS
FORM D-2

OMB No. 0607-0628
Approval Expires 07/31/91

The 1990 census must count every person at his or her "usual residence." This means the place where the person lives and sleeps most of the time.

1 a. List on the numbered lines below the name of each person living here on Sunday, April 1, including all persons staying here who have no other home. If EVERYONE at this address is staying here temporarily and usually lives somewhere else, follow the instructions given in question 1b below.

Include

- Everyone who usually lives here such as family members, housemates and roommates, foster children, roomers, boarders, and live-in employees
- Persons who are temporarily away on a business trip, on vacation, or in a general hospital
- College students who stay here while attending college
- Persons in the Armed Forces who live here
- Newborn babies still in the hospital
- Children in boarding schools below the college level
- Persons who stay here most of the week while working even if they have a home somewhere else
- Persons with no other home who are staying here on April 1

Do NOT include

- Persons who usually live somewhere else
- Persons who are away in an institution such as a prison, mental hospital, or a nursing home
- College students who live somewhere else while attending college
- Persons in the Armed Forces who live somewhere else
- Persons who stay somewhere else most of the week while working

Print last name, first name, and middle initial for each person. Begin on line 1 with the household member (or one of the household members) in whose name this house or apartment is owned, being bought, or rented. If there is no such person, start on line 1 with any adult household member.

LAST	FIRST	INITIAL	LAST	FIRST	INITIAL
1			7		
2			8		
3			9		
4			10		
5			11		
6			12		

1b. If EVERYONE is staying here only temporarily and usually lives somewhere else, list the name of each person on the numbered lines above, fill this circle and print their usual address below. DO NOT PRINT THE ADDRESS LISTED ON THE FRONT COVER.

House number _____ Street or road/Rural route and box number _____ Apartment number _____

City _____ State _____ ZIP Code _____

County or foreign country _____ Names of nearest intersecting streets or roads _____

NOW PLEASE OPEN THE FLAP TO PAGE 2 AND ANSWER ALL QUESTIONS FOR THE FIRST 7 PEOPLE LISTED. USE A BLACK LEAD PENCIL ONLY.

	PERSON 1		PERSON 2	
	Last name	First name Middle initial	Last name	First name Middle initial
<p>Please fill one column → for each person listed in Question 1a on page 1.</p>				
<p>2. How is this person related to PERSON 1?</p> <p>Fill ONE circle for each person.</p> <p>If Other relative of person in column 1, fill circle and print exact relationship, such as mother-in-law, grandparent, son-in-law, niece, cousin, and so on.</p>	<p>START in this column with the household member (or one of the members) in whose name the home is owned, being bought, or rented.</p> <p>If there is no such person, start in this column with any adult household member.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>		<p>If a RELATIVE of Person 1:</p> <p><input type="checkbox"/> Husband/wife <input type="checkbox"/> Brother/sister</p> <p><input type="checkbox"/> Natural-born or adopted son/daughter <input type="checkbox"/> Father/mother</p> <p><input type="checkbox"/> Stepson/stepdaughter <input type="checkbox"/> Grandchild</p> <p><input type="checkbox"/> Other relative →</p> <hr/> <p>If NOT RELATED to Person 1:</p> <p><input type="checkbox"/> Roomer, boarder, or foster child <input type="checkbox"/> Unmarried partner</p> <p><input type="checkbox"/> Housemate, roommate <input checked="" type="checkbox"/> <input type="checkbox"/> Other nonrelative</p>	
<p>3. Sex</p> <p>Fill ONE circle for each person.</p>	<p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>		<p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>	
<p>4. Race</p> <p>Fill ONE circle for the race that the person considers himself/herself to be.</p> <p>If Indian (Amer.), print the name of the enrolled or principal tribe. →</p> <p>If Other Asian or Pacific Islander (API), print one group, for example: Himong, Fijian, Laotian, Thai, Tongan, Pakistani, Cambodian, and so on. →</p> <p>If Other race, print race. →</p>	<p><input type="checkbox"/> White</p> <p><input type="checkbox"/> Black or Negro</p> <p><input type="checkbox"/> Indian (Amer.) (Print the name of the enrolled or principal tribe.) →</p> <p><input type="checkbox"/> Eskimo</p> <p><input type="checkbox"/> Aleut</p> <p style="text-align: center;">Asian or Pacific Islander (API)</p> <p><input type="checkbox"/> Chinese <input type="checkbox"/> Japanese</p> <p><input type="checkbox"/> Filipino <input checked="" type="checkbox"/> <input type="checkbox"/> Asian Indian</p> <p><input type="checkbox"/> Hawaiian <input type="checkbox"/> Samoan</p> <p><input type="checkbox"/> Korean <input type="checkbox"/> Guamanian</p> <p><input type="checkbox"/> Vietnamese <input type="checkbox"/> Other API →</p> <p><input type="checkbox"/> Other race (Print race) →</p>		<p><input type="checkbox"/> White</p> <p><input type="checkbox"/> Black or Negro</p> <p><input type="checkbox"/> Indian (Amer.) (Print the name of the enrolled or principal tribe.) →</p> <p><input type="checkbox"/> Eskimo</p> <p><input type="checkbox"/> Aleut</p> <p style="text-align: center;">Asian or Pacific Islander (API)</p> <p><input type="checkbox"/> Chinese <input type="checkbox"/> Japanese</p> <p><input type="checkbox"/> Filipino <input checked="" type="checkbox"/> <input type="checkbox"/> Asian Indian</p> <p><input type="checkbox"/> Hawaiian <input type="checkbox"/> Samoan</p> <p><input type="checkbox"/> Korean <input type="checkbox"/> Guamanian</p> <p><input type="checkbox"/> Vietnamese <input type="checkbox"/> Other API →</p> <p><input type="checkbox"/> Other race (Print race) →</p>	
<p>5. Age and year of birth</p> <p>a. Print each person's age at last birthday. Fill in the matching circle below each box.</p> <p>b. Print each person's year of birth and fill the matching circle below each box.</p>	<p>a. Age</p> <p>0 0 0 0 0 0</p> <p>1 0 1 0 1 0</p> <p>2 0 2 0</p> <p>3 0 3 0</p> <p>4 0 4 0</p> <p>5 0 5 0</p> <p>6 0 6 0</p> <p>7 0 7 0</p> <p>8 0 8 0</p> <p>9 0 9 0</p>	<p>b. Year of birth</p> <p>1 8 0 0 0 0 0 0</p> <p>9 0 1 0 1 0</p> <p>2 0 2 0</p> <p>3 0 3 0</p> <p>4 0 4 0</p> <p>5 0 5 0</p> <p>6 0 6 0</p> <p>7 0 7 0</p> <p>8 0 8 0</p> <p>9 0 9 0</p>	<p>a. Age</p> <p>0 0 0 0 0 0</p> <p>1 0 1 0 1 0</p> <p>2 0 2 0</p> <p>3 0 3 0</p> <p>4 0 4 0</p> <p>5 0 5 0</p> <p>6 0 6 0</p> <p>7 0 7 0</p> <p>8 0 8 0</p> <p>9 0 9 0</p>	<p>b. Year of birth</p> <p>1 8 0 0 0 0 0 0</p> <p>9 0 1 0 1 0</p> <p>2 0 2 0</p> <p>3 0 3 0</p> <p>4 0 4 0</p> <p>5 0 5 0</p> <p>6 0 6 0</p> <p>7 0 7 0</p> <p>8 0 8 0</p> <p>9 0 9 0</p>
<p>6. Marital status</p> <p>Fill ONE circle for each person.</p>	<p><input type="checkbox"/> Now married <input type="checkbox"/> Separated</p> <p><input type="checkbox"/> Widowed <input type="checkbox"/> Never married</p> <p><input type="checkbox"/> Divorced</p>		<p><input type="checkbox"/> Now married <input type="checkbox"/> Separated</p> <p><input type="checkbox"/> Widowed <input type="checkbox"/> Never married</p> <p><input type="checkbox"/> Divorced</p>	
<p>7. Is this person of Spanish/Hispanic origin?</p> <p>Fill ONE circle for each person.</p> <p>If Yes, other Spanish/Hispanic, print one group. →</p>	<p><input type="checkbox"/> No (not Spanish/Hispanic)</p> <p><input type="checkbox"/> Yes, Mexican, Mexican-Am., Chicano</p> <p><input type="checkbox"/> Yes, Puerto Rican <input checked="" type="checkbox"/></p> <p><input type="checkbox"/> Yes, Cuban</p> <p><input type="checkbox"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.) →</p>		<p><input type="checkbox"/> No (not Spanish/Hispanic)</p> <p><input type="checkbox"/> Yes, Mexican, Mexican-Am., Chicano</p> <p><input type="checkbox"/> Yes, Puerto Rican</p> <p><input type="checkbox"/> Yes, Cuban</p> <p><input type="checkbox"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.) →</p>	
<p>FOR CENSUS USE →</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>		<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	

NOW PLEASE ANSWER QUESTIONS H1a-H26 FOR THIS HOUSEHOLD

PERSON 7	
Last name	
First name	Middle initial
If a RELATIVE of Person 1: <input type="radio"/> Husband/wife <input type="radio"/> Brother/sister <input type="radio"/> Natural-born or adopted son/daughter <input type="radio"/> Father/mother <input type="radio"/> Grandchild <input type="radio"/> Other relative <input type="radio"/> Stepson/stepdaughter	
If NOT RELATED to Person 1: <input type="radio"/> Roomer, boarder, or foster child <input type="radio"/> Unmarried partner <input type="radio"/> Housemate, roommate <input type="radio"/> Other nonrelative <input type="radio"/> Male <input type="radio"/> Female	
<input type="radio"/> White <input type="radio"/> Black or Negro <input type="radio"/> Indian (Amer.) (Print the name of the enrolled or principal tribe.) <input type="radio"/> Eskimo <input type="radio"/> Aleut Asian or Pacific Islander (API) <input type="radio"/> Chinese <input type="radio"/> Japanese <input type="radio"/> Filipino <input type="radio"/> Asian Indian <input type="radio"/> Hawaiian <input type="radio"/> Samoan <input type="radio"/> Korean <input type="radio"/> Guamanian <input type="radio"/> Vietnamese <input type="radio"/> Other API <input type="radio"/> Other race (Print race)	
a. Age	b. Year of birth
0 0 0 C 0 0	1 8 0 0 0 0
1 0 1 C 1 0	9 0 1 0 1 0
2 0 2 0	2 0 2 0
3 0 3 0	3 0 3 0
4 0 4 0	4 0 4 0
5 0 5 0	5 0 5 0
6 0 6 0	6 0 6 0
7 0 7 0	7 0 7 0
8 0 8 0	8 0 8 0
9 0 9 0	9 0 9 0
<input type="radio"/> Now married <input type="radio"/> Separated <input type="radio"/> Widowed <input type="radio"/> Never married <input type="radio"/> Divorced	
<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)	

H1a. Did you leave anyone out of your list of persons for Question 1a on page 1 because you were not sure if the person should be listed -- for example, someone temporarily away on a business trip or vacation, a newborn baby still in the hospital, or a person who stays here once in a while and has no other home?
 Yes, please print the name(s) and reason(s).
 No

b. Did you include anyone in your list of persons for Question 1a on page 1 even though you were not sure that the person should be listed -- for example, a visitor who is staying here temporarily or a person who usually lives somewhere else?
 Yes, please print the name(s) and reason(s).
 No

H2. Which best describes this building? Include all apartments, flats, etc., even if vacant.
 A mobile home or trailer
 A one-family house detached from any other house
 A one-family house attached to one or more houses
 A building with 2 apartments
 A building with 3 or 4 apartments
 A building with 5 to 9 apartments
 A building with 10 to 19 apartments
 A building with 20 to 49 apartments
 A building with 50 or more apartments
 Other

H3. How many rooms do you have in this house or apartment? Do NOT count bathrooms, porches, balconies, foyers, halls, or half-rooms.
 1 room 4 rooms 7 rooms
 2 rooms 5 rooms 8 rooms
 3 rooms 6 rooms 9 or more rooms

H4. Is this house or apartment --
 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)?
 Rented for cash rent?
 Occupied without payment of cash rent?

If this is a ONE-FAMILY HOUSE --
H5a. Is this house on ten or more acres?
 Yes No

b. Is there a business (such as a store or barber shop) or a medical office on this property?
 Yes No

Answer only if you or someone in this household OWNS OR IS BUYING this house or apartment --
H6. What is the value of this property; that is, how much do you think this house and lot or condominium unit would sell for if it were for sale?
 Less than \$10,000 \$70,000 to \$74,999
 \$10,000 to \$14,999 \$75,000 to \$79,999
 \$15,000 to \$19,999 \$80,000 to \$89,999
 \$20,000 to \$24,999 \$90,000 to \$99,999
 \$25,000 to \$29,999 \$100,000 to \$124,999
 \$30,000 to \$34,999 \$125,000 to \$149,999
 \$35,000 to \$39,999 \$150,000 to \$174,999
 \$40,000 to \$44,999 \$175,000 to \$199,999
 \$45,000 to \$49,999 \$200,000 to \$249,999
 \$50,000 to \$54,999 \$250,000 to \$299,999
 \$55,000 to \$59,999 \$300,000 to \$399,999
 \$60,000 to \$64,999 \$400,000 to \$499,999
 \$65,000 to \$69,999 \$500,000 or more

Answer only if you PAY RENT for this house or apartment --
H7a. What is the monthly rent?
 Less than \$80 \$375 to \$399
 \$80 to \$99 \$400 to \$424
 \$100 to \$124 \$425 to \$449
 \$125 to \$149 \$450 to \$474
 \$150 to \$174 \$475 to \$499
 \$175 to \$199 \$500 to \$524
 \$200 to \$224 \$525 to \$549
 \$225 to \$249 \$550 to \$599
 \$250 to \$274 \$600 to \$649
 \$275 to \$299 \$650 to \$699
 \$300 to \$324 \$700 to \$749
 \$325 to \$349 \$750 to \$999
 \$350 to \$374 \$1,000 or more

b. Does the monthly rent include any meals?
 Yes No

FOR CENSUS USE										
A. Total persons	B. Type of unit		D. Months vacant				G. DO			ID
	Occupied	Vacant	<input type="radio"/> Less than 1	<input type="radio"/> 6 up to 12						
	<input type="radio"/> First form	<input type="radio"/> Regular	<input type="radio"/> 1 up to 2	<input type="radio"/> 12 up to 24						
	<input type="radio"/> Cont'n	<input type="radio"/> Usual home elsewhere	<input type="radio"/> 2 up to 6	<input type="radio"/> 24 or more						
	C1. Vacancy status		E. Complete after							
	<input type="radio"/> For rent	<input type="radio"/> For seas/rec/occ	<input type="radio"/> LR	<input type="radio"/> TC	<input type="radio"/> QA	JC1				
	<input type="radio"/> For sale only	<input type="radio"/> For migrant workers	<input type="radio"/> P/F	<input type="radio"/> RE	<input type="radio"/> I/T					
	<input type="radio"/> Rented or sold, not occupied	<input type="radio"/> Other vacant	<input type="radio"/> MV	<input type="radio"/> ED	<input type="radio"/> EN					
			<input type="radio"/> P0	<input type="radio"/> P3	<input type="radio"/> P6					
			<input type="radio"/> P1	<input type="radio"/> P4	<input type="radio"/> IA	JC2				
			<input type="radio"/> P2	<input type="radio"/> P5	<input type="radio"/> SM					
	C2. Is this unit boarded up?		F. Cov.							
	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> 1b	<input type="radio"/> 1a	<input type="radio"/> 7	<input type="radio"/> H1				

<p>H18. When did the person listed in column 1 on page 2 move into this house or apartment?</p> <ul style="list-style-type: none"> <input type="radio"/> 1989 or 1990 <input type="radio"/> 1985 to 1988 <input type="radio"/> 1980 to 1984 <input type="radio"/> 1970 to 1979 <input type="radio"/> 1960 to 1969 <input type="radio"/> 1959 or earlier 	<p>H14. Which FUEL is used MOST for heating this house or apartment?</p> <ul style="list-style-type: none"> <input type="radio"/> Gas: from underground pipes serving the neighborhood <input type="radio"/> Gas: bottled, tank, or LP <input type="radio"/> Electricity <input type="radio"/> Fuel oil, kerosene, etc. <input type="radio"/> Coal or coke <input type="radio"/> Wood <input type="radio"/> Solar energy <input type="radio"/> Other fuel <input type="radio"/> No fuel used 	<p>H20. What are the yearly costs of utilities and fuels for this house or apartment? If you have lived here less than 1 year, estimate the yearly cost.</p> <p>a. Electricity</p> <p style="text-align: center;">\$.00 Yearly cost — Dollars</p> <p style="text-align: center;">OR</p> <p><input type="radio"/> Included in rent or in condominium fee <input type="radio"/> No charge or electricity not used</p>
<p>H19. How many bedrooms do you have; that is, how many bedrooms would you list if this house or apartment were on the market for sale or rent?</p> <ul style="list-style-type: none"> <input type="radio"/> No bedroom <input type="radio"/> 1 bedroom <input type="radio"/> 2 bedrooms <input type="radio"/> 3 bedrooms <input type="radio"/> 4 bedrooms <input type="radio"/> 5 or more bedrooms 	<p>H15. Do you get water from —</p> <ul style="list-style-type: none"> <input type="radio"/> A public system such as a city water department, or private company? <input type="radio"/> An individual drilled well? <input type="radio"/> An individual dug well? <input type="radio"/> Some other source such as a spring, creek, river, cistern, etc.? 	<p>b. Gas</p> <p style="text-align: center;">\$.00 Yearly cost — Dollars</p> <p style="text-align: center;">OR</p> <p><input type="radio"/> Included in rent or in condominium fee <input type="radio"/> No charge or gas not used</p>
<p>H10. Do you have COMPLETE plumbing facilities in this house or apartment; that is, 1) hot and cold piped water, 2) a flush toilet, and 3) a bathtub or shower?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes, have all three facilities <input type="radio"/> No 	<p>H16. Is this building connected to a public sewer?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes, connected to public sewer <input type="radio"/> No, connected to septic tank or cesspool <input type="radio"/> No, use other means 	<p>c. Water</p> <p style="text-align: center;">\$.00 Yearly cost — Dollars</p> <p style="text-align: center;">OR</p> <p><input type="radio"/> Included in rent or in condominium fee <input type="radio"/> No charge</p>
<p>H11. Do you have COMPLETE kitchen facilities; that is, 1) a sink with piped water, 2) a range or cookstove, and 3) a refrigerator?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No 	<p>H17. About when was this building first built?</p> <ul style="list-style-type: none"> <input type="radio"/> 1989 or 1990 <input type="radio"/> 1985 to 1988 <input type="radio"/> 1980 to 1984 <input type="radio"/> 1970 to 1979 <input type="radio"/> 1960 to 1969 <input type="radio"/> 1950 to 1959 <input type="radio"/> 1940 to 1949 <input type="radio"/> 1939 or earlier <input type="radio"/> Don't know 	<p>d. Oil, coal, kerosene, wood, etc.</p> <p style="text-align: center;">\$.00 Yearly cost — Dollars</p> <p style="text-align: center;">OR</p> <p><input type="radio"/> Included in rent or in condominium fee <input type="radio"/> No charge or these fuels not used</p>
<p>H12. Do you have a telephone in this house or apartment?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No 	<p>H18. Is this house or apartment part of a condominium?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No 	
<p>H13. How many automobiles, vans, and trucks of one-ton capacity or less are kept at home for use by members of your household?</p> <ul style="list-style-type: none"> <input type="radio"/> None <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 or more 	<p style="text-align: center;"><i>If you live in an apartment building, skip to H20.</i></p> <p>H19a. Is this house on less than 1 acre?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes — Skip to H20 <input type="radio"/> No <p>b. In 1989, what were the actual sales of all agricultural products from this property?</p> <ul style="list-style-type: none"> <input type="radio"/> None <input type="radio"/> \$1 to \$999 <input type="radio"/> \$1,000 to \$2,499 <input type="radio"/> \$2,500 to \$4,999 <input type="radio"/> \$5,000 to \$9,999 <input type="radio"/> \$10,000 or more 	

9
8
7
6
5
4
3
2
1
0
9
8
7
6
5
4
3
2
1
0

INSTRUCTION:

Answer questions H21 TO H26, if this is a one-family house, a condominium, or a mobile home that someone in this household OWNS OR IS BUYING; otherwise, go to page 6.

H21. What were the real estate taxes on THIS property last year?

\$.00
Yearly amount — Dollars

OR

None

H22. What was the annual payment for fire, hazard, and flood insurance on THIS property?

\$.00
Yearly amount — Dollars

OR

None

H23a. Do you have a mortgage, deed of trust, contract to purchase, or similar debt on THIS property?

- Yes, mortgage, deed of trust, or similar debt } Go to H23b
- Yes, contract to purchase }
- No — Skip to H24a

b. How much is your regular monthly mortgage payment on THIS property? Include payment only on first mortgage or contract to purchase.

\$.00
Monthly amount — Dollars

OR

No regular payment required — Skip to H24a

c. Does your regular monthly mortgage payment include payments for real estate taxes on THIS property?

- Yes, taxes included in payment
- No, taxes paid separately or taxes not required

d. Does your regular monthly mortgage payment include payments for fire, hazard, or flood insurance on THIS property?

- Yes, insurance included in payment
- No, insurance paid separately or no insurance

H24a. Do you have a second or junior mortgage or a home equity loan on THIS property?

- Yes
- No — Skip to H25

b. How much is your regular monthly payment on all second or junior mortgages and all home equity loans?

\$.00
Monthly amount — Dollars

OR

No regular payment required

Answer ONLY if this is a CONDOMINIUM —
H25. What is the monthly condominium fee?

\$.00
Monthly amount — Dollars

Answer ONLY if this is a MOBILE HOME —
H26. What was the total cost for personal property taxes, site rent, registration fees, and license fees on this mobile home and its site last year? Exclude real estate taxes.

\$.00
Yearly amount — Dollars

Please turn to page 6. →

9
8
7
6
5
4
3
2
1
0

23a. How did this person usually get to work LAST WEEK? If this person usually used more than one method of transportation during the trip, fill the circle of the one used for most of the distance.

Car, truck, or van Motorcycle
 Bus or trolley bus Bicycle
 Streetcar or trolley car Walked
 Subway or elevated Worked at home
 Railroad Skip to 28
 Ferryboat Other method
 Taxicab

If "car, truck, or van" is marked in 23a, go to 23b. Otherwise, skip to 24a.

b. How many people, including this person, usually rode to work in the car, truck, or van LAST WEEK?

Drove alone 5 people
 2 people 6 people
 3 people 7 to 9 people
 4 people 10 or more people

24a. What time did this person usually leave home to go to work LAST WEEK?

a.m.
 p.m.

b. How many minutes did it usually take this person to get from home to work LAST WEEK?

Minutes — Skip to 28

25. Was this person TEMPORARILY absent or on layoff from a job or business LAST WEEK?

Yes, on layoff
 Yes, on vacation, temporary illness, labor dispute, etc.
 No

26a. Has this person been looking for work during the last 4 weeks?

Yes
 No — Skip to 27

b. Could this person have taken a job LAST WEEK if one had been offered?

No, already has a job
 No, temporarily ill
 No, other reasons (in school, etc.)
 Yes, could have taken a job

27. When did this person last work, even for a few days?

1990 1980 to 1984
 1989 1979 or earlier
 1988 Never worked
 1985 to 1987

Go to 28 *Skip to 32*

28-30. CURRENT OR MOST RECENT JOB ACTIVITY. Describe clearly this person's chief job activity or business last week. If this person had more than one job, describe the one at which this person worked the most hours. If this person had no job or business last week, give information for his/her last job or business since 1985.

28. Industry or Employer

a. For whom did this person work? If now on active duty in the Armed Forces, fill this circle and print the branch of the Armed Forces.

(Name of company, business, or other employer)

b. What kind of business or industry was this? Describe the activity at location where employed.

(For example: hospital, newspaper publishing, mail order house, auto engine manufacturing, retail bakery)

c. Is this mainly — Fill ONE circle

Manufacturing Other (agriculture, construction, service, government, etc.)
 Wholesale trade
 Retail trade

29. Occupation

a. What kind of work was this person doing?

(For example: registered nurse, personnel manager, supervisor of order department, gasoline engine assembler, cake icer)

b. What were this person's most important activities or duties?

(For example: patient care, directing hiring policies, supervising order clerks, assembling engines, icing cakes)

30. Was this person — Fill ONE circle

Employee of a PRIVATE FOR PROFIT company or business or of an individual, for wages, salary, or commissions
 Employee of a PRIVATE NOT-FOR-PROFIT, tax-exempt, or charitable organization
 Local GOVERNMENT employee (city, county, etc.)
 State GOVERNMENT employee
 Federal GOVERNMENT employee
 SELF-EMPLOYED in own NOT INCORPORATED business, professional practice, or farm
 SELF-EMPLOYED in own INCORPORATED business, professional practice, or farm
 Working WITHOUT PAY in family business or farm

31a. Last year (1989), did this person work, even for a few days, at a paid job or in a business or farm?

Yes
 No — Skip to 32

b. How many weeks did this person work in 1989? Count paid vacation, paid sick leave, and military service.

Weeks

c. During the weeks WORKED in 1989, how many hours did this person usually work each week?

Hours

32. INCOME IN 1989 — Fill the "Yes" circle below for each income source received during 1989. Otherwise, fill the "No" circle. If "Yes," enter the total amount received during 1989. For income received jointly, see instruction guide. If exact amount is not known, please give best estimate. If net income was a loss, write "Loss" above the dollar amount.

a. Wages, salary, commissions, bonuses, or tips from all jobs — Report amount before deductions for taxes, bonds, dues, or other items.

Yes
 No

Annual amount — Dollars

b. Self-employment income from own nonfarm business, including proprietorship and partnership — Report NET income after business expenses.

Yes
 No

Annual amount — Dollars

c. Farm self-employment income — Report NET income after operating expenses. Include earnings as a tenant farmer or sharecropper.

Yes
 No

Annual amount — Dollars

d. Interest, dividends, net rental income or royalty income, or income from estates and trusts — Report even small amounts credited to an account.

Yes
 No

Annual amount — Dollars

e. Social Security or Railroad Retirement

Yes
 No

Annual amount — Dollars

f. Supplemental Security Income (SSI), Aid to Families with Dependent Children (AFDC), or other public assistance or public welfare payments.

Yes
 No

Annual amount — Dollars

g. Retirement, survivor, or disability pensions — Do NOT include Social Security.

Yes
 No

Annual amount — Dollars

h. Any other sources of income received regularly such as Veterans' (VA) payments, unemployment compensation, child support, or alimony — Do NOT include lump-sum payments such as money from an inheritance or the sale of a home.

Yes
 No

Annual amount — Dollars

33. What was this person's total income in 1989? Add entries in questions 32a through 32h; subtract any losses. If total amount was a loss, write "Loss" above amount.

None OR

Annual amount — Dollars

Please turn the page and answer questions for Person 2 listed on page 1. If this is the last person listed in question 1a on page 1, go to the back of the form.

APPENDIX F.

Data Products and User Assistance

CONTENTS

Data Products	F-1
Geographic Products	F-3
Other Census Bureau Resources	F-5
Reference Materials	F-4
Sources of Assistance	F-4

The 1990 census data products, being released during 1991-93, are available in a variety of new and traditional media. The Census Bureau has increased the product options available to data users in an effort to meet a variety of requirements and maximize the usefulness of the data. For example, laser discs, called CD-ROM (compact disc—read-only memory), are a new data delivery medium.

The Census Bureau also has expanded services and sources of assistance available to data users. For example, the State-Data Center Program has been expanded to include over 1,400 organizations to provide data and services to the public.

This appendix provides a detailed introduction to the 1990 census data products and related materials, such as maps and reference publications. It concludes by describing sources of assistance and other Census Bureau data available to the public.

DATA PRODUCTS

Printed reports and computer tape files traditionally are the most widely used products. The Census Bureau also offers data on microfiche, on CD-ROM laser discs, and through its online service, CENDATA™. These various products are described below. For information about prices and how to order, write or call Customer Services. (See the "Sources of Assistance" section for the address and phone number.)

The data products present statistics about the subjects covered in the 1990 census questionnaires. These subjects are listed in figure 1, page F-8. As the figure shows, there are 100-percent subjects (those covered in questions asked of everyone or about every housing unit) and sample subjects (those covered in questions asked at about one out of every six housing units). Generally, a data product presents either 100-percent data prepared by tabulating the responses to the 100-percent questions from all questionnaires, or sample data prepared by tabulating only the responses to the 100-percent and sample questions from the "long-form" questionnaires. Two report series, 1990 CPH-3 and 1990 CPH-4 (see figure 2, page F-9), present both 100-percent and sample data.

Printed Reports

Printed reports are the most convenient and readily available source of data for most census users. The Census Bureau releases the reports in several series (see figure 2) that are grouped under three broad titles: *1990 Census of Population and Housing* (1990 CPH), *1990 Census of Population* (1990 CP), and *1990 Census of Housing* (1990 CH). There also are reports, not reflected in figure 2, for the outlying areas of the Pacific. The reports are sold by the Superintendent of Documents, U.S. Government Printing Office. (See the "Sources of Assistance" section for the address and phone number.)

In several series, there are separate reports for each State. The geographic coverage of the State reports is listed in figure 2. The United States summaries for these report series contain, for the most part, data for the United States, regions, divisions, States, metropolitan areas (MA's), urbanized areas (UA's), counties, American Indian and Alaska Native areas, places with 10,000 or more persons, and other large substate areas (for example, county subdivisions, such as towns and townships, with 10,000 or more persons in selected States).

Report series that present data for small areas, such as census tracts, contain limited subject-matter detail (for example, counts of people by age ranges—under 5 years, 5 to 9 years, etc.—rather than by single years). Report series that include greater amounts of subject-matter detail include less geographic detail.

Computer Tape Files

The Census Bureau provides more data on tape and other machine-readable products than in printed reports. These products are sold by the Census Bureau's Customer Services. There are several general types of data files released on computer tape (available on both reels and cartridges). They are introduced below, and more information is presented in figures 3 and 4, pages F-12 through F-14.

Public Law 94-171 Data—This data file presents the counts designed and formatted for use in legislative redistricting. These counts also are available on CD-ROM and paper listings. Excerpts are available on CENDATA™. The counts, for areas as small as blocks, census tracts, and voting districts, include totals for population, race groups, persons of Hispanic origin, population 18 years and over, and housing units. (See figure 4.)

Summary Tape Files (STF's)— These computer tape files provide statistics with greater subject-matter detail than printed reports. They also present statistics for some types of areas, such as block groups and blocks, that are not included in the reports. (See figure 3.)

Here are some important features of STF's:

- Each STF presents a particular set of data tables for specific types of geographic areas.
- Each STF has three or more file types (indicated by a letter suffix attached to the STF number) that differ in the geographic levels reported, but contain the same data detail.
- STF's 1 and 2 contain 100-percent data, and STF's 3 and 4 offer sample data.
- STF's 1 and 3 report on smaller areas and offer less data detail than STF's 2 and 4.
- STF's 1 through 4 offer greater data detail than the 1980 STF's 1 through 4.

Subject Summary Tape Files (SSTF's)—These files are the source of the subject reports and provide greater subject-matter detail than the STF's. They present data for the United States, regions, and divisions, and, in some cases, also for States, counties, and large cities. (See figure 4.)

Public Use Microdata Sample (PUMS) Files—These computer tape files (see figure 4) contain data from samples of long-form housing-unit records ("microdata") for large geographic areas. Each sample housing-unit record includes essentially all the 1990 census data collected about each person in a sample household and the characteristics of the housing unit. Information that could be used to identify an individual or a housing unit is not included in the file.

Microdata files enable users to prepare customized tabulations and cross-tabulations of most items on the census questionnaire. There are two PUMS files:

- A file presenting a 5-percent sample of housing units in which each household record includes codes to let the user know in what area, such as a group of counties, a single county, or a place, the household is located. Each area identified must have a population of at least 100,000 and boundaries that do not cross State lines.
- A file presenting a 1-percent sample of housing units. Its household records include codes associating them with MA's and other large areas, the boundaries of which may cross State lines. (For the 1980 census, there were two files with 1-percent samples. The 1-percent sample showing data for selected urbanized areas and other large areas will not be produced for the 1990 census.)

Other Special Computer Tape Files—Other files include the Census/Equal Employment Opportunity (EEO) Special File and the County-to-County Migration File. (See figure 4.) The Census Bureau may prepare additional special files.

Microfiche

Block statistics are available on microfiche as they were for the 1980 census. The microfiche present, in table format, a subset of the tabulations for census blocks found in STF 1B (see figure 3). In the 1990 census, for the first time, the entire land area of the Nation and its possessions was block-numbered. This increased the number of blocks for which the Census Bureau provides data from 2.5 million in 1980 to 7 million for 1990. The cost and storage of block data of this magnitude would be prohibitive if the data were published in printed reports.

STF's 1A and 3A are available on microfiche, as well. As noted in figure 3, they provide data for a variety of geographic areas. Also, all printed reports are offered on microfiche from Customer Services soon after they are published.

Compact Disc—Read-Only Memory (CD-ROM)

For the 1990 census, the Public Law (P.L.) 94-171 file; an extract of STF 1B that presents selected statistics for blocks; and STF's 1A, 1C, 3A, 3B, and 3C are also available on CD-ROM. (One 4 3/4-inch CD-ROM, a type of optical or laser disc, can hold the contents of approximately 1,600 flexible diskettes, or three or four high-density computer tapes.)

Online Information Systems

The Census Bureau began CENDATA™, its online information service, in 1984. CENDATA™ is accessible through two information vendors, CompuServe and DIALOG. A number of Census Bureau reports, in whole or in part, are offered online. For the 1990 census, CENDATA™ provides up-to-date information about the availability of data products and carries selections of State, county, MA, and place data from the P.L. 94-171 tape file and STF's 1 and 3.

Custom Data Products

These products are for users who require unique tabulations that are not included in standard products; for example, information for locally defined geographic areas. Users also can order special microdata files.

The cost of preparing custom products must be paid by the users who request them. Any data that the Census Bureau provides in these products are subject to the same standards applied to other data to ensure that confidential individual information is not revealed.

User-Defined Areas Program (UDAP) Tabulations—UDAP can provide a set of predefined data tables for locally defined areas that do not correspond to standard 1990 census geographic areas. Users identify the geographic areas of interest to them by delineating boundaries around groupings of census blocks on 1990 census County Block Maps or by electronically submitting the geographic components of their area of interest. (A contact for more information is given in the "Sources of Assistance" section.)

Special Tabulations—The Census Bureau can prepare special data tabulations for any specific geographic or subject-matter area. Users should rely on standard reports, tapes, microfiche, or user-defined area tabulations whenever possible, since special tabulations tend to be substantially more expensive and take time to arrange and produce. (Contacts for more information are given in the "Sources of Assistance" section.)

GEOGRAPHIC PRODUCTS

Maps

Census Bureau maps are necessary for virtually all uses of small-area 1990 census data. They are needed to locate the specific geographic areas for which the census provides data and to study the spatial relationship of the data for analytic purposes. The Census Bureau prepares a variety of 1990 census maps. Among the most useful are these four series:

County Block Maps—These maps show census blocks and their numbers; boundaries for statistical and governmental entities, such as census tracts and places; and physical features. The P.L. 94-171 version of these maps also shows voting district boundaries in those States that furnished them. The maps are prepared on electrostatic plotters by county (or equivalent entity) with one or more map sheets each, depending on the size and shape of the area and the density of the block pattern. An average county requires 20 map sheets. The maps may be purchased from Customer Services.

County Subdivision Outline Maps—Maps in this State-based series present the boundaries of the counties, county subdivisions, places, American Indian and Alaska Native areas (including off-reservation trust lands), tribal designated statistical areas, and tribal jurisdiction statistical areas. Electrostatic-plotter copies are available for purchase from Customer Services. Also, they appear on multiple page-size sheets in the State reports of these series: 1990 CPH-1, 1990 CPH-2, 1990 CPH-5, 1990 CP-1, 1990 CP-2, 1990 CH-1, and 1990 CH-2.

Census Tract/Block Numbering Area (BNA) Outline Maps—Maps in this county-based series depict census tract or BNA boundaries and numbers, and the features

underlying the boundaries. They also show governmental units in relation to the census tracts/BNA's. Customer Services sells electrostatic-plotter copies, and the Superintendent of Documents sells printed copies.

Voting District Outline Maps—Maps in this county-based series depict voting district boundaries (for those counties for which States furnished boundary information) and the features underlying the boundaries. They also show governmental unit boundaries in relation to the voting districts. They are prepared on electrostatic plotters and sold by Customer Services.

Geographic Publications

The *Geographic Identification Code Scheme* report in the 1990 CPH-R series shows the 1990 census geographic area codes and Federal information processing standards (FIPS) codes, as appropriate, for States, metropolitan areas, counties, county subdivisions, places, American Indian and Alaska Native areas, and other entities, along with some descriptive information about the codes. The code scheme also is offered on computer tape.

Machine-Readable Geographic Files

All 1990 census summary tape files include 1990 census geographic area codes, FIPS codes, certain area names, land and inland water area in square kilometers, geographic coordinates for an internal point for each entity, and other geographic information.

The Census Bureau developed an automated geographic data base, known as the TIGER (Topologically Integrated Geographic Encoding and Referencing) System, to produce the geographic products for the 1990 census. TIGER provides coordinate-based digital map information for the entire United States, Puerto Rico, the U.S. Virgin Islands, and the Pacific territories over which the United States has jurisdiction.

The TIGER System has significantly improved the utility of 1990 census maps and geographic reference products. Extract files generated from the TIGER System permit users, with appropriate software, to perform such tasks as linking the statistical data in the P.L. 94-171 file or the STF's and displaying selected characteristics on maps or a video display screen at different scales and with whatever boundaries they select for any geographic area of the country. For example, a map for a particular county could show the distribution of the voting age population by city block.

The first extract of selected geographic and cartographic information intended for computer applications, such as plotting maps and building geographic information systems, is called the TIGER/Line™ files. TIGER/Line™ files contain attributes for the segments of each boundary and feature (for example, roads, railroads, and rivers), including 1990 census geographic codes for

adjacent areas, latitude/longitude coordinates of segment end points and the curvature of segments, the name and type of the feature, and the relevant census feature class code identifying the feature segment by category. TIGER/Line™ files also furnish address ranges and associated ZIP Codes for each side of street segments in major urban areas; provide the names of landmarks, such as lakes and golf courses; and include other information.

TIGER/Line™ files and other TIGER System extracts, such as TIGER/Boundary™ and TIGER/DataBase™, are released on computer tape and, in some cases, CD-ROM. For information on TIGER extract files, contact Customer Services.

REFERENCE MATERIALS

The Census Bureau issues several reference publications for data users. Some are sold by the Superintendent of Documents; others are distributed free by Customer Services. Addresses and phone numbers for the Superintendent of Documents and Customer Services are given in the following section.

- *1990 Census of Population and Housing, Guide*. This guide, in the 1990 CPH-R report series, provides detailed information about all aspects of the census and a comprehensive glossary of census terms. Sold by the Superintendent of Documents, U.S. Government Printing Office.
- *1990 Census of Population and Housing Tabulation and Publication Program*. A free report describing 1990 census products, comparing 1990 products with those of 1980, and more. Request from Customer Services.
- *Census '90 Basics*. A free booklet covering how the 1990 census data were collected and processed, the full range of data products, the maps and geographic files, and more, but with less detail than the Guide (above). Request from Customer Services.
- *Census ABC's—Applications in Business and Community*. A free booklet that highlights key information about the 1990 census and illustrates a variety of ways the data can be used. Request from Customer Services.
- *Strength in Numbers*. A free, tabloid-size booklet designed to assist people in using 1990 census data in redistricting. Among other features, it includes illustrations of maps and Public Law 94-171 counts. Request from Customer Services.
- *TIGER: The Coast-to-Coast Digital Map Data Base*. A free booklet describing the structure and uses of the Census Bureau's TIGER System. Request from Customer Services.

- *Census and You*. The Census Bureau's monthly newsletter for data users. It reports on the latest 1990 census developments, selected new publications and computer tape files, other censuses and surveys, developments in services to users, and upcoming conferences and training courses. Subscriptions are sold by the Superintendent of Documents, U.S. Government Printing Office.
- *Monthly Product Announcement*. A free monthly listing of all new Census Bureau publications; microfiche; maps; data files on tape, diskettes, or CD-ROM; and technical documentation. To subscribe, contact Customer Services.
- *Census Catalog and Guide*. A comprehensive annual description of data products, statistical programs, and services of the Census Bureau. It provides abstracts of the publications, data files, microfiche, maps, and items online. In addition, the Catalog/Guide offers such features as information about censuses and surveys and telephone contact lists of data specialists at the Census Bureau, the State Data Centers, and other data processing service centers. It is sold by the Superintendent of Documents, U.S. Government Printing Office.

Users also can get listings of new Census Bureau products, updated daily, by subscribing to the *Daily List*. This information and selected statistics are available online through CENDATA™, the Census Bureau's online information service. For more information, contact Customer Services.

SOURCES OF ASSISTANCE

U.S. Bureau of the Census

The Census Bureau's Customer Services sells most of the machine-readable data products, microfiche, and maps described earlier. (The 1990 census printed reports are sold by the Superintendent of Documents, as noted below.) Also, users may consult with specialists at the Census Bureau's Washington headquarters and its 12 regional offices. From time to time, the specialists also conduct workshops, seminars, and training courses.

Washington, DC, Contacts—To order products, for a telephone contacts list of Census Bureau specialists, and for general information: Customer Services, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-4100 (FAX number, 301-763-4794).

For User-Defined Areas Program (UDAP) information: UDAP Staff, Decennial Planning Division, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-4282.

For special tabulation information: Population—Rosemarie Cowan, Population Division, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-5476; Housing—William Downs, Housing and Household Economic Statistics, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-8553.

Regional Office Contacts—

Atlanta, GA	404-347-2274
Boston, MA	617-565-7078
Charlotte, NC	704-371-6144
Chicago, IL	312-353-0980
Dallas, TX	214-767-7105
Denver, CO	303-969-7750
Detroit, MI	313-354-4654
Kansas City, KS	913-236-3711
Los Angeles, CA	818-904-6339
New York, NY	212-264-4730
Philadelphia, PA	215-597-8313
Seattle, WA	206-728-5314

Superintendent of Documents, U.S. Government Printing Office

The Superintendent of Documents handles the sale of most of the Federal Government's publications, including 1990 census reports. To order reports and for information: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, telephone 202-783-3238.

Other Sources of Products and Services

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, Guam, Puerto Rico, and the U.S. Virgin Islands. State Data Centers, in turn, offer publications for reference, printouts from computer tape, specially prepared reports, maps, and other products and assistance to data users. For a list of the State Data Centers, see the *Census Catalog and Guide* or contact Customer Services. The list also notes organizations in States participating in the Census Bureau's Business/Industry Data Center (BIDC) Program. The BIDC's help business people, economic development planners, and other data users obtain and use data.

National Services Program—The National Services Program (NSP) provides data-related services for nationally based nonprofit organizations that represent minorities or other segments of the population who have been historically undercounted in decennial censuses. The participants include social service, business, professional, civil rights, educational, and religious groups. Through a pilot project, the National Services Information Center (NSIC) Initiative, three of these nonprofit

groups now offer their clientele reports, computer tape printouts, and other information from the Census Bureau. To learn more about the NSP and the NSIC, write to the National Services Program, Data User Services Division, Bureau of the Census, Washington, DC 20233, or call 301-763-1384.

National Clearinghouse—The National Clearinghouse for Census Data Services is a listing of private companies and other organizations that offer assistance in obtaining and using data released by the Census Bureau. For a list of participants in the National Clearinghouse, see the *Census Catalog and Guide* or contact Customer Services.

Depository Libraries—There are 1,400 libraries that receive (from the Government Printing Office) Federal publications that they think their patrons will need. Often some of these publications are Census Bureau reports. The Census Bureau provides free reports to an additional 120 census depository libraries. Also, many libraries purchase census reports and maps for their areas. The *Census Catalog and Guide* includes a list of all depository libraries.

OTHER CENSUS BUREAU RESOURCES

The Census Bureau has more to offer than just the results of the census of population and housing. Through other censuses, surveys, and estimates programs, it compiles and issues (in reports, computer tape, and other media) data on subjects as diverse as appliance sales, neighborhood conditions, and exports to other countries. Here are examples of the information published about—

- *People*: Age, race, sex, income, poverty, child care, child support, fertility, noncash benefits, education, commuting habits, pension coverage, unemployment, ancestry.
- *Business and industry*: Number of employees, total payroll, sales and receipts, products manufactured or sold.
- *Housing and construction*: Value of new construction, numbers of owners and renters, property value or rent paid, housing starts, fuels used, mortgage costs.
- *Farms*: Number, acreage, livestock, crop sales.
- *Governments*: Revenues and expenditures, taxes, employment, pension funds.
- *Foreign trade*: Exports and imports, origin and destination, units shipped.
- *Other nations*: Population, birth rates, death rates, literacy, fertility.

The other censuses, such as agriculture, retail trade, manufactures, and governments, are collected for years ending in "2" and "7." Surveys and estimates programs generate results as often as every month.

Many of the monthly "economic indicators" that measure how the Nation is doing come directly or indirectly from the Census Bureau. Examples: employment and unemployment; housing starts; wholesale and retail trade; manufacturers' shipments, inventories, and orders; export and import trade; and sales of single-family homes.

The other statistical activities of the Census Bureau are described below. Data users will find more information about them and descriptions of their data products in the annual *Census Catalog and Guide*. Also, special guides and brochures are prepared for most of them. Contact the Census Bureau's Customer Services for more information.

Current Demographic and Housing Programs

Two types of current programs complement the 10-year census: population estimates and surveys. The total population of the United States is estimated monthly; the population of States, counties, and metropolitan areas is estimated annually; and the population of places and other governmental units is estimated every 2 years. Projections of future population are made at the national and State levels.

The Census Bureau's many household surveys update population and housing characteristics at the national level and sometimes for States and metropolitan areas, as well. These surveys also obtain many characteristics not included in the 10-year census. The Current Population Survey is taken monthly; the American Housing Survey national sample is taken biennially; the American Housing Survey metropolitan sample is taken in 44 areas, 11 per year in a 4-year cycle; most other surveys are annual or less frequent.

Economic Censuses and Surveys

The economic censuses provide statistics about business establishments once every 5 years, covering years ending in "2" and "7." The 1987 Economic Censuses include the censuses of retail trade, wholesale trade, service industries, transportation, manufactures, mineral industries, and construction industries. Also included are related programs, such as statistics on minority- and women-owned businesses, enterprise statistics, and censuses of economic activity in Puerto Rico and some of the outlying areas under U.S. jurisdiction.

Several key statistics are tabulated for all industries covered in the censuses. They are number of establishments, number of employees, payroll, and measure of output (sales or receipts, and value of shipments or of work done). Other items vary from sector to sector.

The Census Bureau also has programs that provide current statistics on such measures as total sales of particular kinds of businesses or production of particular products. These programs include monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Business Reports* and *Current Industrial Reports*. The County Business Patterns program offers annual statistics based on data compiled primarily from administrative records.

Agriculture Census and Surveys

The agriculture census is conducted concurrently with the economic censuses. It is the only source of uniform agriculture data at the county level. It provides data on such subjects as the number and size of farms; land use and ownership; livestock, poultry, and crops; and value of products sold.

Results of three surveys—the 1988 Farm and Ranch Irrigation Survey, 1988 Census of Horticulture Specialties, and 1988 Agricultural Economics and Land Ownership Survey—are published in conjunction with the 1987 Census of Agriculture. Also, the Census Bureau regularly issues reports from a survey on cotton ginnings.

Governments Census and Surveys

The census of governments, also for years ending in "2" and "7," covers all types of governments: Federal, State, county, municipal (place), township (county subdivision), school district, and special district. It provides data on such subjects as number of public employees, payrolls, revenue, and expenditures.

Annual and quarterly surveys cover the same principal subjects but generate data only for States and the largest local governments.

Foreign Trade Statistics

Monthly U.S. merchandise trade data compiled by the Census Bureau summarize export and import transactions and are based on the official documents filed by shippers and receivers. These figures reflect the flow of merchandise but not intangibles like services and financial commitments. The trade figures trace commodity movements out of and into the U.S. Customs jurisdiction, which includes Puerto Rico and the U.S. Virgin Islands as well as the 50 States and the District of Columbia. Data are published separately on trade between the United States and Puerto Rico, the U.S. Virgin Islands, and other U.S. possessions.

Other Statistical Activities

The Census Bureau also offers international data. It maintains an international data base which is available to the public on computer tape and is used to produce

the biennial *World Population Profile* report. It prepares studies dealing with the demographic and economic characteristics of other countries and world regions.

Statistical compendia are another important data product. These publications (sometimes also offered in machine-readable form) draw data from many sources

and reorganize them for convenient use. The most widely used compendia are the annual *Statistical Abstract of the United States*, the *County and City Data Book* (published every 5 years), and the *State and Metropolitan Area Data Book* (published approximately every 4 years).

Figure 1. 1990 Census Content

100-PERCENT COMPONENT

Population

Household relationship
Sex
Race
Age
Marital status
Hispanic origin

Housing

Number of units in structure
Number of rooms in unit
Tenure—owned or rented
Value of home or monthly rent
Congregate housing (meals included in rent)
Vacancy characteristics

SAMPLE COMPONENT

Population

Social characteristics:
Education—enrollment and attainment
Place of birth, citizenship, and year of entry into U.S.
Ancestry
Language spoken at home
Migration (residence in 1985)
Disability
Fertility
Veteran status

Economic characteristics:

Labor force
Occupation, industry, and class of worker
Place of work and journey to work
Work experience in 1989
Income in 1989
Year last worked

Housing

Year moved into residence
Number of bedrooms
Plumbing and kitchen facilities
Telephone in unit
Vehicles available
Heating fuel
Source of water and method of sewage disposal
Year structure built
Condominium status
Farm residence
Shelter costs, including utilities

NOTE: Questions dealing with the subjects covered in the 100-percent component were asked of all persons and housing units. Those covered by the sample component were asked of a sample of the population and housing units.

Figure 2. 1990 Census Printed Reports

Series	Title	Report(s) issued for	Description	Geographic areas
1990 CENSUS OF POPULATION AND HOUSING (1990 CPH)				
100-Percent Data				
1990 CPH-1	Summary Population and Housing Characteristics	U.S., States, DC, Puerto Rico, and U.S. Virgin Islands	Population and housing unit counts, and summary statistics on age, sex, race, Hispanic origin, household relationship, units in structure, value and rent, number of rooms, tenure, and vacancy characteristics	Local governmental units (i.e., counties, places, and towns and townships), other county subdivisions, and American Indian and Alaska Native areas
1990 CPH-2	Population and Housing Unit Counts	U.S., States, DC, Puerto Rico, and U.S. Virgin Islands	Total population and housing unit counts for 1990 and previous censuses	States, counties, county subdivisions, places, State component parts of metropolitan areas (MA's) and urbanized areas (UA's), and summary geographic areas (for example, urban and rural)
100-Percent and Sample Data				
1990 CPH-3	Population and Housing Characteristics for Census Tracts and Block Numbering Areas	MA's, and the nonmetropolitan balance of each State, Puerto Rico, and U.S. Virgin Islands	Statistics on 100-percent and sample population and housing subjects	In MA's: census tracts/ block numbering areas (BNA's), places of 10,000 or more inhabitants, and counties. In the remainder of each State: census tracts/ BNA's, places of 10,000 or more, and counties
1990 CPH-4	Population and Housing Characteristics for Congressional Districts of the 103rd Congress	States and DC	Statistics on 100-percent and sample population and housing subjects	Congressional districts (CD's) and, within CD's, counties, places of 10,000 or more inhabitants, county subdivisions of 10,000 or more inhabitants in selected States, and American Indian and Alaska Native areas
Sample Data				
1990 CPH-5	Summary Social, Economic, and Housing Characteristics	U.S., States, DC, Puerto Rico, and U.S. Virgin Islands	Statistics generally on sample population and housing subjects	Local governmental units (i.e., counties, places, and towns and townships), other county subdivisions, and American Indian and Alaska Native areas
1990 CENSUS OF POPULATION (1990 CP)				
100-Percent Data				
1990 CP-1	General Population Characteristics	U.S., States, DC, Puerto Rico, and U.S. Virgin Islands	Detailed statistics on age, sex, race, Hispanic origin, marital status, and household relationship characteristics	States, counties, places of 1,000 or more inhabitants, county subdivisions of 1,000 or more inhabitants in selected States, State parts of American Indian areas, Alaska Native areas, and summary geographic areas such as urban and rural

Figure 2. 1990 Census Printed Reports—Con.

Series	Title	Report(s) issued for	Description	Geographic areas
1990 CENSUS OF POPULATION (1990 CP)—Con.				
100-Percent Data—Con.				
1990 CP-1-1A	General Population Characteristics for American Indian and Alaska Native Areas	U.S.	Detailed statistics on age, sex, race, Hispanic origin, marital status, and household relationship characteristics	American Indian and Alaska Native areas; i.e., American Indian reservations, off-reservation trust lands, tribal jurisdiction statistical areas (Oklahoma), tribal designated statistical areas, Alaska Native village statistical areas, and Alaska Native Regional Corporations
1990 CP-1-1B	General Population Characteristics for Metropolitan Areas	U.S.	Detailed statistics on age, sex, race, Hispanic origin, marital status, and household relationship characteristics	Individual MA's. For MA's split by State boundaries, summaries are provided both for the parts and for the whole MA
1990 CP-1-1C	General Population Characteristics for Urbanized Areas	U.S.	Detailed statistics on age, sex, race, Hispanic origin, marital status, and household relationship characteristics	Individual UA's. For UA's split by State boundaries, summaries are provided both for the parts and for the whole UA
Sample Data				
1990 CP-2	Social and Economic Characteristics	U.S., States, DC, Puerto Rico, and U.S. Virgin Islands	Statistics generally on sample population subjects	States (including summaries such as urban and rural), counties, places of 2,500 or more inhabitants, county subdivisions of 2,500 or more inhabitants in selected States, Alaska Native areas, and the State portion of American Indian areas
1990 CP-2-1A	Social and Economic Characteristics for American Indian and Alaska Native Areas	U.S.	Statistics generally on sample population subjects	American Indian and Alaska Native areas, as for CP-1-1A
1990 CP-2-1B	Social and Economic Characteristics for Metropolitan Areas	U.S.	Statistics generally on sample population subjects	Individual MA's, as for CP-1-1B
1990 CP-2-1C	Social and Economic Characteristics for Urbanized Areas	U.S.	Statistics generally on sample population subjects	Individual UA's, as for CP-1-1C
1990 CP-3	Population Subject Reports	Selected subjects	Approximately 30 reports on population census subjects such as migration, education, income, the older population, and racial and ethnic groups	Generally limited to the U.S., regions, and divisions; for some reports, other highly populated areas such as States, MA's, counties, and large places

Figure 2. 1990 Census Printed Reports—Con.

Series	Title	Report(s) issued for	Description	Geographic areas
1990 CENSUS OF HOUSING (1990 CH)				
100-Percent Data				
1990 CH-1	General Housing Characteristics	U.S., States, DC, Puerto Rico, and U.S. Virgin Islands	Detailed statistics on units in structure, value and rent, number of rooms, tenure, and vacancy characteristics	States, counties, places of 1,000 or more inhabitants, county subdivisions of 1,000 or more inhabitants in selected States, State parts of American Indian areas, Alaska Native areas, and summary geographic areas such as urban and rural
1990 CH-1-1A	General Housing Characteristics for American Indian and Alaska Native Areas	U.S.	Detailed statistics on units in structure, value and rent, number of rooms, tenure, and vacancy characteristics	American Indian and Alaska Native areas; i.e., American Indian reservations, trust lands, tribal jurisdiction statistical areas (Oklahoma), tribal designated statistical areas, Alaska Native village statistical areas, and Alaska Native Regional Corporations
1990 CH-1-1B	General Housing Characteristics for Metropolitan Areas	U.S.	Detailed statistics on units in structure, value and rent, number of rooms, tenure, and vacancy characteristics	Individual MA's. For MA's split by State boundaries, summaries are provided both for the parts and for the whole MA
1990 CH-1-1C	General Housing Characteristics for Urbanized Areas	U.S.	Detailed statistics on units in structure, value and rent, number of rooms, tenure, and vacancy characteristics	Individual UA's. For UA's split by State boundaries, summaries are provided both for the parts and for the whole UA
Sample Data				
1990 CH-2	Detailed Housing Characteristics	U.S., States, DC, Puerto Rico, and U.S. Virgin Islands	Statistics generally on sample housing subjects	States (including summaries such as urban and rural), counties, places of 2,500 or more inhabitants, county subdivisions of 2,500 or more inhabitants in selected States, Alaska Native areas, and State parts of American Indian areas
1990 CH-2-1A	Detailed Housing Characteristics for American Indian and Alaska Native Areas	U.S.	Statistics generally on sample housing subjects	American Indian and Alaska Native areas, as in 1990 CH-1-1A
1990 CH-2-1B	Detailed Housing Characteristics for Metropolitan Areas	U.S.	Statistics generally on sample housing subjects	Individual MA's, as in 1990 CH-1-1B
1990 CH-2-1C	Detailed Housing Characteristics for Urbanized Areas	U.S.	Statistics generally on sample housing subjects	Individual UA's, as in 1990 CH-1-1C
1990 CH-3	Housing Subject Reports	Selected subjects	Approximately 10 reports on housing census subjects such as structural characteristics and space utilization	Generally limited to U.S., regions, and divisions; for some reports, other highly populated areas such as States, MA's, counties, and large places

Figure 3. 1990 Census Summary Tape Files

Summary Tape File (STF 1A, 1B, etc.) and data type (100 percent or sample)¹	Geographic areas	Description	
STF 1 (100 percent)	A ^{2 3}	States, counties, county subdivisions, places, census tracts/ block numbering areas (BNA's), block groups (BG's). Also Alaska Native areas and State parts of American Indian areas	
	B ^{2 3}	States, counties, county subdivisions, places, census tracts/BNA's, BG's, blocks. Also Alaska Native areas and State parts of American Indian areas	
	C ³	U.S., regions, divisions, States (including summaries such as urban and rural), counties, places of 10,000 or more inhabitants, county subdivisions of 10,000 or more inhabitants in selected States, metropolitan areas (MA's), urbanized areas (UA's), American Indian and Alaska Native areas	Over 900 cells/items of 100-percent population and housing counts and characteristics for each geographic area
	D	Congressional districts (CD's) of the 103rd Congress by State; and within each CD: counties, places of 10,000 or more inhabitants, county subdivisions of 10,000 or more inhabitants in selected States, Alaska Native areas, and American Indian areas	
STF 2 (100 percent)	A	In MA's: counties, places of 10,000 or more inhabitants, and census tracts/BNA's. In the remainder of each State: counties, places of 10,000 or more inhabitants, and census tracts/BNA's	
	B	States (including summaries such as urban and rural), counties, places of 1,000 or more inhabitants, county subdivisions, State parts of American Indian areas, and Alaska Native areas	
	C	U.S., regions, divisions, States (including summaries such as urban and rural), counties, places of 10,000 or more inhabitants, county subdivisions of 10,000 or more inhabitants in selected States, all county subdivisions in New England MA's, American Indian and Alaska Native areas, MA's, UA's	
STF 3 (Sample)	A ^{2 3}	States, counties, county subdivisions, places, census tracts/BNA's, BG's. Also Alaska Native areas and State parts of American Indian areas	
	B ³	Five-digit ZIP Codes within each State	
	C ³	U.S., regions, divisions, States, counties, places of 10,000 or more inhabitants, county subdivisions of 10,000 or more inhabitants in selected States, American Indian and Alaska Native areas, MA's, UA's	Over 3,300 cells/items of sample population and housing characteristics for each geographic area
	D	CD's of the 103rd Congress by State; and within each CD: counties, places of 10,000 or more inhabitants, county subdivisions of 10,000 or more inhabitants in selected States	

Figure 3. 1990 Census Summary Tape Files—Con.

**Summary Tape File
(STF 1A, 1B, etc.)
and data type
(100 percent or
sample)¹**

	Geographic areas	Description
	A In MA's: counties, places of 10,000 or more inhabitants, and census tracts/BNA's. In the remainder of each State: counties, places of 10,000 or more inhabitants, and census tracts/BNA's	
STF 4 (Sample)	B State (including summaries such as urban and rural), counties, places of 2,500 or more inhabitants, county subdivisions of 2,500 or more inhabitants in selected States, all county subdivisions in New England MA's, State parts of American Indian areas, and Alaska Native areas	Over 8,500 cells/ items of sample population and housing characteristics for each geographic area. Each of the STF 4 files will include a set of tabulations for the total population and separate presentations of tabulations by race and Hispanic origin.
	C U.S., regions, divisions, States (including urban and rural and metropolitan and nonmetropolitan components), counties, places of 10,000 or more inhabitants, county subdivisions of 10,000 or more inhabitants in selected States, all county subdivisions in New England MA's, American Indian and Alaska Native areas, MA's, UA's	

¹Similar STF's will be prepared for Puerto Rico and the U.S. Virgin Islands.

²Also available on microfiche. STF 1B microfiche provides only part of the data for blocks and other areas in the tape file.

³Also available on laser disc (CD-ROM). STF 1B CD-ROM presents the same file extract as STF 1B microfiche.

Figure 4. Other 1990 Census Data Products

Title	Description	Geographic areas
Subject Summary Tape Files	About 20 computer tape files used to produce the subject reports (1990 CP-3 and 1990 CH-3 series). On the average, a file is the source of two subject reports	U.S., regions, divisions, States, metropolitan areas (MA's), and large counties and places
Public Law 94-171 Data File (redistricting data)	Counts by total, race, and Hispanic origin for the total population and population 18 years old and over, and counts of housing units. Available on tape, CD-ROM, and paper listings	States, counties, county subdivisions, places, census tracts/ block numbering areas (BNA's), block groups (BG's), and blocks; voting districts where States have identified them for the Census Bureau; and American Indian and Alaska Native areas
Census/ Equal Employment Opportunity (EEO) Special File	Sample tabulations showing detailed occupations and educational attainment data by age; cross tabulated by sex, Hispanic origin, and race	Counties, MA's, places of 50,000 or more inhabitants
County-to-County Migration File	Summary statistics for all intra-state county-to-county migration streams and significant inter-state county-to-county migration streams. Each record will include codes for the geographic area of destination, and selected characteristics of the persons who made up the migration stream	States, counties
Public Use Microdata Sample (PUMS) Files	Machine-readable files containing a sample of individual long-form census records showing most population and housing characteristics but with identifying information removed	
5 Percent—PUMS Areas		County groups, counties, county subdivisions, and places with 100,000 or more inhabitants
1 Percent—Metropolitan Areas (1990)		MA's and other large areas with 100,000 or more inhabitants
User-Defined Areas Tabulations	A set of standard tabulations provided on print-outs, tapes, or other products with maps and narrative (if requested)	User-defined areas created by aggregating census blocks
Special Tabulations	User-defined tabulations for specified geographic areas provided on printouts, tapes, or other products	User-defined areas or standard areas

APPENDIX H

Machine-Readable Data Dictionary Layout

Data dictionary lines are 80 characters. The character in the first position determines the type of line. Each variable may have the following lines:

1. COMMENTS ("*") lines
2. DATA DICTIONARY ("D"); line and DATA DESCRIPTION
3. VALUE DESCRIPTION ("V") lines
4. One blank line at the end

FORMAT

"*" Line - Comments

- a. "*" in the first position indicates that this is a comment line. This line can appear any place in the dictionary. It will be used for short comments or to nullify any value codes.

"D" Line - Data Dictionary

This line contains the following information:

ID	"D"	COL.	1
BLANK		COL.	2
NAME	Variable name	COL.	3-10
BLANK		COL.	11
SIZE	Size of data field	COL.	12-14
BLANK		COL.	15
BEGIN	Begin position of data	COL.	16-19

Text describing the variable will follow this "D" line, and appears in COL. 5-65 for as many lines as are needed.

"V" Line - Value Description

This line contains the value description.

ID	"V"	COL.	1
BLANK		COL.	2
VALUE	Value code-right justified	COL.	3-29
BLANK		COL.	30
	."	COL.	31
DESCRIPTION	Value description - left justified	COL.	32-80

(Any value description exceeding column 80 is continued in COL. 14-80 for as many lines as are needed.)

APPENDIX I. Code Lists

CONTENTS

Ancestry-----	I-1
Group Quarters-----	I-23
Hispanic Origin-----	I-28
Industry-----	I-30
Language-----	I-37
Occupation-----	I-45
Place of Birth-----	I-59
Race-----	I-63

ANCESTRY

This section contains a modified code list for ancestry categories for the PUMS. Some categories have been grouped. Each person enumerated in the census had the opportunity to enter two distinct ancestry identities which indicated his or her ethnic origin. Each entry received one of the unique three-digit codes listed below. All codes are listed below. However, not all ancestry entries are listed. The ancestry codes can be aggregated to create commonly recognized national groupings. For example, the code for Walloon has been collapsed with other "Belgian" entries to form a national grouping representative of an area in Europe. National groupings can also be collapsed to represent continental areas. For example, Belgium can be added to France and other European clusters to form a representation of that continent. "n.e.c." is the abbreviation for not elsewhere classified.

001-099 WESTERN EUROPE (EXCEPT SPAIN)

<p>001 ALSATIAN 001 Alsace Lorraine</p> <p>002 ANDORRAN 002 Andorra</p> <p>003 AUSTRIAN 003 Austria</p> <p>004 TIROL 004 Tirolean 004 Tirolese 004 Tyrol 004 Tyrolean 004 Tyrolese</p> <p>005 BASQUE 005 Euskalduna 005 Euzkadi</p> <p>006 FRENCH BASQUE 006 Basque French</p> <p>007 SPANISH BASQUE 007 Basque Spanish</p>	<p>007 Vasca 007 Vasco</p> <p>008 BELGIAN 008 Belgium 009 Flemish 009 Flamand 009 Flanders 009 Fleming 009 Vlamand 010 Walloon</p> <p>011 BRITISH 011 Britain 011 Briton 011 G B 011 GB 011 Great Britain 011 U K 011 UK 011 United Kingdom 012 British Isles 013 Channel Islander 013 Guernsey Islander 013 Jersey Islander 014 Gibraltar 014 Gibraltar</p>
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015	CORNISH		026	Gascon
	015	Cornishman	026	Guienne
	015	Cornwall	026	Guyenne
016	CORSICAN		026	Hugenot
	016	Corse	026	Norman
	016	Corsica	026	Normandy
	016	Corsu	026	Wallis Islander
017	CYPRIO		027	Lorrainian
	017	Cyprian	027	Lorraine
	017	Cypriote		
	017	Cyprus	028	BRETON
018	GREEK CYPRIOTE		028	Breizh
	018	Cypriote Greek	028	Bretagne
019	TURKISH CYPRIOTE		028	Brittany
	019	Cypriote Turk	029	FRISIAN
020	DANISH		029	Friesian
	020	Dane	029	Friesian Islands
	020	Denmark	029	Friesland
021	DUTCH		029	North Friesland
	021	Amsterdam	030	FRIULIAN
	021	Dutchman	030	Friulan
	021	Holland	030	Friuli
	021	Hollander	030	Friulia
	021	Netherlander	030	Furlan
	021	Netherlandian	030	Furland
	021	Netherlandic	031	Ladin
	021	Netherlands	031	Ladini
022	ENGLISH		032	GERMAN
	022	Anglican	032	Germany
	022	England	034	Berliner
	022	Mayflower	035	Hamburger
023	FAEROE ISLANDER		036	Hannover
	023	Faeroe Islands	036	Hanover
	023	Faeroes	037	Hessian
	023	Faroe Islands	038	Lubecker
024	FINNISH		039	Pomeranian
	024	Finland	039	Pommern
	024	Finn	042	Sudetenlander
	025	Karelian	042	Sudeten
026	FRENCH		042	Sudetes
	026	France	043	Westphalian
	026	Franco	043	Westfalen
			044	East German
			045	West German
			045	Palatinate
			045	Rhineland
			033	BAVARIAN
			033	Bavaria

040	PRUSSIAN	051	ITALIAN
041	SAXON	051	Istria
041	041 Sachsen	051	Italo
	041 Saxony	051	Italy
045	GREEK	052	Trieste
046	046 Greece	053	Abruzzi
047	047 Cretan	054	Apulian
047	047 Crete	054	Apulia
048	048 Cycladic Islander	055	Basilicata
048	048 Cyclades	055	Lucania
048	048 Dodecanese Islander	056	Calabrian
048	048 Peloponnesian	056	Calabria
049	ICELANDER	057	Amalfian
049	049 Iceland	057	Amalfi
049	049 Icelandic	057	Amalfitani
049	IRISH	057	Campania
050	050 Black Irish	057	Campanian
050	050 Clare	058	Emilia Romagna
050	050 Cork	059	Rome
050	050 Donegal	059	Lazio
050	050 Dublin	059	Vatican City
050	050 Dubliner	060	Ligurian
050	050 Eire	060	Liguria
050	050 Erin	061	Lombardian
050	050 Galway	061	Lombard
050	050 Ireland	061	Lombardy
050	050 Irish Free State	062	Marche
050	050 Kerry	062	Marches
050	050 Kildare	063	Molise
050	050 Kilkenny	064	Neapolitan
050	050 Laoighis	064	Naples
050	050 Leitrim	065	Piedmontese
050	050 Leix	065	Piedmont
050	050 Limerick	066	Puglia
050	050 Longford	067	Sardinian
050	050 Louth	067	Sardegna
050	050 Mayo	068	SICILIAN
050	050 Meath	068	Sicily
050	050 Monaghan	069	Toscana
050	050 Offaly	069	Tuscan
050	050 Roscommon	069	Tuscany
050	050 Sligo	070	Trentino
050	050 Tipperary	071	Umbrian
050	050 Waterford	071	Umbria
050	050 Westmeath	072	Valle Daosta
050	050 Wexford	073	Venetian
050	050 Wicklow	073	Venice
		073	Veneto
		073	Venezia
		073	Venezia Giulia
		074	San Marino

	074	Venice		083	OCCITAN
				083	Occitanie
075	LAPP			083	Provencal
	075	Lapland		083	Provence
	075	Laplander			
	075	Lappish	084	PORTUGUESE	
	075	Samelat	084	Lusitania	
			084	Lusitanian	
076	LIECHTENSTEINER		084	Luso	
	076	Liechtenstein	084	Portugal	
	076	Liechtenstein			
			085	AZOREAN	
077	LUXEMBURGER		085	Azores Islander	
	077	Luxembourg	085	Azorian	
	077	Luxembourgeois	086	Madeiran	
	077	Luxembourger	086	Madeira Islander	
	077	Luxemburg			
			087	SCOTCH IRISH	
078	MALTESE		087	Scot Irish	
	078	Gozo			
	078	Malta			
			088	SCOTTISH	
079	MANX		088	Orkney Islander	
	079	Isle of Man	088	Pict	
	079	Manx Islander	088	Pictish	
			088	Scot	
			088	Scotch	
080	MONEGASQUE		088	Scotland	
	080	Monacan	088	Scots	
	080	Monaco	088	Scottie	
			088	Shetland	
			088	Shetland Islander	
081	NORTHERN IRELANDER		089	SWEDISH	
	081	Antrim	089	Swede	
	081	Armagh	089	Sweden	
	081	Derry	090	Aland Islander	
	081	Down			
	081	Fermanagh	091	SWISS	
	081	Londonderry	091	Switzerland	
	081	Northern Ireland	092	Suisse	
	081	Orangeman	093	Switzer	
	081	Tyrone	093	Schweiz	
	081	Ulster	095	Romansch	
	081	Ulsterite	095	Romansh	
	081	Ulsterman	096	Suisse Romane	
			096	Ticino	
082	NORWEGIAN				
	082	Jan Meyen Islander	097	WELSH	
	082	Norse	097	Wales	
	082	Norsk	097	Welch	
	082	Norway			
	082	Spitsbergen			
	082	Svalbard Islander			

098	SCANDINAVIAN		108	COSSACK
	098	Nordic	108	Don Cossack
	098	Scandinavia	108	Orenburg Cossack
099	CELTIC		108	Terek Cossack
	099	Celt	108	Ural Cossack
	099	Celtish		
100-180 EASTERN EUROPE AND SOVIET UNION				
100	ALBANIAN		109	CROATIAN
	100	Albania	109	Croat
	100	Arberesh	109	Croatia
	100	Geg	109	Dalmatian
	100	Gheg	109	Zadar
	100	Italo Albanian	109	Zara
	100	Kossovo		
	100	Tosc	111	CZECH
	100	Tosk	111	Chech
101	AZERBAIJANI		111	Chekh
	101	Adjerbajjani	112	Bohemian
	101	Aderbajjaniah	113	Moravian
	101	Azerbaidzhan		
	101	Azeri	114	CZECHOSLOVAKIAN
	101	Azeris	114	Czechoslovak
102	BELOURUSSIAN		114	Czechoslovakia
	102	Bielorus	114	Tczechoslovakia
	102	Byelorussian	114	Tczechoslovakian
103	BULGARIAN		115	ESTONIAN
	103	Bulgar	115	Estonia
	103	Bulgaria	116	Livonian
	103	Bulgaro Macedonian	116	Liv
	103	Eastern Rumelian		
104	CARPATHO RUSYN		117	FINNO UGRIAN
	104	Carpatho Rus	117	Komi
	104	Carpatho Russian	117	Mari
	104	Carpatho-Ruthenian	117	Udmurt
	105	Carpathian	118	Mordovian
	105	Carpatho	118	Mordva
106	RUSYN		118	Mordvin
	106	Rus	119	Voytak
	106	Rusin	120	GRUZIIA
	106	Rusnak	120	Gruzinets
107	RUTHENIAN		122	GERMAN FROM RUSSIA
	107	Ruthenia	123	Volga
			123	Black Sea German
			123	Volga German
			123	Volhynian German
			124	ROM
			124	Boyash
			124	Cali
			124	Churara

124	Dom	132	Ingush
124	Gitanos	132	Kabardinian
124	Gypsy	132	Lezghian
124	Kalderash	132	Tavlintsy
124	Lowrara	133	North Caucasian Turkic
124	Luri	133	Adzharian
124	Machwaya	133	Balkar
124	Manouche	133	Cherkess
124	Melungeon	133	Circassian
124	Nat	133	Karacay
124	Romani	133	Karachay
124	Romany	133	Kumyk
124	Rommany	140	Ossetian
124	Romnichal		
124	Senti	142	POLISH
124	Xoraxaya	142	Gorali
125	HUNGARIAN	142	Masurian
125	Hungary	142	Poland
125	Szekler	142	Pole
126	Magyar	142	Polonia
127	KALMYK	142	Polska
127	Kalmuck	143	Kashubian
128	LATVIAN	143	Kashube
128	Latvi	144	ROMANIAN
128	Latvia	144	Roman
128	Lett	144	Romania
128	Lettish	144	Roumanian
129	LITHUANIAN	144	Rumanian
129	Jmoud	144	Transylvanian
129	Lithuania	144	Transylvania
130	MACEDONIAN	145	Bessarabian
130	Macedonia	145	Dobruja
131	Slavophone	146	Moldavian
131	Montenegrin	147	Wallachian
131	Orna Gora	147	Vlach
132	NORTH CAUCASIAN	148	RUSSIAN
132	Abkhazian	148	Black Russian
132	Adyge	148	Great Russian
132	Avar	148	Rossiya
132	Caucasus Mountains	148	Russia
132	Chechen	148	Red Russian
132	Dagestan	150	Muscovite
132	Dagestani	150	Moscow
132	Daghestan	150	Moskva
132	Darghinian	152	SERBIAN
132	Gortsy	152	Serb
		153	SLOVAK
		153	Slovakian

	153	Slovjak	168	Kazak
			168	Kazakh
154		SLOVENE	168	Kirghiz
	154	Slovinc	168	Kirgiz
	154	Slovenian	168	Turcoman
	154	Slovenski	168	Turkmen
	155	Sorbian/Wend	168	Turkmenian
	155	Lusatia	168	Turkmenistan
	155	Lusatian Serb	168	Turkoman
	155	Lusatian Sorb	168	Turkomen
	155	Sorb	168	Turkuman
	155	Sorbian	168	Uiger
	155	Wend	168	Uigur
	155	Wenden	168	Uygur
	155	Wendish	169	Uzebeg
			169	Usbeg
156		SOVIET TURKIC	169	Usbek
	157	Bashkir	169	Uzbek
	158	Chuvash		
	158	Chevash	171	UKRAINIAN
	159	Gagauz	171	Little Russian
	160	Mesknetian	171	Malo Russian
	161	Tuvinian	171	Ukraine
	161	Tuva	172	Lemko
	163	Yakut	172	Lemkian
			173	Bioko
164		SOVIET UNION N.E.C.	173	Boyko
	164	U S S R	174	Husel
	164	Union of Soviet Socialist Republics		
	164	USSR	175	WINDISH
165		TATAR	175	Prekmurje
	165	Crimean	175	Vind
	165	Crimean Tatar	175	Wind
	165	Kazan Tatar	175	Windisch
	165	Nogay Tatar		
	165	Volga Tatar	176	YUGOSLAVIAN
	167	Soviet Central Asia	176	Yugoslavia
	167	Kuril Islander	176	Yugoslav
	167	Kurile Islander	176	Yugoslavia
	167	Kurilian	177	Herzegovinian
	167	Saghalien	177	Bosanci
	167	Sakhalin Islander	177	Bosnian
	167	Siber	177	Bosnjaci
	167	Siberian	177	Bosnjak
	167	Tadjik	177	Hercegovinian
	167	Tadzhik		
	167	Tadzik	178	SLAVIC
	167	Tajik	178	Koakslav
			178	Slav
			178	Slavish
168		TURKESTANI	178	Slavonic
	168	Karakalpak	179	Slavonian

181-199 EUROPE N.E.C.

- 181 CENTRAL EUROPEAN
 - 181 Central Europe
 - 181 Middle European
- 183 NORTHERN EUROPEAN
 - 183 North Europe
- 185 SOUTHERN EUROPEAN
 - 185 South Europe
- 187 WESTERN EUROPEAN
 - 187 West Europe
- 190 EASTERN EUROPEAN
 - 190 Byzantine
 - 190 East Europe

- 191 BUCOVINA
 - 191 Bukovina

- 193 SILESIAN
 - 193 Silesia

- 195 EUROPEAN
 - 195 Euro-White
 - 195 Europe

- 196 GALICIAN
 - 196 Galicia

200-299 HISPANIC CATEGORIES (WITH SPAIN)

- 200 SPANIARD
 - 200 Espana
 - 200 Espanol
 - 200 Espanola
 - 200 Iberan
 - 200 Iberian
 - 200 Ibero
 - 200 Spain
 - 201 Andalusian
 - 202 Asturian
 - 203 Castillian
 - 203 Castellana
 - 203 Castellano
 - 203 Castile
 - 203 Castilian

- 204 CATALONIAN
 - 204 Catalan

- 204 Catalana
- 204 Catalonia
- 205 Balearic Islander
- 205 Majorca
- 205 Majorcan
- 205 Mallorca
- 205 Mallorcan
- 205 Mallorquin
- 205 Mallorquina
- 206 Gallego
- 206 Gallega
- 207 Valencian
- 207 Valenciana
- 207 Valenciano
- 208 Canarian
- 208 Canaria
- 208 Canario
- 208 Canary Islander

210 MEXICAN

- 210 Mex
- 211 Mexican American
- 211 Mex Am
- 211 Mex American
- 211 Mexam
- 211 Mexican Am
- 211 Mexican Amer
- 211 Mexican USA
- 211 Mexicanam
- 212 Mexicano
- 212 Mexicana
- 213 Chicano
- 213 Chicana
- 214 La Raza
- 218 Mexican State
- 218 Aguascalientes
- 218 Baja California
- 218 Campeche
- 218 Chiapas
- 218 Chihuahua
- 218 Coahuila
- 218 Colima
- 218 Distrito Federal
- 218 Durango
- 218 Guanajuato
- 218 Guerrero
- 218 Hidalgo
- 218 Jalisco
- 218 Mexico
- 218 Michoacan
- 218 Morelos
- 218 Nayarit

218	Nuevo Leon	227	CENTRAL AMERICAN
218	Oaxaca	227	America Central
218	Puebla	227	Central America
218	Querataro	227	Centroamericana
218	San Luis Potosi	227	Centroamericano
218	Sinaola		
218	Sonora	229	CANAL ZONE
218	Tobasco	229	Zonian
218	Tamaulipas		
218	Tlaxcala	231	ARGENTINEAN
218	Tlaxkala	231	Argentina
218	Vera Cruz	231	Argentine
218	Veracruz	231	Argentinian
218	Yucatan	231	Argebtino
218	Zacatecas		
221	COSTA RICAN	232	BOLIVIAN
221	Costa Rica	232	Bolivia
221	Costarricense	232	Boliviana
221	Costarriquena	232	Boliviano
221	Costarriqueno		
222	GUATEMALAN	233	CHILEAN
222	Guatemala	233	Chile
222	Guatamalteca	233	Chilena
222	Guatemalteco	233	Chileno
223	HONDURAN	234	COLOMBIAN
223	Honduras	234	Antiochio
223	Hondurena	234	Colombia
223	Hondureno	234	Colombiana
		234	Colombiano
224	NICARAGUAN	235	ECUADORIAN
224	Nicaragua	235	Ecuador
224	Nicaraguena	235	Ecuadoran
224	Nicaragueno	235	Ecuatoriana
224	Nicaraguense	235	Ecuatoriano
		235	Galapagos Islander
225	PANAMANIAN	236	PARAGUAYAN
225	Panama	236	Paraguay
225	Panamena	236	Paraguaya
225	Panameno	236	Paraguayana
		236	Paraguayano
		236	Paraguayoy
226	SALVADORAN	237	PERUVIAN
226	El Salvador	237	Peru
226	El Salvadorean	237	Peruana
226	El Salvadorian	237	Peruano
226	Salvador		
226	Salvadorean		
226	Salvadorena		
226	Salvadoreno	238	URUGUAYAN
226	Salvadorian	238	Uruguay

238	Uruguay	290	HISPANIC
238	Uruguayo	290	Hispana
239	VENEZUELAN	290	Hispano
239	Venezolana	291	SPANISH
239	Venezolano	291	Spanish
239	Venezuela	292	Californio
248	CRIOLLO	293	Tejano
248	Criolla	293	Tejana
249	SOUTH AMERICAN	294	Nuevo Mexicano
249	America Del Sur	295	Spanish American
249	South America	300-359	WEST INDIES
249	Sudamerica	300	BAHAMIAN
249	Sudamericana	300	Bahama Islander
249	Sudamericano	300	Bahamas
250	LATIN AMERICAN	301	BARBADIAN
250	American Latina	301	Barbados
250	Latinoamericana	302	BELIZEAN
250	Latinoamericano	302	Belice
251	Latin	302	Belicean
252	Latino	302	Beliceno
252	Latina	302	Belize
261	PUERTO RICAN	302	British Honduran
261	Boricua	303	BERMUDAN
261	Borinquena	303	Bermuda
261	Borinqueno	303	Bermuda Islander
261	New York Puerto Rican	303	Bermudas
261	P R	303	Bermudian
261	PR	304	CAYMAN ISLANDER
261	Puerto Rico	308	JAMAICAN
261	Puertorriquena	308	Jamaica
261	Puertorriqueno	310	DUTCH WEST INDIES
271	CUBAN	310	Black Dutch
271	Cuba	310	Netherlands Antilles
271	Cubana	311	Aruba Islander
271	Cubano	311	Aruban
271	Guajira	311	Bonaire Islander
271	Guajiro	311	Curacao Islander
275	DOMINICAN	312	St Maartem Islander
275	D R	312	Saba Islander
275	Dominican Republic	312	St Eustatius Islander
275	Dominicana	312	St Martin Islander
275	Dominicano		
275	Espanola Island		
275	Hispaniola		
275	Santo Domingo		

314	TRINIDADIAN TOBAGONIAN	329	Grenada Islander
315	Trinidadian	330	Vincent/Grenadine Islander
315	Trinidad	330	Grenadities Islander
316	Tobagonian	330	St Vincent Islander
316	Tobago	330	Vincentian
		331	St Lucia Islander
317	US VIRGIN ISLANDER	332	FRENCH WEST INDIES
317	U S Virgin Islander	333	Guadeloupe Islander
317	Virgin Islander	333	Martinicois
318	St Croix Islander	333	Martinique Islander
318	Crucian	334	Cayenne
318	Crucan	334	French Guiana
318	Santa Cruz	334	French Guianese
319	St John Islander	334	Guyane
319	St Johnian Islander		
319	St Jon Islander	335	WEST INDIAN
320	St Thomas Islander	335	Arawak
320	St Thomian	335	Carib
320	St Tomas Islander	335	Caribbean
		335	Garfiuna
		335	West Indies
321	BRITISH VIRGIN ISLANDER	336	HAITIAN
321	Anegada	336	Haiti
321	Jost Van Dyke	336	Hayti
321	Peter and Norman Islands		
321	Tortolan	360-399	CENTRAL & SOUTH AMERICA (EXCEPT HISPANIC)
321	Virgin Gorda	360	BRAZILIAN
		360	Brazil
322	BRITISH WEST INDIES	365	SAN ANDRES
322	British West Indien	370	GUYANESE
323	Turks and Caicos Islander	370	British Guiana
323	Caicos Islander	370	Guyana
323	Grand Turk Islander	375	Providencia
323	Turks Islander	380	SURINAM
324	Anguilla Islander	380	Dutch Guiana
324	Anguillian	380	Netherlands Guiana
325	Antigua and Barbudd	380	Suriname
325	Angigua Islander	400-499	NORTH AFRICAN AND SOUTHWEST ASIA
325	Antiguan	400	ALGERIAN
325	Barbuda Islander	400	Algeria
325	Barbudan		
325	Redonda Islander		
326	Montserrat Islander		
326	Montserratian		
327	Kitts/Nevis Islander		
327	Kittitian		
327	Nevis Islander		
327	Nevisian		
327	Sombrero Islander		
327	St Christopher Islander		
327	St Kitts Islander		
328	Dominica Islander		
329	Grenadian		

402	EGYPTIAN	417	Iraq
	402 Copt	419	ISRAELI
	402 Copt	419	Israel
	402 Egypt	421	JORDANIAN
	402 Fellaheen	421	Hashemite
	402 Fellahin	421	Hsahimite
	402 United Arab Republic	421	Jordan
		422	Transjordan
404	LIBYAN	423	KUWAITI
	404 Libya	423	Kuwait
	404 Tripoli	425	LEBANESE
	404 Tripolitanian	425	Beirut
		425	Lebanon
406	MOROCCAN	425	Maronite
	406 Moor	427	SAUDI ARABIAN
	406 Moorish	427	Saudi
	406 Morocco	427	Saudi Arabia
	406 Tangier	429	SYRIAN
	407 Ifni	329	Webel Druze
408	TUNISIAN	429	Drusean
	408 Tunis	429	Jebel Druze
	408 Tunisia	429	Djebel Druze
		429	Jebel Ed Druz
411	NORTH AFRICAN	429	Latakia
		429	Latakian
412	ALHUCEMAS	429	Syria
	412 Ceuta	431	ARMENIAN
	412 Chafarinas	431	Armenia
	412 Melilla	434	TURKISH
413	BERBER	434	Turk
		434	Turkey
414	RIO DE ORO	434	Hatay
	414 Ssguia El Hamra	435	YEMENI
		435	Yemen
415	BAHRAINI	435	Yemen Arab Republic
	415 Bahrain	435	Yemenite
	415 Bahrayn	436	OMANI
	415 Bahrein	436	Oman
	415 Bahreini	437	Muscan
416	IRANIAN	438	Trucial States
	416 Iran	438	Trucial Oman
	416 Irani	439	Qatar
	416 Parsi		
	416 Persia		
	416 Persian		
	416 Teheran		
417	IRAQI		
	417 Irak		

441	Bedouin	500	Cabinda
442	KURDISH	502	BENIN
442	Kurd	502	Dahoman
444	Kuria Muria Islander	502	Dahom
465	PALESTINIAN	502	Dahomey
465	Palestine	502	Dahomeyan
466	Gaza Strip	502	Fon
466	Gazan	504	BOTSWANA
467	West Bank	504	Bechuana
470	SOUTH YEMEN	504	Bechuanaikand
470	Peoples Democratic Republic of Yemen	504	Botswanaland
471	Aden	506	BURUNDIAN
471	Aden Protectorate	506	Burundi
480	UNITED ARAB EMIRATES	506	Urundi
480	Abu Dhabi	508	CAMEROONIAN
480	Ajman	508	Cameroon
480	Dubai	508	Cameroun
480	Fujairah	508	Fako
480	Ras al Kaimah	510	CAPE VERDEAN
480	Sharjah	510	Brava
480	Umm Al Qaiwain	510	Caba Verdian
482	ASSYRIAN	510	Cape Verde Islander
482	Aramean	512	CENTRAL AFRICAN REPUBLIC
482	Assyria	512	Ubangi Shari
482	Chaldean	513	CHADIAN
482	Chaldo	513	Chad
482	Jacobite	515	CONGOLESE
482	Kaldany	515	Congo
482	Kaldu	516	Congo Brazzaville
482	Kasddem	519	DJIBOUTI
482	Kasdu	519	Afars and Issas
482	Nestorian	519	Jibuti
482	Telkeffee	520	EQUATORIAL GUINEA
490	MIDEAST	520	Rio Muni
490	Middle Eastern	521	Corsico Islander
495	ARAB	521	Annobon Islander
495	Arabia	521	Bioko Islander
495	Arabian	521	Elobeis Islander
496	Arabic	521	Fernando Po Islander
500-599	SUBSAHARAN AFRICA		
500	ANGOLAN		
500	Angola		

522	ETHIOPIAN	549	MOZAMBICAN
	522 Abyssinia		549 Mozambique
	522 Abyssinian		
	522 Ethiopia	550	NAMIBIAN
	523 Eritrean		550 Namibia
525	GABONESE	551	NIGER
	525 Gabon		
	525 Gaboon	553	NIGERIAN
	525 Gabun		553 Nigeria
527	GAMBIAN		554 Fulah
	527 Gambia		554 Fulani
529	GHANIAN		555 Hausa
	529 Ashanti		556 Ibo
	529 Ghana		557 Tiv
	529 Ghanese	561	RWANDAN
	529 Ghanian		561 Rwanda
	529 Gold Coast		
	529 Twi	564	SENEGALESE
530	GUINEAN		564 Dakar
	530 Guinea		564 Senegal
531	GUINEA BISSAU	566	SIERRA LEONEAN
531	IVORY COAST		566 Sierra Leone
534	KENYAN	568	SOMALIAN
	534 Kenya		568 Somali Republic
			568 Somalia
538	LESOTHO	569	SWAZILAND
	538 Basuto		
	538 Basutoland	570	SOUTH AFRICAN
	538 Basutoland		570 Republic of South Africa
541	LIBERIAN		570 South Africa
	541 Liberia		571 Union of South Africa
543	MADAGASCAN		571 Orange Free State
	543 Madagascar		571 Pretoria
545	MALAWIAN		571 Transkei
	545 Malwai		571 Transvaal
546	MALIAN		572 Afrikaner
	546 Mali		572 Boer
			573 Natal
547	MAURITANIAN		573 Natalian
	547 Mauritania	574	ZULU
			574 Zululand
		576	SUDANESE
			576 Soudan
			576 Soudanese

576	Sudan	595	Mauritian
577	Dinka	595	Mairitius Islander
578	Nuer		
579	Fur	596-599	SUBSAHARA AFRICA N.E.C.
579	Darfur		
580	Baggara	596	CENTRAL AFRICAN
582	TANZANIAN	596	Central Africa
582	Tanzania	596	Middle Congo
583	Tanganyikan	597	Eastern African
583	Tanganyika	597	East Africa
584	Zanzibar Islander	597	Galla
584	Zanzibari	597	Kikuyu
		597	Masai
586	TOGO	598	Western African
586	Togoland	598	West Africa
586	Togolander	599	African
586	Togolese	599	Africa
		600-699	SOUTH ASIA
588	UGANDAN	600	AFGHANISTAN
588	Lugbara	600	Afghan
588	Uganda	601	Baluchistan
589	UPPER VOLTAN	601	Baluchi
589	Upper Volta	602	Pathan
590	Volta		
591	ZAIRIAN	603	BANGLADESHI
591	Belgian Congo	603	Bangladesh
591	Congo Kinshasa	603	Bungaladese
591	Kinshasa	603	East Pakistan
591	Zaire		
592	ZAMBIAN	607	BHUTANESE
592	Zambia	607	Bhotan
		607	Bhutan
593	ZIMBABWEAN	609	NEPALI
593	Rhodesia	609	Nepal
593	Rhodesian	609	Nepalese
593	Southern Rhodesian	609	Nepalis
593	Zimbabwe		
593	Zimbabwe Rhodesia	615	ASIAN INDIAN
594	AFRICAN ISLANDS (EXCEPT MADAGASCAR)	615	Behar
594	Comoros Islander	615	Bharat
594	Principe Islander	615	Bharati
594	Reunion Islander	615	Bihar
594	Sao Tome Islander	615	Delhi
594	Seychelles Islander	615	Dravidian
594	St Helena Islander	615	Dravidic
594	St Pierre Islander	615	Hindoo
594	Tristan De Cunha Islander	615	Hindu
		615	India
		615	Indian Asian

615	Indian Hindu	648	Pondichery
615	Indic	650	Punjabi
615	Indo Aryan	650	Punjab
615	Indo Asian	652	Rajasthani
615	Indo Dravidian	652	Rajasthan
615	Indoaryan	654	Sikkim
615	Indoasian	654	Sikkimese
615	Indodravidian	656	Tamil Nadu
615	Kashuuri	656	Tamil
615	Khalistan	656	Tamilian
615	Pacific Asian	656	Tamilic
615	Sikh	658	Uttar Pradesh
615	South Asian	675	East Indies
615	Viz Porsi		
616	Kashmir	680	PAKISTAN
616	Kashmiri	680	Pakistani
616	Kashmirian	680	Jammu
618	Bengali	680	Sind
618	Bangoli	680	West Pakistan
618	Bangoli		
618	Bengal	690	SRI LANKAN
618	Bengalee	690	Ceylon
618	Bengalese	690	Ceylonese
620	East Indian	690	Shri Lanka
620	Indian East	690	Shri Lankan
622	Andamanese	690	Sri Lanka
622	Andaman	691	Singhalese
622	Andaman Islander	691	Sinhalese
622	Nicobar Islander	692	Veddah
624	Andhra Pradesh	692	Vedda
626	Assamese	692	Veddoid
626	Assam		
628	Goanese	695	MALDIVIAN
628	Goa	695	Maldive Islander
628	Goan	695	Maldives
630	Gujarati		
630	Gujarat	700-799	OTHER ASIA
632	Karnatakan		
632	Karnataka	700	BURMESE
634	Keralan	700	Burma
634	Kerala	700	Burman
636	Madhya Pradesh	700	Cachin
638	Maharashtran	700	Chin
638	Maharashtra	700	Karen
640	Madrasi	700	Mon
640	Madrass	700	Palaung
642	Mysore	702	Shan
642	Mizoran		
644	Nagaland	703	CAMBODIAN
644	Naga	703	Cambodia
646	Orissa	703	Kampuchean
648	Pondicherry	704	Khmer

706	CHINESE		
	706	China	
	706	Chino	
	706	Jehol	
	706	Sino Chinese	
	706	Yao	
	707	Cantonese	
	708	Manchurian	
	708	Manchuria	
	709	Mandarin	
712	MONGOLIAN		
	712	Buriat	
	712	Buryat	
	712	Mongol	
	712	Mongolia	
714	TIBETAN		
	714	Thibet	
	714	Tibet	
716	HONG KONG		
	716	Hong Kong Chinese	
	716	Eastern Archipelago	
	716	Riau Islander	
718	MACAO		
	718	Portuguese Macao	
720	FILIPINO		
	720	Cebuanos	
	720	Filipine Islander	
	720	Illocanos	
	720	Philipino	
	720	Philippines	
	720	Philippino Islander	
	720	Pilipino	
	720	Tagalog	
	720	Visayan	
730	INDONESIAN		
	730	Ascension Islander	
	730	Bangka	
	730	Banka	
	730	Billiton	
	730	Celebes Islander	
	730	Celebesian	
	730	Dutch East Indian	
	730	Indonesia	
	730	Molucca Islander	
	730	Moluccan	
	730	Pangdangan	
			730 Portuguese Timor
			730 Spice Islander
			730 Sulawesi Islander
			730 Tampango
			732 Boreno
			734 Java
			734 Javanese
			736 Sumatran
			736 Sumatra
		740	JAPANESE
		740	Japan
		740	Nippon
		740	Nipponese
		741	Issei
		742	Nisei
		743	Sansei
		744	Yonsei
		745	Gosei
		746	RYUKYU ISLANDER
		746	Northern Ryukyu Islander
		748	OKINAWAN
		748	Okinawa
		748	Onik
		750	KOREAN
		750	Chosen
		750	Korea
		750	North Korean
		750	South Korean
		765	LAOTIAN
		765	Lao
		765	Laos
		766	Meo
		768	HMONG
		768	Hmongtana
		768	Laohmong
		768	Mong
		770	MALAYSIAN
		770	Malay
		770	Malayan
		770	Malaysia
		770	Sakai
		770	Semang
		770	Senoi

- 771 NORTH BORNEO
771 Brunei
771 Sabah
771 Sarawak
- 774 SINGAPOREAN
774 Singapore
- 776 THAI
776 Siam
776 Siamese
776 Tai
776 Thailand
776 Thialander
777 Black Thai
777 Thai Dam
777 Thaidam
778 Western Lao
- 782 TAIWANESE
782 Taiwan
- 783 FORMOSAN
783 Formosa
- 785 VIETNAMESE
785 Anam
785 Annam
785 Annamese
785 Annamite
785 North Vietnamese
785 South Vietnamese
785 Vietnam
786 Katu
787 Ma
788 Mnong
- 790 MONTAGNARD
790 Cham
790 Chom
- 792 INDO CHINESE
792 Indo China
792 Indochina
792 Indochinese
- 793 EURASIAN
793 Indo European
793 Indoeuropean
- 794 AMERASIAN
- 795 ASIAN
795 Asia
795 Asiatic
795 Orient
795 Oriental
- 800-899 PACIFIC
- 800 AUSTRALIAN
800 Australia
800 Moen
800 New South Wales
800 Northern Territory
800 Queensland
800 South Australia
800 Victoria
800 Western Australia
800 Tasmanian
801 Tasmania
802 Australian Aborigine
- 803 NEW ZEALANDER
803 New Zealand
- 808 POLYNESIAN
808 Ellis
808 Norfolk Islander
808 Polynesia
808 Polynesia Islander
808 Satuvaluan
808 Tulo Anese
808 Tuvalu
808 Tuvaluan
809 Kapinagamarangan
809 Nukoroan
810 Maori
- 811 HAWAIIAN
811 Hawaiian Islander
811 Hawaiian Native
811 Mixed Hawaiian
811 Native Hawaiian
813 Part Hawaiian
- 814 SAMOAN
814 American Samoan
814 Samoa
814 Swains Island
814 Tutuila
- 815 TONGAN
815 Niukro

815	Tonga	827	Ngatikese
815	Tonga Islander	827	Pingelapese
816	TOKELAUAN	827	Pohnpeian
816	Toelau	827	Ponape
816	Tokelau Islander	827	Ponape Islander
817	COOK ISLANDER	827	Prohnpen
818	TAHITIAN	827	Pronpen
818	French Polynesia	828	CHUUKESE
818	Society Islander	828	Chuuk
818	Tahiti	828	Chuukian
819	NIUEAN	828	Hall Islander
820	MICRONESIAN	828	Mortlockese
820	FSM	828	Namanouito
820	Micronesia Islander	828	Pulapese
820	US Trust Territory of the Pacific	828	Pulasukese
821	GUAMANIAN	828	Pulwaatese
821	Gu	828	Tamatamian
821	Guam	828	Truk
822	Chamorro	828	Truk Islander
822	Chamorro Islander	828	Trukese
823	SAIPANESE	828	Ulul
823	Micanina	829	YAPESE
823	Northern Marianas Islander	829	Yap
823	Saipan Islander	829	Yap Islander
823	Rota	830	CAROLINIAN
823	Rotanese	830	Caroline Islander
823	Rotinian	830	Eauripikese
824	PALAUAN	830	Faisian
824	Belau	830	Ifalukese
824	Belauan	830	Lamotrekesse
824	Puloanese	830	Satawalese
824	R P	830	Ulithian
824	R.P.	830	Woleaian
824	RP	831	KIRIBATESE
824	Sonsorolese	831	Gilbertese
824	Tulo Anese	832	NAURUAN
825	MARSHALLESE	833	TARAWA ISLANDER
825	Marshall Islander	833	Tarawa
826	KOSRAEAN	834	TINIAN ISLANDER
827	PONAPEAN	834	Tinian
827	Mokilese	840	MELANESIAN ISLANDER
		840	Melanesia

841	FIJIAN	914	S A INDIAN
	841 Fiji	920	AMERICAN INDIAN
	841 Fiji Islander	920	Blackfoot
843	NEW GUINEAN	920	Cherokee
	844 Papuan	920	Mayan
	844 Papua	920	Native American
845	SOLOMON ISLANDER	920	Navajo
	845 British Solomons	921	ALEUT
846	NEW CALEDONIAN ISLANDER	921	Aleutian
	846 New Caledonia	921	Aleutian Islander
847	VANUATUAN	922	ESKIMO
	847 New Hebrides Islander	923	INUIT
	847 NHB	924	WHITE
	847 Ni Vanuatu	924	Caucasian
850	PACIFIC ISLANDER	924	Swamp Yankee
	850 Campbell Islander	924	Wasp
	850 Christmas Islander	924	Yankee
	850 Kermadec Islander	925	Anglo
	850 Midway Islander	925	Anglo Saxon
	850 Phoenix Islander	925	Anglosaxon
	850 Pi	927	Appalachian
	850 Wake Islander	927	Hillbilly
860	Pacific N.E.C.	928	Aryan
	860 Oceania	929	PENNSYLVANIA GERMAN
	860 Oceania	929	Amish
	860 Paccian	929	Hutterite
	860 Pacific	929	Mennonite
	861 Part Samoan	929	Pennsylvania Dutch
	862 Chamolinian	930	GREENLANDER
863	RESERVED CODES	931	CANADIAN
900	AFRO AMERICAN	931	Albertan
	900 Afroamerican	931	British Canadian
	900 Afro	931	British Columbia
	902 African American	931	British Columbian
	902 African Amer	931	Canada
	903 Black	931	English Canadian
	904 Negro	931	Labrador
	905 Nonwhite	931	Labradorean
	906 Colored	931	Labradorian
	906 Bilalian	931	Manitoba
	906 Nigritian	931	Manitoban
	907 Creole	931	New Brunswick
	908 Mulatto	931	Ontarian
913	C A INDIAN	931	Ontario

931	Prince Edward Islander	952	Illinoisan
931	Saskatchewan	953	Indiana
931	Yukon	953	Indianan
931	Yukoner	954	Iowa
933	Newfoundland	955	Kansan
934	Nova Scotian	955	Kansas
934	Nova Scotia	956	Kentucky
		957	Louisiana
935	FRENCH CANADIAN	958	Maine
935	Canadien	959	Maryland
935	Franco American	959	Marylander
935	Quebec	960	Massachusetts
935	Quebécois	961	Michigan
		961	Michigander
936	ACADIAN	962	Minnesota
936	Acadia	962	Minnesotan
937	Cajun	963	Mississippi
		963	Mississippian
939	AMERICAN	964	Missouri
939	America	964	Missourian
939	Americans	965	Montana
		965	Monranan
940	UNITED STATES	966	Nebraska
940	U S	966	Nebraskan
940	U S A	967	Nevada
940	Unites States of America	967	Nevadan
940	US	968	New Hampshire
940	USA	969	New Jersey
941	Alabama	969	New Jerseyite
941	Alabaman	970	New Mexican
941	Albamian	970	New Mexico
942	Alaska	971	New York
942	Alaskan	971	New Yorker
943	Arizona	972	North Carolina
943	Arizonan	972	North Carolinian
943	Arizonian	973	North Dakota
944	Arkansan	973	North Dakotan
944	Arkansas	974	Ohio
945	California	974	Ohioan
945	Californian	976	Oklahoma
946	Coloradan	976	Oklahoman
946	Colorado	977	Oregon
947	Connecticut	977	Oregonian
948	D C	978	Pennsylvania
948	DC	979	Rhode Island
948	District of Columbia	979	Rhode Islander
948	Washington DC	980	South Carolina
949	Delaware	980	South Carolinian
950	Florida	981	South Dakota
950	Floridian	981	South Dakotan
951	Idaho	982	Tennessean
952	Illinois	982	Tennessee

983 Texan
 983 Texas
 984 Utah
 985 Vermont
 985 Vermonter
 986 Virginia
 986 Virginian
 987 Washington
 987 Washingtonian
 988 West Virginia
 988 West Virginian
 989 Wisconsin
 990 Wyoming
 991 Georgia
 991 Georgian
 993 Southerner

 994 NORTH AMERICAN
 994 North America

 959-999 RESIDUAL AND NO RESPONSE

 995 MIXTURE
 995 Bi Racial
 995 Biracial
 995 Combination
 995 Everything
 995 Heinz 57
 995 Homo Sapien
 995 Human Being
 995 Many
 995 Mixed
 995 Multi National
 995 Multiple
 995 Several
 995 Various

 996 UNCODABLE ENTRIES
 996 Adopted
 996 Do Not Know
 996 Dont Know
 996 Gery
 996 Kuttuse
 996 None
 996 Pig Latin
 996 Refused
 996 Roc
 996 Tianglap
 996 Tobian
 996 Unknown
 997 Deferred Cases

998 OTHER RESPONSES
 998 Adventist
 998 Agnostic
 998 Apostolic
 998 Ashkenazim
 998 Ashkenazim Jew
 998 Atheist
 998 Bahai
 998 Baptist
 998 Black Muslim
 998 Brethren
 998 Buddhist
 998 Catholic
 998 Christian
 998 Christian Scientist
 998 Congregationalist
 998 Episcopal
 998 Evangelist
 998 Hebrew
 998 Holiness
 998 Islam
 998 Islamic
 998 Jain
 998 Jehovahs Witnesses
 998 Jehovah's Witnesses
 998 Jewish
 998 Latter Day Saints
 998 Lutheran
 998 Methodist
 998 Mormon
 998 Moslem
 998 Muslem
 998 Muslim
 998 Orthodox
 998 Pentecostal
 998 Presbyterian
 998 Protestant
 998 Quaker
 998 Roman Catholic
 998 Salvation Army
 998 Sephardic
 998 Sephardic Jew
 998 Sephardim
 998 Seventh Day Adventist
 998 Shiite
 998 Unitarian
 998 Yiddish
 998 Zoroastrian
 999 NOT REPORTED

GROUP QUARTERS

This section contains the alphabetical code list for group quarters. The group quarters code list was used by special place prelist enumerators to classify each type of group quarters. Each group quarters code is a two-digit number followed by either an "I" (institutional) or "N" (noninstitutional) suffix. The group quarters codes listed in the second column are for staff residing in group quarters.

GQ codes	Staff residents GQ codes	
87-N	--	A. College Quarters Off Campus (Code only if occupied by 10 or more unrelated persons. If less than 10, these are classified as a housing unit.)
		B. Correctional Institutions
22-I	22-N	1. <i>Federal Detention Centers:</i> Including Park Police, Bureau of Indian Affairs, Immigration and Naturalization Service (INS) centers, INS detention centers operated within local jails, and State and Federal prisons. INS detention centers also include INS Federal Alien Detention Facilities, INS Service Processing Centers, and INS Contract Detention Centers used to detain aliens under exclusion or deportation proceedings and aliens who require custodial departures.
21-I	21-N	2. <i>Federal Prisons:</i> Including criminally insane wards operated by a Federal prison within a mental or general hospital. If ward is not operated by a prison, code according to paragraph H4. For detention centers within Federal prisons, see B1 above.
23-I	23-N	3. <i>Halfway Houses:</i> Operated for correctional purposes, including probation and restitution centers, prerelease centers, and community-residential treatment centers.
27-I	27-N	4. <i>Local (County/City) Jails and Other Local Confinement Facilities:</i> Including work farms used to hold persons awaiting trial or serving time on relatively short sentences (usually of a year or less), and jails run by private businesses under contract.
95-I	95-N	5. <i>Military Stockades, Jails</i>
28-I	28-N	6. <i>Police Lockups:</i> Temporary-holding facilities or other facilities that hold persons only if they have not been formally charged in court (usually detained less than 48 hours).
24-I	24-N	7. <i>State Prisons:</i> Prisons run by private businesses (under contract); including criminally insane wards operated by a State prison within a mental or general hospital. If ward is not operated by a prison, code according to paragraph H4.
20-I	20-N	8. <i>Other Types of Correctional Institutions:</i> Including private correctional facilities and correctional facilities specifically for alcohol/drug abuse. (Use only as a last resort if no other type code applies.)
91-N	--	C. Crews of Civilian Vessels
		D. Dormitories
92-N	--	1. <i>Agriculture Workers' Dormitories on Farms:</i> Including migratory farm workers' camps on farms, bunkhouses for ranch hands, and other dormitories on farms including those on "tree farms."
87-N	--	2. <i>College Student Dormitories, and Fraternity and Sorority Houses (on campus):</i> Including residential quarters for those in religious orders.
86-N	--	3. <i>Dormitories for Nurses and Interns in General and Military Hospitals</i>
97-N	--	4. <i>Military Quarters on Base:</i> Including barracks, bachelor officers quarters, unaccompanied officer personnel housing, unaccompanied enlisted personnel housing, and similar noninstitutional group living quarters for military personnel.
93-N	--	5. <i>Other Workers' Dormitories:</i> Including logging camps, construction workers' camps, firehouse dormitories, job-training camps, energy enclave (Alaska only), Alaskan pipeline camps, nonfarm migratory workers' camps, such as workers who lay oil and gas pipelines.
		6. <i>Runaway, Neglected, and Homeless Children:</i> Including emergency shelters/group homes which provide temporary sleeping facilities for juveniles, see paragraph F2.

GQ codes Staff residents GQ codes

E. **Elderly:** Skilled nursing facilities, intermediate care facilities, long-term care rooms in wards or buildings on the grounds of hospitals, nursing, convalescent, and rest homes including soldiers', sailors', veterans', and fraternal or religious homes for the aged, with or without nursing care.

NOTE: Do not include dormitories for nurses' and interns'; see paragraph D3.

1. *Public Ownership*

- 62-I 62-N a. Federal ownership: Including Veterans' Administration, domiciliary homes, and U.S. Naval homes.
- 63-I 63-N b. State ownership
- 64-I 64-N c. County or city ownership
- 65-I 65-N d. Don't know if Federal, State, or county-city ownership (Use only as a last resort if no other type code applies.)

2. *Private Ownership*

- 66-I 66-N a. Private not-for-profit
- 67-I 67-N b. Private for profit
- 60-I 60-N c. Don't know if for profit or not (Use only as a last resort if no other type code applies.)
- 61-I 61-N 3. *Don't Know if Federal, State, Local, or Private Ownership* (Use only as a last resort if no other type code applies.)

F. **Emergency Shelter/Street Night Enumeration ("S-NIGHT")**

- 82-N -- 1. *Shelters for the Homeless with Sleeping Facilities:* Including emergency housing, missions and flop-houses, Salvation Army shelters, hotels and motels charging \$12 or less a night (excluding taxes), hotels and motels used entirely for homeless persons, the group of rooms in hotels and motels used partially for the homeless, and similar places known to have persons with no usual home elsewhere who stay overnight.
- 83-N -- 2. *Runaway, Neglected, and Homeless Children:* Including emergency shelters/group homes which provide temporary sleeping facilities for juveniles.
- 84-N -- 3. *Street Enumeration – Predesignated Sites*
 - a. Nonstructure locations, other than commerce places: Including street corners, parks, bridges, abandoned and boarded-up buildings, noncommercial campsites ("tent cities"), and similar sites.
 - 85-N -- b. Commerce places: Including railroad stations, airports, bus depots, subway stations, all-night movie theaters, all-night restaurants, emergency hospital waiting rooms, and other similar predesignated sites.
- 75-N -- 4. *Shelters for Abused Women* (Shelters against domestic violence)

G. **Group Homes:** Including those providing community-based care and supportive services such as halfway houses for the groups listed below. (Code only if occupied by 10 or more unrelated persons. If less than 10, these are classified as a housing unit.)

- 76-N -- 1. *Drug/Alcohol Abuse:* Including group homes, detoxification centers, quarterway houses such as residential treatment facilities that work closely with an accredited hospital, halfway houses, recovery homes for ambulatory, and mentally competent recovering alcoholics who may be re-entering the work force. (Ask usual home elsewhere in these places. Include as living there only persons who have no usual home elsewhere.)
- 29-N -- 2. *Maternity* (Homes for unwed mothers) (Ask usual home elsewhere in these places. Include as living there only persons who have no usual home elsewhere.)
- 3. *Mentally Ill*
 - 16-N -- a. Federal
 - 17-N -- b. State
 - 18-N -- c. Private
 - 19-N -- d. Don't know if public/private ownership (Use only as a last resort if no other type code applies.)

GQ codes Staff residents GQ codes

G. Group Homes—Con.

4. Mentally Retarded

- 56-N -- a. Federal
- 57-N -- b. State
- 58-N -- c. Private
- 59-N -- d. Don't know if public/private ownership (Use only as a last resort if no other type code applies.)

5. Physically Handicapped

- 72-N -- a. Public ownership
- 73-N -- b. Private ownership
- 74-N -- c. Don't know if public/private ownership (Use only as a last resort if no other type code applies.)

6. Runaway, Neglected, and Homeless Children: Including emergency shelters/group homes which provide temporary sleeping facilities for juveniles, see paragraph F2.

- 79-N -- **7. Other Group Homes:** Including communes, foster care homes and job corps centers with 10 or more unrelated children. Do not include emergency housing for persons with no other home. See paragraph F1. (Use only as a last resort if no other type code applies.)

H. Hospitals/Schools for the Handicapped

1. Dormitories for Nurses and Interns in General and Military Hospitals

- 86-N --
- 70-I 70-N **2. Drug/Alcohol Abuse:** Including hospitals, and hospital wards in psychiatric and general hospitals. These facilities/wards are in a medical setting equipped and designed for the diagnosis and treatment of medical or psychiatric illnesses associated with alcohol or drug abuse. Patients receive supervised medical/nursing care from a formally trained staff. For group homes, see paragraph G.

3. Hospitals for Chronically Ill

- 54-I 86-N a. Military hospitals or wards for chronically ill
- 55-I 86-N b. Other hospitals or wards for chronically ill: Including tuberculosis hospitals or wards, wards in general and Veterans' Administration hospitals for the chronically ill, neurological wards, hospices; wards for patients with Hansen's Disease (leprosy) and other incurable diseases; and other unspecified wards for the chronically ill. Do not include mental or alcohol/drug abuse hospitals or wards.

4. Mentally Ill (Psychiatric): Hospitals or wards, including wards for the criminally insane not operated by a prison and psychiatric wards of general hospitals and veterans' hospitals. This is a medical setting designed for the treatment of mental illness. Patients receive supervised and medical/nursing care from a formally trained staff. Code wards for the mentally retarded according to paragraph H5. Do not include hospitals or wards for alcohol/drug abuse; see paragraph H2.

- 46-I 46-N a. Federal ownership
- 47-I 47-N b. State or local ownership
- 48-I 48-N c. Private ownership
- 45-I 45-N d. Don't know if Federal, State, local, or private ownership (Use only as a last resort if no other type code applies.)

5. Mentally Retarded: Schools, hospitals, wards, including wards in hospitals for the mentally ill, and intermediate care facilities for the mentally retarded. This is in a suitably-equipped setting and with supervised and medical/nursing care from a formally trained staff.

- 41-I 41-N a. Federal ownership
- 43-I 43-N b. State or local ownership
- 42-I 42-N c. Private ownership
- 40-I 40-N d. Don't know if Federal, State, local, or private ownership (Use only as a last resort if no other type code applies.)

H. Hospitals/Schools for the Handicapped—Con.

6. *Physically Handicapped*: Including schools, hospitals, or wards in a suitably-equipped medical setting and designed primarily for the physically handicapped who receive supervised care and medical/nursing care from a formally trained staff.

a. Institutions for the deaf

- 38-I 38-N (1) Public ownership
- 39-I 39-N (2) Private ownership
- 37-I 37-N (3) Don't know if public/private ownership (Use only as a last resort if no other type code applies.)

b. Institutions for the blind

- 35-I 35-N (1) Public ownership
- 36-I 36-N (2) Private ownership
- 34-I 34-N (3) Don't know if public/private ownership (Use only as a last resort if no other type code applies.)

c. Orthopedic wards and institutions for physically handicapped: Including accident victims, and persons with polio, cerebral palsy, and muscular dystrophy.

- 32-I 32-N (1) Public ownership
- 33-I 33-N (2) Private ownership
- 31-I 31-N (3) Don't know if public/private ownership (Use only as a last resort if no other type code applies.)

53-I 86-N 7. *Wards in General and Military Hospitals for Patients Who Have No Usual Home Elsewhere*: Including maternity, neonatal, pediatric (including wards for boarder babies), military, surgical wards, and other purpose wards of hospitals and wards for infectious diseases.

Note: Do not include long-term care rooms for the elderly in wards or buildings on the grounds of hospitals, see paragraph E.

I. Hotels/Motels: "S-Night" locations, see paragraph F.

J. Juvenile Institutions: Including homes, schools, and hospitals.

1. *Long-Term Care* (length of stay usually more than 30 days)

a. Neglected, abused, and dependent children: Including orphanages, homes, or residential care.

- 03-I 03-N (1) Public ownership
- 04-I 04-N (2) Private ownership
- 02-I 02-N (3) Don't know if public/private ownership (Use only as a last resort if no other type code applies.)

b. Emotionally disturbed children: Including residential treatment centers (psychiatric care provided).

c. Delinquent children: Placed by court, parents, or social service agency, in residential training school or home, including industrial schools, camps, or farms.

- 12-I 12-N (1) Public ownership: Committed by courts.
- 15-I 15-N (2) Private ownership: Some are committed by courts, others are referred by parents or social service agencies because of delinquent behavior.
- 11-I 11-N (3) Don't know if public/private ownership (Use only as a last resort if no other type code applies.)

GQ codes	Staff residents GQ codes	
		J. Juvenile Institutions: Including homes, schools, and hospitals—Con.
		2. <i>Short-term</i> (length of stay usually 30 days or less)
10-I	10-N	a. Delinquent children: Including those receiving temporary care in detention or diagnostic centers pending court disposition of case.
		b. Runaway, neglected, and homeless children: Including emergency shelters/group homes which provide temporary sleeping facilities for juveniles, see paragraph F2.
01-I	01-N	3. <i>Don't Know Type of Juvenile Institution</i> : Including homes, schools, hospitals, or wards for children. (Use only as a last resort if no other type code applies.)
		K. Military Quarters
		1. <i>On Base</i>
97-N	--	a. Barracks, bachelor officers quarters, unaccompanied officer personnel housing, unaccompanied enlisted personnel housing, and similar noninstitutional group living quarters for military personnel
96-N	--	b. Transient quarters (noninstitutional) for temporary residents (military or civilian)
86-N	--	c. Dormitories for nurses and interns in general military hospitals
54-I	86-N	d. Hospitals or wards for chronically ill
95-I	95-N	e. Stockades and jails
98-N	--	2. <i>Military Ships</i>
90-N	--	L. Natural Disaster : Including those temporarily displaced by a natural disaster, such as "Hurricane Hugo."
89-N	--	M. Religious Group Quarters : Including convents, monasteries, and rectories. Members of religious orders who live in a dormitory at a hospital or college were classified according to the type of place where they live, such as 86-N if at a general hospital, or 87-N if at a college. (Code only if occupied by 10 or more unrelated persons. If less than 10, these are classified as a housing unit.)
80-N	--	N. Rooming and Boarding Houses (Code only if occupied by 10 or more unrelated persons. If less than 10, these are classified as a housing unit.)
		O. Schools for the Handicapped : See paragraphs H5 and H6.
		P. Shelter/Street Night Enumeration ("S-Night") : See paragraph F.
94-N	--	Q. Other Nonhousehold Living Situations : Including places not covered by other GQ codes shown herein, such as commercial or public campgrounds, campgrounds at racetracks, fairs, and carnivals, hostels, and similar transient sites. (Ask usual home elsewhere in these places. Include as living there only persons who have no usual home elsewhere.)
		R. Staff of Institutions : Including staff personnel residing in group quarters. Code according to the appropriate type of group quarters shown under the column "Staff residents GQ codes." Staff residents are coded with an "N" suffix.
		Note: Do not assign GQ codes to staff residents in group quarters where a "--" is shown.

HISPANIC ORIGIN

This section contains the list used for both the write-in entries and the FOSDIC circle entries for the Hispanic origin question in PUMS. The list of origins with their associated three-digit codes is shown below. "n.e.c." is the abbreviation for not elsewhere classified.

000,	NOT SPANISH/HISPANIC	236	Paraguayan
006-199		231-249	SOUTH AMERICAN- Con.
000	Not Spanish/Hispanic (FOSDIC circle)	237	Peruvian
006-199	Not Spanish/Hispanic	238	Uruguayan
		239	Venezuelan
200-209	SPANIARD	240	Reserve Spanish/Hispanic 6
200	Spaniard	241	Reserve Spanish/Hispanic 7
201	Andalusian	242	Reserve Spanish/Hispanic 8
202	Asturian	243	Reserve Spanish/Hispanic 9
203	Castillian	244	Reserve Spanish/Hispanic 10
204	Catalonian	245	Reserve Spanish/Hispanic 11
205	Balearic Islander	246	Reserve Spanish/Hispanic 12
206	Gallego	247	South American Indian
207	Valencian	248	Criollo
208	Canarian	249	South American
209	Spanish Basque		
		002, 261-270	PUERTO RICAN
001, 210-220	MEXICAN	002	Puerto Rican (FOSDIC circle)
001	Mexican (FOSDIC circle)	261	Puerto Rican
210	Mexican	262	Reserve Spanish/Hispanic 21
211	Mexican American	263	Reserve Spanish/Hispanic 22
212	Mexicano	264	Reserve Spanish/Hispanic 23
213	Chicano	265	Reserve Spanish/Hispanic 24
214	La Raza	266	Reserve Spanish/Hispanic 25
215	Mexican American Indian	267	Reserve Spanish/Hispanic 26
216	Reserve Spanish/Hispanic 1	268	Reserve Spanish/Hispanic 27
217	Reserve Spanish/Hispanic 2	269	Reserve Spanish/Hispanic 28
218	Mexico	270	Reserve Spanish/Hispanic 29
219	Reserve Spanish/Hispanic 3		
220	Reserve Spanish/Hispanic 4	003, 271-274	CUBAN
		003	Cuban (FOSDIC circle)
221-230	CENTRAL AMERICAN	271	Cuban
221	Costa Rican	272	Reserve Spanish/Hispanic 30
222	Guatemalan	273	Reserve Spanish/Hispanic 31
223	Honduran	274	Reserve Spanish/Hispanic 32
224	Nicaraguan		
225	Panamanian	275-289	DOMINICAN
226	Salvadoran	275	Dominican
27	Central American	276	Reserve Spanish/Hispanic 33
228	Central American Indian	277	Reserve Spanish/Hispanic 34
229	Canal Zone	278	Reserve Spanish/Hispanic 35
230	Reserve Spanish/Hispanic 5	279	Reserve Spanish/Hispanic 36
		280	Reserve Spanish/Hispanic 37
231-249	SOUTH AMERICAN	281	Reserve Spanish/Hispanic 38
231	Argentinean	282	Reserve Spanish/Hispanic 39
232	Bolivian	283-289	Reserve Spanish/Hispanic 40
233	Chilean		
234	Colombian		
235	Ecuadorian		

004-005, 250-260, 290-999	OTHER SPANISH/HISPANIC
004-005	Other Spanish/Hispanic (FOSDIC circle)
250-260	Latin American
290	Hispanic
291	Spanish
292	Californio
293	Tejano
294	Nuevo Mexicano
295	Spanish American
296	Spanish American Indian
297	Meso American Indian
298	Mestizo
299-999	Other Spanish/Hispanic, n.e.c.

INDUSTRY

The list presents the industrial classification developed for the 1990 Census of Population and Housing. There are 235 categories for the employed, with 1 additional category for the experienced unemployed, and 7 additional categories for the Armed Forces. These categories are aggregated into 13 major groups. The classification is developed from the 1987 Standard Industrial Classification. "n.e.c." is the abbreviation for not elsewhere classified.

1990
Census
code

Industry category

AGRICULTURE, FORESTRY, AND FISHERIES

010 Agricultural production, crops (01)
011 Agricultural production, livestock (02)
012 Veterinary services (074)
020 Landscape and horticultural services (078)
030 Agricultural services, n.e.c. (071, 072, 075, 076)
031 Forestry (08)
032 Fishing, hunting, and trapping (09)

MINING

040 Metal mining (10)
041 Coal mining (12)
042 Oil and gas extraction (13)
050 Nonmetallic mining and quarrying, except fuels (14)

060 CONSTRUCTION (15, 16, 17)

MANUFACTURING

Nondurable Goods

Food and kindred products

100 Meat products (201)
101 Dairy products (202)
102 Canned, frozen, and preserved fruits and vegetables (203)
110 Grain mill products (204)
111 Bakery products (205)
112 Sugar and confectionery products (206)
120 Beverage industries (208)
121 Miscellaneous food preparations and kindred products (207,209)
122 Not specified food industries
130 Tobacco manufactures (21)

Textile mill products

132 Knitting mills (225)
140 Dyeing and finishing textiles, except wool and knit goods (226)
141 Carpets and rugs (227)
142 Yarn, thread, and fabric mills (221-224, 228)
150 Miscellaneous textile mill products (229)

Apparel and other finished textile products

151 Apparel and accessories, except knit (231-238)
152 Miscellaneous fabricated textile products (239)

1990 Census code	Industry category
	MANUFACTURING—Con.
	Nondurable Goods—Con.
	Paper and allied products
160	Pulp, paper, and paperboard mills (261-263)
161	Miscellaneous paper and pulp products (267)
162	Paperboard containers and boxes (265)
	Printing, publishing, and allied industries
171	Newspaper publishing and printing (271)
172	Printing, publishing, and allied industries, except newspapers (272-279)
	Chemicals and allied products
180	Plastics, synthetics, and resins (282)
181	Drugs (283)
182	Soaps and cosmetics (284)
190	Paints, varnishes, and related products (285)
191	Agricultural chemicals (287)
192	Industrial and miscellaneous chemicals (281, 286, 289)
	Petroleum and coal products
200	Petroleum refining (291)
201	Miscellaneous petroleum and coal products (295, 299)
	Rubber and miscellaneous plastics products
210	Tires and inner tubes (301)
211	Other rubber products, and plastics footwear and belting (302-306)
212	Miscellaneous plastics products (308)
	Leather and leather products
220	Leather tanning and finishing (311)
221	Footwear, except rubber and plastic (313, 314)
222	Leather products, except footwear (315-317, 319)
	Durable Goods
	Lumber and wood products, except furniture
230	Logging (241)
231	Sawmills, planing mills, and millwork (242, 243)
232	Wood buildings and mobile homes (245)
241	Miscellaneous wood products (244, 249)
242	Furniture and fixtures (25)
	Stone, clay, glass, and concrete products
250	Glass and glass products (321-323)
251	Cement, concrete, gypsum, and plaster products (324,327)
252	Structural clay products (325)
261	Pottery and related products (326)
262	Miscellaneous nonmetallic mineral and stone products (328, 329)
	Metal industries
270	Blast furnaces, steelworks, rolling and finishing mills (331)
271	Iron and steel foundries (332)
272	Primary aluminum industries (3334, part 334, 3353-3355,3363,3365)

1990
Census
code

Industry category

MANUFACTURING—Con.

Durable Goods—Con.

280 Other primary metal industries (3331, 3339, part 334, 3351,3356, 3357, 3364, 3366, 3369, 339)
281 Cutlery, handtools, and general hardware (342)
282 Fabricated structural metal products (344)
290 Screw machine products (345)
291 Metal forgings and stampings (346)
292 Ordnance (348)
300 Miscellaneous fabricated metal products (341, 343, 347, 349)
301 Not specified metal industries

Machinery and computing equipment

310 Engines and turbines (351)
311 Farm machinery and equipment (352)
312 Construction and material handling machines (353)
320 Metalworking machinery (354)
321 Office and accounting machines (3578, 3579)
322 Computers and related equipment (3571-3577)
331 Machinery, except electrical, n.e.c. (355, 356, 358, 359)
332 Not specified machinery

Electrical machinery, equipment, and supplies

340 Household appliances (363)
341 Radio, TV, and communication equipment (365, 366)
342 Electrical machinery, equipment, and supplies, n.e.c. (361,362, 364, 367, 369)
350 Not specified electrical machinery, equipment, and supplies

Transportation equipment

351 Motor vehicles and motor vehicle equipment (371)
352 Aircraft and parts (372)
360 Ship and boat building and repairing (373)
361 Railroad locomotives and equipment (374)
362 Guided missiles, space vehicles, and parts (376)
370 Cycles and miscellaneous transportation equipment (375, 379)

Professional and photographic equipment, and watches

371 Scientific and controlling instruments (381, 382 exc. 3827)
372 Medical, dental, and optical instruments and supplies (3827,384, 385)
380 Photographic equipment and supplies (386)
381 Watches, clocks, and clockwork operated devices (387)
390 Toys, amusement, and sporting goods (394)
391 Miscellaneous manufacturing industries (39 exc. 394)
392 Not specified manufacturing industries

TRANSPORTATION, COMMUNICATIONS, AND OTHER PUBLIC UTILITIES

Transportation

400 Railroads (40)
401 Bus service and urban transit (41, except 412)
402 Taxicab service (412)
410 Trucking service (421, 423)
411 Warehousing and storage (422)

1990
Census
code

Industry category

TRANSPORTATION, COMMUNICATIONS, AND OTHER PUBLIC UTILITIES—Con.

412	U.S. Postal Service (43)
420	Water transportation (44)
421	Air transportation (45)
422	Pipe lines, except natural gas (46)
432	Services incidental to transportation (47)
Communications	
440	Radio and television broadcasting and cable (483, 484)
441	Telephone communications (481)
442	Telegraph and miscellaneous communications services (482, 489)
Utilities and sanitary services	
450	Electric light and power (491)
451	Gas and steam supply systems (492, 496)
452	Electric and gas, and other combinations (493)
470	Water supply and irrigation (494, 497)
471	Sanitary services (495)
472	Not specified utilities

WHOLESALE TRADE

Durable Goods

500	Motor vehicles and equipment (501)
501	Furniture and home furnishings (502)
502	Lumber and construction materials (503)
510	Professional and commercial equipment and supplies (504)
511	Metals and minerals, except petroleum (505)
512	Electrical goods (506)
521	Hardware, plumbing and heating supplies (507)
530	Machinery, equipment, and supplies (508)
531	Scrap and waste materials (5093)
532	Miscellaneous wholesale, durable goods (509 exc. 5093)

Nondurable Goods

540	Paper and paper products (511)
541	Drugs, chemicals and allied products (512, 516)
542	Apparel, fabrics, and notions (513)
550	Groceries and related products (514)
551	Farm-product raw materials (515)
552	Petroleum products (517)
560	Alcoholic beverages (518)
561	Farm supplies (5191)
562	Miscellaneous wholesale, nondurable goods (5192-5199)
571	Not specified wholesale trade

RETAIL TRADE

580	Lumber and building material retailing (521, 523)
581	Hardware stores (525)
582	Retail nurseries and garden stores (526)
590	Mobile home dealers (527)
591	Department stores (531)

1990
Census
code

Industry category

RETAIL TRADE—Con.

592 Variety stores (533)
600 Miscellaneous general merchandise stores (539)
601 Grocery stores (541)
602 Dairy products stores (545)
610 Retail bakeries (546)
611 Food stores, n.e.c. (542, 543, 544, 549)
612 Motor vehicle dealers (551, 552)
620 Auto and home supply stores (553)
621 Gasoline service stations (554)
622 Miscellaneous vehicle dealers (555, 556, 557, 559)
623 Apparel and accessory stores, except shoe (56, except 566)
630 Shoe stores (566)
631 Furniture and home furnishings stores (571)
632 Household appliance stores (572)
633 Radio, TV, and computer stores (5731, 5734)
640 Music stores (5735, 5736)
641 Eating and drinking places (58)
642 Drug stores (591)
650 Liquor stores (592)
651 Sporting goods, bicycles, and hobby stores (5941, 5945, 5946)
652 Book and stationery stores (5942, 5943)
660 Jewelry stores (5944)
661 Gift, novelty, and souvenir shops (5947)
662 Sewing, needlework and piece goods stores (5949)
663 Catalog and mail order houses (5961)
670 Vending machine operators (5962)
671 Direct selling establishments (5963)
672 Fuel dealers (598)
681 Retail florists (5992)
682 Miscellaneous retail stores (593, 5948, 5993-5995, 5999)
691 Not specified retail trade

FINANCE, INSURANCE, AND REAL ESTATE

700 Banking (60 exc. 603 and 606)
701 Savings institutions, including credit unions (603, 606)
702 Credit agencies, n.e.c. (61)
710 Security, commodity brokerage, and investment companies (62, 67)
711 Insurance (63, 64)
712 Real estate, including real estate-insurance offices (65)

BUSINESS AND REPAIR SERVICES

721 Advertising (731)
722 Services to dwellings and other buildings (734)
731 Personnel supply services (736)
732 Computer and data processing services (737)
740 Detective and protective services (7381, 7382)
741 Business services, n.e.c. (732, 733, 735, 7383-7389)
742 Automotive rental and leasing, without drivers (751)
750 Automobile parking and carwashes (752, 7542)
751 Automotive repair and related services (753, 7549)

1990
Census
code

Industry category

BUSINESS AND REPAIR SERVICES—Con.

752 Electrical repair shops (762, 7694)
760 Miscellaneous repair services (763, 764, 7692, 7699)

PERSONAL SERVICES

761 Private households (88)
762 Hotels and motels (701)
770 Lodging places, except hotels and motels (702, 703, 704)
771 Laundry, cleaning, and garment services (721 exc. part 7219)
772 Beauty shops (723)
780 Barber shops (724)
781 Funeral service and crematories (726)
782 Shoe repair shops (725)
790 Dressmaking shops (part 7219)
791 Miscellaneous personal services (722, 729)

ENTERTAINMENT AND RECREATION SERVICES

800 Theaters and motion pictures (781-783, 792)
801 Video tape rental (784)
802 Bowling centers (793)
810 Miscellaneous entertainment and recreation services (791, 794, 799)

PROFESSIONAL AND RELATED SERVICES

812 Offices and clinics of physicians (801, 803)
820 Offices and clinics of dentists (802)
821 Offices and clinics of chiropractors (8041)
822 Offices and clinics of optometrists (8042)
830 Offices and clinics of health practitioners, n.e.c. (8043, 8049)
831 Hospitals (806)
832 Nursing and personal care facilities (805)
840 Health services, n.e.c. (807, 808, 809)
841 Legal services (81)
842 Elementary and secondary schools (821)
850 Colleges and universities (822)
851 Vocational schools (824)
852 Libraries (823)
860 Educational services, n.e.c. (829)
861 Job training and vocational rehabilitation services (833)
862 Child day care services (part 835)
863 Family child care homes (part 835)
870 Residential care facilities, without nursing (836)
871 Social services, n.e.c. (832, 839)
872 Museums, art galleries, and zoos (84)
873 Labor unions (863)
880 Religious organizations (866)
881 Membership organizations, n.e.c. (861, 862, 864, 865, 869)
882 Engineering, architectural, and surveying services (871)
890 Accounting, auditing, and bookkeeping services (872)
891 Research, development, and testing services (873)
892 Management and public relations services (874)
893 Miscellaneous professional and related services (899)

1990
Census
code

Industry category

PUBLIC ADMINISTRATION

900 Executive and legislative offices (911-913)
901 General government, n.e.c. (919)
910 Justice, public order, and safety (92)
921 Public finance, taxation, and monetary policy (93)
922 Administration of human resources programs (94)
930 Administration of environmental quality and housing programs (95)
931 Administration of economic programs (96)
932 National security and international affairs (97)

ACTIVE DUTY MILITARY

Armed Forces

940 Army
941 Air Force
942 Navy
950 Marines
951 Coast Guard
952 Armed Forces, Branch not specified
960 Military Reserves or National Guard

EXPERIENCED UNEMPLOYED NOT CLASSIFIED BY INDUSTRY

992 Last worked 1984 or earlier

LANGUAGE

This section contains the code list of languages other than English spoken at home. Each entry was given a three-digit code. If more than one language was reported, only the first language reported was coded. The languages were coded originally into nearly 400 different language categories. The following list contains the principal name for each code. Since many languages and language groups are known by several names, additional illustrative names are shown for some languages. A complete list of all reported language names and categories into which they were coded may be obtained from the Census Bureau at the cost of reproduction.

000-600	NOT IN UNIVERSE	632	RHAETO-ROMANIC
601	JAMAICAN CREOLE	632	Romansch
602	KRIO		
603	HAWAIIAN PIDGIN	633	WELSH
604	PIDGIN	634	BRETON
605	GULLAH	635	IRISH GAELIC
606	SARAMACCA	636	SCOTTIC GAELIC
		637	GREEK
607	GERMAN	638	ALBANIAN
607	Austrian	639	RUSSIAN
607	Swiss	640	BIELORUSSIAN
		641	UKRAINIAN
608	PENNSYLVANIA DUTCH	642	CZECH
609	YIDDISH	643	KASHUBIAN
610	DUTCH	644	LUSATIAN
610	Flemish	644	Sorbian
		644	Wendish
611	AFRIKAANS		
612	FRISIAN	645	POLISH
613	LUXEMBOURGIAN	646	SLOVAK
614	SWEDISH	647	BULGARIAN
615	DANISH	648	MACEDONIAN
616	NORWEGIAN		
617	ICELANDIC	649	SERBOCROATIAN
618	FAROESE	649	Slavic
619	ITALIAN	649	Yugoslav
620	FRENCH	650	CROATIAN
620	Walloon	651	SERBIAN
		652	SLOVENE
621	PROVENCAL	653	LITHUANIAN
622	PATOIS	654	LETTISH
		655	ARMENIAN
623	FRENCH CREOLE		
623	Haitian Creole	656	PERSIAN
		656	Farsi
624	CAJUN	656	Pushto
625	SPANISH		
626	CATALONIAN	657	PASHTO
627	LADINO	657	Afghan
628	PACHUCO		
629	PORTUGUESE	658	KURDISH
630	PAPIA MENTAE	659	BALOCHI
631	RUMANIAN	660	TADZHIK
		661	OSSETE

662	SANSKRIT	696	Georgian
663	HINDI AND RELATED	697	BASQUE
663	Hindi	698	DRAVIDIAN
663	India	699	BRAHUI
663	Urdu	700	GONDI
		701	TELUGU
664	BENGALI	702	KANNADA
665	PANJABI	703	MALAYALAM
666	MARATHI	704	TAMIL
667	GUJARATHI	705	KURUKH
668	BIHARI	706	MUNDA
669	RAJASTHANI	707	BURUSHASKI
670	ORIYA		
671	BHILI	708	CHINESE
672	ASSAMESE	708	Cantonese
673	KASHMIRI	708	Yueh
674	NEPALI	708	Min
675	SINDHI		
676	MALDIVIAN	709	HAKKA
677	SINHALESE	709	Fukien
678	ROMANY	709	K'echia
679	FINNISH		
680	ESTONIAN	710	KAN
681	LAPP	710	Nan Chang
682	HUNGARIAN		
		711	HSIANG
683	OTHER URALIC LANGUAGES	711	Hunan
683	Cheremis		
683	Mordvin	712	MANDARIN
683	Samoyed	712	Honan
683	Ugric	712	Hopei
683	Yenisei	712	Pei
684	CHUVASH	713	FUCHOW
685	KARAKALPAK	713	Min Pei
686	KAZAKH		
687	KIRGHIZ	714	FORMOSAN
		714	Min Nan
688	KARACHAY		
688	Tatar	715	WU
		716	TIBETAN
689	UIGHUR		
689	Uzbek	717	BURMESE
		717	Tonkin
690	AZERBAIJANI		
691	TURKISH	718	KAREN
692	TURKMEN	719	KACHIN
693	YAKUT		
694	MONGOLIAN	720	THAI
695	TUNGUS	720	Kam
		720	Lao
		720	Laotian
696	CAUCASIAN	720	Tung
696	Avar	720	

721	MIAO-YAO	758	NAURUAN
		759	PALAU
722	MIAO	760	PONAPEAN
722	Hmong	761	TRUKESE
		762	ULITHEAN
723	JAPANESE		
724	KOREAN	763	WOLEAI-ULITHI
725	AINU	763	Eauripik
		763	Ifaluk
726	MON-KHMER		
726	Cambodian	764	YAPESE
726	Khmer		
726	Mon	765	INDO-PACIFIC LANGUAGES, not elsewhere classified
727	SIBERIAN LANGUAGES, not elsewhere classified	765	Melanesian
728	VIETNAMESE	766	POLYNESIAN
729	MUONG	767	SAMOAN
730	BUGINESE	768	TONGAN
731	MOLUCCAN	769	NIUEAN
732	INDONESIAN	770	TOKELAUAN
733	ACHINESE	771	FIJIAN
734	BALINESE	772	MARQUESAN
735	CHAM	773	RAROTONGAN
736	JAVANESE	774	MAORI
737	MADURESE	775	NUKUORO
738	MALAGASY	776	HAWAIIAN
739	MALAY	777	ARABIC
740	MINANGKABAU	778	HEBREW
741	SUNDANESE		
		779	SYRIAC
742	TAGALOG	779	Aramaic
742	Filipino	779	Assyrian
		779	Chaldean
743	BISAYAN		
743	Ilongo	780	AMHARIC
		780	Tigre
744	SEBUANO		
745	PANGASINAN	781	BERBER
746	ILOCANO	782	CHADIC
746	Igorot	782	Hamitic
		782	Hausa
747	BIKOL		
748	PAMPANGAN	783	CUSHITE
749	GORONTALO	783	Beja
750	MICRONESIAN	783	Somali
751	CAROLINIAN		
752	CHAMORRO	784	SUDANIC
753	GILBERTESE	784	Dinka
754	KUSAIEAN	784	Gambai
755	MARSHALLESE	784	Sudanese
756	MOKILESE		
757	MORTLOCKESE	785	NILOTIC

785	Acholi	801	PACIFIC GULF YUPIK
785	Luo	801	Pacific Eskimo
785	Nuer		
786	NILO-HAMITIC	802	ESKIMO
786	Bari	803	INUPIK
786	Masai	803	Inuit
787	NUBIAN	804	SAINT LAWRENCE ISLAND YUPIK
788	SAHARAN	805	YUPIK
		806	ALGONQUIAN
789	NILO-SAHARAN	807	ARAPAHO
789	Fur		
789	Songhai	808	ATSINA
		808	Gros Ventre
790	KHOISAN		
790	Bushman	809	BLACKFOOT
		810	CHEYENNE
791	SWAHILI	811	CREE
792	BANTU	812	DELAWARE
792	Bembe	812	Lenni-Lenape
792	Botswana		
792	Chaga	813	FOX
792	Fan	813	Sac
792	Kikuyu	814	KICKAPOO
792	Kongo	815	MENOMINI
792	Luganda		
792	Naebele	816	FRENCH CREE
792	Xhosa	816	Metis
792	Zulu		
		817	MIAMI
793	MANDE	818	MICMAC
793	Kpelle		
793	Mandingo	819	OJIBWA
		819	Chippewa
794	FULANI		
		820	OTTAWA
795	GUR		
795	Dagomba	821	PASSAMAQUODDY
		821	Malecite
796	KRU		
796	Damomeen	822	PENOBSCOT
796	Egbo	823	ABNAKI
796	Ibo	824	POTAWATOMI
796	Nigerian	825	SHAWNEE
796	Yoruba	826	WIYOT
		827	YUROK
797	EFIK	828	KUTENAI
797	Ibibio	829	MAKAH
798	MBUM AND RELATED	830	KWAKIUTL
799	AFRICAN, not further specified	830	Quileute
800	ALEUT		

831-832	NOOTKA	857	Tetlin
833	LOWER CHEHALIS	858	TUTCHONE
834	UPPER CHEHALIS	859	CHASTA COSTA
834	Chehalis	859	Chetco
834	Satsop	859	Coquille
835	CLALLAM	859	Smith River Athapaskan
836	COEUR D'ALENE	860	HUPA
836	Skitsamish	861	OTHER ATHAPASCAN-EYAK LANGUAGES
837	COLUMBIA	861	Cahto
837	Chelan	861	Mattole
837	Wenatchee	861	Wailaki
838	COWLITZ	862	APACHE
839	SALISH	863	KIOWA
839	Flathead	864	NAVAHO
840	NOOTSACK	865	EYAK
841	OKANOGAN	866	TLINGIT
842	PUGET SOUND SALISH	866	Chilkat
842	Duwamish	866	Sitka
842	Nisqualli	866	Tongass
842	Puyallup	866	Yakutat
842	Skagit	867	MOUNTAIN MAIDU
842	Snohomish	867	Maidu
842	Suquamish	868	NORTHWEST MAIDU
843	QUINAULT	868	Concow
843	Queets	869	SOUTHERN MAIDU
844	TILLAMOOK	869	Nisenan
845	TWANA	870	COAST MIWOK
846	HAIDA	870	Bodega
847	ATHAPASCAN	870	Marin
848	AHTENA	871	PLAINS MIWOK
849	HAN	872	SIERRA MIWOK
850	INGALIT	872	Miwok
851	KOYUKON	873	NOMLAKI
852	KUCHIN	873	Tehama
853	UPPER KUSKOKWIM	874	PATWIN
854	TANAINA	874	Colouse
855	TANANA	874	Suisun
855	Minto	875	WINTUN
856	TANACROSS	876	FOOTHILL NORTH YOKUTS
857	UPPER TANANA		
857	Nabesna		

877	TACHI	905	HIDATSA
878	SANTIAM	906	MANDAN
878	Calapooya		
878	Wapatu	907	DAKOTA
		907	Brule
879	SIUSLAW	907	Lakota
879	Coos	907	Oglala
879	Lower Umpqua	907	Sioux
880	KLAMATH	908	CHIWERE
880	Modoc	909	WINNEBAGO
881	NEZ PERCE	910	KANSA
		910	Kaw
882	SAHAPTIAN		
882	Celilo	911	OMAHA
882	Klikitat	912	OSAGE
882	Palouse	913	PONCA
882	Tenino		
882	Umatilla	914	QUAPAW
882	Warm Springs	914	Arkansas
882	Yakima		
		915	ALABAMA
883	UPPER CHINOOK		
883	Chinook	916	CHOCTAW
883	Clackamas	916	Chickasaw
883	Multnomah		
883	Wasco	917	MIKASUKI
883	Wishram		
		918	HICHITA
		918	Apalachicola
884	TSIMSHIAN		
885	ACHUMAWI		
886	ATSUGEWI	919	KOASATI
887	KAROK		
888	POMO	920	MUSKOGEE
889	SHASTAN	920	Creek
890	WASHO	920	Seminole
891	UP RIVER YUMAN	921	CHETEMACHA
892	COCOMARICOPA	922	YUKI
893	MOHAVE	923	WAPPO
894	YUMA	924	KERES
895	DIEGUENO	925	IROQUOIS
896	DELTA RIVER YUMAN	926	MOHAWK
897	UPLAND YUMÁN	927	ONEIDA
898	HAVASUPAI	928	ONONDAGA
899	WALAPAI	929	CAYUGA
900	YAVAPAI	930	SENECA
901	CHUMASH	931	TUSCARORA
902	TONKAWA		
903	YUCHI	932	WYANDOT
		932	Huron
904	CROW		
904	Absaroke	933	CHEROKEE

934	ARIKARA	962	TEWA
935	CADDO	962	Hano
936	PAWNEE	962	Hopi-Tewa
937	WICHITA	962	San Ildefonso
938	COMANCHE	962	San Juan
		962	Santa Clara
939	MONO		
939	Owens Valley Paiute	963	TOWA
		964	ZUNI
940	PAIUTE	965	CHINOOK JARGON
		966	AMERICAN INDIAN
941	NORTHERN PAIUTE		
941	Bannock	967	MISUMALPAN
941	Num	967	Matagalpa
941	Snake	967	Miskito
		967	Sumu
942	SOUTHERN PAIUTE		
943	CHEMEHUEVI	968	MAYAN LANGUAGES
944	KAWAII SU	968	Cakchiquel
945	UTE	968	Chol
946	SHOSHONI	968	Guastec
947	PANAMINT	968	Guatemala
948	HOPI	968	Ixil
949	CAHUILLA	968	Kechi
950	CUPENO	968	Mam
951	LUISENO	968	Maya
952	SERRANO	968	Queche
953	TUBATULABAL	968	Yucateca
954	PIMA	969	TARASCAN
954	Papago		
		970	MAPUCHE
955	YAQUI	970	Araucanian
		970	Chilote
956	AZTECAN		
956	Mexicano	971	OTO-MANGUEN
956	Nahua	971	Ixatec
		971	Mixtec
957-958	SONORAN, not elsewhere classified	971	Otomi
957	Cahita	971	Popoloc
957	Guasave	971	Zapoteca
957	Huichole		
957	Nayit	972	QUECHUA
957-958	Tarahumara	973	AYMARA
959	PICURIS	974	ARAWAKIAN
959	Northern Tiwa	974	Araua
959	Taos	974	Carib
		974	Guajiro
960	TIWA	974	Kitemoca
960	Isleta	974	Tatu
960	Ysleta		
		975	CHIBCHAN
961	SANDIA	975	Boruca

975	Cuna	979	SAN CARLOS
975	Guaymi	979	Cibecue
975	Ica	979	San Carlos
		979	San Carlos Apache
976	TUPI-GUARANI	979	White Mountain
976	Guajibo		
976	Guarani	980	KIOWA-APACHE
976	Siriono	981	KALISPEL
		982	SPOKANE
977	JICARILLA	983-998	LANGUAGE SPECIFIED, NOT LISTED
977	Lipan	999	NOT REPORTED
978	CHIRICAHUA		
978	Mescalero		

OCCUPATION

The list presents the occupational classification developed for the 1990 Census of Population and Housing. There are 501 categories for the employed with 1 additional category for the experienced unemployed and 3 additional categories for the Armed Forces. These categories are grouped into 6 summary groups and 13 major groups. The classification is developed from the 1980 Standard Occupational Classification. "n.e.c." is the abbreviation for not elsewhere classified.

In the Table (Matrix) Outlines and the Table (Matrix) Section, many occupation codes are presented as ranges; for example, legislators (001-003). In this appendix, the Occupation Code List includes single census occupation codes and comparable Standard Occupational Classification (SOC) code equivalents. Single census occupation codes in this appendix are equivalent to corresponding census code ranges in the Table (Matrix) Outlines and Table (Matrix) Section.

1990
Census
code

Occupation category

MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS

Executive, Administrative, and Managerial Occupations

003	Legislators (111)
004	Chief executives and general administrators, public administration (112)
005	Administrators and officials, public administration (1132-1139)
006	Administrators, protective services (1131)
007	Financial managers (122)
008	Personnel and labor relations managers (123)
009	Purchasing managers (124)
013	Managers, marketing, advertising, and public relations (125)
014	Administrators, education and related fields (128)
015	Managers, medicine and health (131)
016	Postmasters and mail superintendents (1344)
017	Managers, food serving and lodging establishments (1351)
018	Managers, properties and real estate (1353)
019	Funeral directors (pt 1359)
021	Managers, service organizations, n.e.c. (127, 1352, 1354, pt 1359)
022	Managers and administrators, n.e.c. (121, 126, 132-1343, 136-139)

Management Related Occupations

023	Accountants and auditors (1412)
024	Underwriters (1414)
025	Other financial officers (1415, 1419)
026	Management analysts (142)
027	Personnel, training, and labor relations specialists (143)
028	Purchasing agents and buyers, farm products (1443)
029	Buyers, wholesale and retail trade except farm products (1442)
033	Purchasing agents and buyers, n.e.c. (1449)
034	Business and promotion agents (145)
035	Construction inspectors (1472)
036	Inspectors and compliance officers, except construction (1473)
037	Management related occupations, n.e.c. (149)

Professional Specialty Occupations

Engineers, Architects, and Surveyors

043	Architects (161)
	Engineers
044	Aerospace (1622)

1990
Census
code

Occupation category

MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.

Professional Specialty Occupations—Con.

045 Metallurgical and materials (1623)
046 Mining (1624)
047 Petroleum (1625)
048 Chemical (1626)
049 Nuclear (1627)
053 Civil (1628)
054 Agricultural (1632)
055 Electrical and electronic (1633, 1636)
056 Industrial (1634)
057 Mechanical (1635)
058 Marine and naval architects (1637)
059 Engineers, n.e.c. (1639)
063 Surveyors and mapping scientists (164)

Mathematical and Computer Scientists

064 Computer systems analysts and scientists (171)
065 Operations and systems researchers and analysts (172)
066 Actuaries (1732)
067 Statisticians (1733)
068 Mathematical scientists, n.e.c. (1739)

Natural Scientists

069 Physicists and astronomers (1842, 1843)
073 Chemists, except biochemists (1845)
074 Atmospheric and space scientists (1846)
075 Geologists and geodesists (1847)
076 Physical scientists, n.e.c. (1849)
077 Agricultural and food scientists (1853)
078 Biological and life scientists (1854)
079 Forestry and conservation scientists (1852)
083 Medical scientists (1855)

Health Diagnosing Occupations

084 Physicians (261)
085 Dentists (262)
086 Veterinarians (27)
087 Optometrists (281)
088 Podiatrists (283)
089 Health diagnosing practitioners, n.e.c. (289)

Health Assessment and Treating Occupations

095 Registered nurses (29)
096 Pharmacists (301)
097 Dietitians (302)

Therapists

098 Respiratory therapists (3031)
099 Occupational therapists (3032)
103 Physical therapists (3033)
104 Speech therapists (3034)

1990
Census
code

Occupation category

MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.

Professional Specialty Occupations—Con.

105	Therapists, n.e.c. (3039)
106	Physicians' assistants (304)
	Teachers, Postsecondary
113	Earth, environmental, and marine science teachers (2212)
114	Biological science teachers (2213)
115	Chemistry teachers (2214)
116	Physics teachers (2215)
117	Natural science teachers, n.e.c. (2216)
118	Psychology teachers (2217)
119	Economics teachers (2218)
123	History teachers (2222)
124	Political science teachers (2223)
125	Sociology teachers (2224)
126	Social science teachers, n.e.c. (2225)
127	Engineering teachers (2226)
128	Mathematical science teachers (2227)
129	Computer science teachers (2228)
133	Medical science teachers (2231)
134	Health specialties teachers (2232)
135	Business, commerce, and marketing teachers (2233)
136	Agriculture and forestry teachers (2234)
137	Art, drama, and music teachers (2235)
138	Physical education teachers (2236)
139	Education teachers (2237)
143	English teachers (2238)
144	Foreign language teachers (2242)
145	Law teachers (2243)
146	Social work teachers (2244)
147	Theology teachers (2245)
148	Trade and industrial teachers (2246)
149	Home economics teachers (2247)
153	Teachers, postsecondary, n.e.c. (2249)
154	Postsecondary teachers, subject not specified
	Teachers, Except Postsecondary
155	Teachers, prekindergarten and kindergarten (231)
156	Teachers, elementary school (232)
157	Teachers, secondary school (233)
158	Teachers, special education (235)
159	Teachers, n.e.c. (236, 239)
163	Counselors, educational and vocational (24)
	Librarians, Archivists, and Curators
164	Librarians (251)
165	Archivists and curators (252)
	Social Scientists and Urban Planners
166	Economists (1912)
167	Psychologists (1915)

1990
Census
code

Occupation category

MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.

Professional Specialty Occupations—Con.

168 Sociologists (1916)
169 Social scientists, n.e.c. (1913, 1914, 1919)
173 Urban planners (192)

Social, Recreation, and Religious Workers

174 Social workers (2032)
175 Recreation workers (2033)
176 Clergy (2042)
177 Religious workers, n.e.c. (2049)

Lawyers and Judges

178 Lawyers (211)
179 Judges (212)

Writers, Artists, Entertainers, and Athletes

183 Authors (321)
184 Technical writers (398)
185 Designers (322)
186 Musicians and composers (323)
187 Actors and directors (324)
188 Painters, sculptors, craft-artists, and artist printmakers (325)
189 Photographers (326)
193 Dancers (327)
194 Artists, performers, and related workers, n.e.c. (328, 329)
195 Editors and reporters (331)
197 Public relations specialists (332)
198 Announcers (333)
199 Athletes (34)

TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS

Technicians and Related Support Occupations

Health Technologists and Technicians

203 Clinical laboratory technologists and technicians (362)
204 Dental hygienists (363)
205 Health record technologists and technicians (364)
206 Radiologic technicians (365)
207 Licensed practical nurses (366)
208 Health technologists and technicians, n.e.c. (369)

Technologists and Technicians, Except Health

Engineering and Related Technologists and Technicians

213 Electrical and electronic technicians (3711)
214 Industrial engineering technicians (3712)
215 Mechanical engineering technicians (3713)
216 Engineering technicians, n.e.c. (3719)
217 Drafting occupations (372)
218 Surveying and mapping technicians (373)

Science Technicians

223 Biological technicians (382)
224 Chemical technicians (3831)

1990
Census
code

Occupation category

TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.

Technicians and Related Support Occupations—Con.

225 Science technicians, n.e.c. (3832, 3833, 384, 389)

Technicians; Except Health, Engineering, and Science

226 Airplane pilots and navigators (825)
227 Air traffic controllers (392)
228 Broadcast equipment operators (393)
229 Computer programmers (3971, 3972)
233 Tool programmers, numerical control (3974)
234 Legal assistants (396)
235 Technicians, n.e.c. (399)

Sales Occupations

243 Supervisors and proprietors, sales occupations (40)

Sales Representatives, Finance and Business Services

253 Insurance sales occupations (4122)
254 Real estate sales occupations (4123)
255 Securities and financial services sales occupations (4124)
256 Advertising and related sales occupations (4153)
257 Sales occupations, other business services (4152)

Sales Representatives, Commodities Except Retail

258 Sales engineers (421)
259 Sales representatives, mining, manufacturing, and wholesale (423, 424)

Sales Workers, Retail and Personal Services

263 Sales workers, motor vehicles and boats (4342, 4344)
264 Sales workers, apparel (4346)
265 Sales workers, shoes (4351)
266 Sales workers, furniture and home furnishings (4348)
267 Sales workers; radio, TV, hi-fi, and appliances (4343, 4352)
268 Sales workers, hardware and building supplies (4353)
269 Sales workers, parts (4367)
274 Sales workers, other commodities (4345, 4347, 4354, 4356, 4359, 4362, 4369)
275 Sales counter clerks (4363)
276 Cashiers (4364)
277 Street and door-to-door sales workers (4366)
278 News vendors (4365)

Sales Related Occupations

283 Demonstrators, promoters and models, sales (445)
284 Auctioneers (447)
285 Sales support occupations, n.e.c. (444, 446, 449)

Administrative Support Occupations, Including Clerical

Supervisors, Administrative Support Occupations

303 Supervisors, general office (4511, 4513, 4514, 4516, 4519, 4529)
304 Supervisors, computer equipment operators (4512)
305 Supervisors, financial records processing (4521)

1990
Census
code

Occupation category

TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.

Administrative Support Occupations, Including Clerical—Con.

306 Chief communications operators (4523)
307 Supervisors; distribution, scheduling, and adjusting clerks (4522, 4524-4528)

Computer Equipment Operators

308 Computer operators (4612)
309 Peripheral equipment operators (4613)

Secretaries, Stenographers, and Typists

313 Secretaries (4622)
314 Stenographers (4623)
315 Typists (4624)

Information Clerks

316 Interviewers (4642)
317 Hotel clerks (4643)
318 Transportation ticket and reservation agents (4644)
319 Receptionists (4645)
323 Information clerks, n.e.c. (4649)

Records Processing Occupations, Except Financial

325 Classified-ad clerks (4662)
326 Correspondence clerks (4663)
327 Order clerks (4664)
328 Personnel clerks, except payroll and timekeeping (4692)
329 Library clerks (4694)
335 File clerks (4696)
336 Records clerks (4699)

Financial Records Processing Occupations

337 Bookkeepers, accounting, and auditing clerks (4712)
338 Payroll and timekeeping clerks (4713)
339 Billing clerks (4715)
343 Cost and rate clerks (4716)
344 Billing, posting, and calculating machine operators (4718)

Duplicating, Mail and Other Office Machine Operators

345 Duplicating machine operators (4722)
346 Mail preparing and paper handling machine operators (4723)
347 Office machine operators, n.e.c. (4729)

Communications Equipment Operators

348 Telephone operators (4732)
353 Communications equipment operators, n.e.c. (4733, 4739)

Mail and Message Distributing Occupations

354 Postal clerks, exc. mail carriers (4742)
355 Mail carriers, postal service (4743)
356 Mail clerks, exc. postal service (4744)
357 Messengers (4745)

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Census
code

Occupation category

TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.

Administrative Support Occupations, Including Clerical—Con.

Material Recording, Scheduling, and Distributing Clerks

- 359 Dispatchers (4751)
- 363 Production coordinators (4752)
- 364 Traffic, shipping, and receiving clerks (4753)
- 365 Stock and inventory clerks (4754)
- 366 Meter readers (4755)
- 368 Weighers, measurers, checkers and samplers (4756, 4757)
- 373 Expeditors (4758)
- 374 Material recording, scheduling, and distributing clerks, n.e.c. (4759)

Adjusters and Investigators

- 375 Insurance adjusters, examiners, and investigators (4782)
- 376 Investigators and adjusters, except insurance (4783)
- 377 Eligibility clerks, social welfare (4784)
- 378 Bill and account collectors (4786)

Miscellaneous Administrative Support Occupations

- 379 General office clerks (463)
- 383 Bank tellers (4791)
- 384 Proofreaders (4792)
- 385 Data-entry keyers (4793)
- 386 Statistical clerks (4794)
- 387 Teachers' aides (4795)
- 389 Administrative support occupations, n.e.c. (4787, 4799)

SERVICE OCCUPATIONS

Private Household Occupations

- 403 Launderers and ironers (503)
- 404 Cooks, private household (504)
- 405 Housekeepers and butlers (505)
- 406 Child care workers, private household (506)
- 407 Private household cleaners and servants (502, 507, 509)

Protective Service Occupations

Supervisors, Protective Service Occupations

- 413 Supervisors, firefighting and fire prevention occupations (5111)
- 414 Supervisors, police and detectives (5112)
- 415 Supervisors, guards (5113)

Firefighting and Fire Prevention Occupations

- 416 Fire-inspection and fire prevention occupations (5122)
- 417 Firefighting occupations (5123)

Police and Detectives

- 418 Police and detectives, public service (5132)
- 423 Sheriffs, bailiffs, and other law enforcement officers (5134)
- 424 Correctional institution officers (5133)

Guards

- 425 Crossing guards (5142)

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Census
code

Occupation category

SERVICE OCCUPATIONS—Con.

Protective Service Occupations—Con.

426 Guards and police, exc. public service (5144)
427 Protective service occupations, n.e.c. (5149)

Service Occupations, Except Protective and Household

Food Preparation and Service Occupations

433 Supervisors, food preparation and service occupations (5211)
434 Bartenders (5212)
435 Waiters and waitresses (5213)
436 Cooks (5214, 5215)
438 Food counter, fountain and related occupations (5216)
439 Kitchen workers, food preparation (5217)
443 Waiters'/waitresses' assistants (5218)
444 Miscellaneous food preparation occupations (5219)

Health Service Occupations

445 Dental assistants (5232)
446 Health aides, except nursing (5233)
447 Nursing aides, orderlies, and attendants (5236)

Cleaning and Building Service Occupations, except Household

448 Supervisors, cleaning and building service workers (5241)
449 Maids and housemen (5242, 5249)
453 Janitors and cleaners (5244)
454 Elevator operators (5245)
455 Pest control occupations (5246)

Personal Service Occupations

456 Supervisors, personal service occupations (5251)
457 Barbers (5252)
458 Hairdressers and cosmetologists (5253)
459 Attendants, amusement and recreation facilities (5254)
461 Guides (5255)
462 Ushers (5256)
463 Public transportation attendants (5257)
464 Baggage porters and bellhops (5262)
465 Welfare service aides (5263)
466 Family child care providers (pt 5264)
467 Early childhood teacher's assistants (pt 5264)
468 Child care workers, n.e.c. (pt 5264)
469 Personal service occupations, n.e.c. (5258, 5269)

FARMING, FORESTRY, AND FISHING OCCUPATIONS

Farm Operators and Managers

473 Farmers, except horticultural (5512-5514)
474 Horticultural specialty farmers (5515)
475 Managers, farms, except horticultural (5522-5524)
476 Managers, horticultural specialty farms (5525)

Other Agricultural and Related Occupations

Farm Occupations, Except Managerial

1990
Census
code

Occupation category

FARMING, FORESTRY, AND FISHING OCCUPATIONS—Con.

477 Supervisors, farm workers (5611)
479 Farm workers (5612-5617)
483 Marine life cultivation workers (5618)
484 Nursery workers (5619)

Related Agricultural Occupations

485 Supervisors, related agricultural occupations (5621)
486 Groundskeepers and gardeners, except farm (5622)
487 Animal caretakers, except farm (5624)
488 Graders and sorters, agricultural products (5625)
489 Inspectors, agricultural products (5627)

Forestry and Logging Occupations

494 Supervisors, forestry, and logging workers (571)
495 Forestry workers, except logging (572)
496 Timber cutting and logging occupations (573, 579)

Fishers, Hunters, and Trappers

497 Captains and other officers, fishing vessels (pt 8241)
498 Fishers (583)
499 Hunters and trappers (584)

PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS

Mechanics and Repairers

503 Supervisors, mechanics and repairers (60)

Mechanics and Repairers, Except Supervisors

Vehicle and Mobile Equipment Mechanics and Repairers

505 Automobile mechanics (pt 6111)
506 Automobile mechanic apprentices (pt 6111)
507 Bus, truck, and stationary engine mechanics (6112)
508 Aircraft engine mechanics (6113)
509 Small engine repairers (6114)
514 Automobile body and related repairers (6115)
515 Aircraft mechanics, exc. engine (6116)
516 Heavy equipment mechanics (6117)
517 Farm equipment mechanics (6118)
518 Industrial machinery repairers (613)
519 Machinery maintenance occupations (614)

Electrical and Electronic Equipment Repairers

523 Electronic repairers, communications and industrial equipment (6151, 6153, 6155)
525 Data processing equipment repairers (6154)
526 Household appliance and power tool repairers (6156)
527 Telephone line installers and repairers (6157)
529 Telephone installers and repairers (6158)
533 Miscellaneous electrical and electronic equipment repairers (6152, 6159)
534 Heating, air conditioning, and refrigeration mechanics (616)

Miscellaneous Mechanics and Repairers

535 Camera, watch, and musical instrument repairers (6171,6172)

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Census
code

Occupation category

**PRECISION PRODUCTION, CRAFT, AND
REPAIR OCCUPATIONS—Con.**

536 Locksmiths and safe repairers (6173)
538 Office machine repairers (6174)
539 Mechanical controls and valve repairers (6175)
543 Elevator installers and repairers (6176)
544 Millwrights (6178)
547 Specified mechanics and repairers, n.e.c. (6177, 6179)
549 Not specified mechanics and repairers

Construction Trades

Supervisors, Construction Occupations

553 Supervisors; brickmasons, stonemasons, and tile setters (6312)
554 Supervisors, carpenters and related workers (6313)
555 Supervisors, electricians and power transmission installers (6314)
556 Supervisors; painters, paperhangers, and plasterers (6315)
557 Supervisors; plumbers, pipefitters, and steamfitters (6316)
558 Supervisors, construction n.e.c. (6311, 6318)

Construction Trades, Except Supervisors

563 Brickmasons and stonemasons (pt 6412, pt 6413)
564 Brickmason and stonemason apprentices (pt 6412, pt 6413)
565 Tile setters, hard and soft (pt 6414, pt 6462)
566 Carpet installers (pt 6462)
567 Carpenters (pt 6422)
569 Carpenter apprentices (pt 6422)
573 Drywall installers (6424)
575 Electricians (pt 6432)
576 Electrician apprentices (pt 6432)
577 Electrical power installers and repairers (6433)
579 Painters, construction and maintenance (6442)
583 Paperhangers (6443)
584 Plasterers (6444)
585 Plumbers, pipefitters, and steamfitters (pt 645)
587 Plumber, pipefitter, and steamfitter apprentices (pt 645)
588 Concrete and terrazzo finishers (6463)
589 Glaziers (6464)
593 Insulation workers (6465)
594 Paving, surfacing, and tamping equipment operators (6466)
595 Roofers (6468)
596 Sheetmetal duct installers (6472)
597 Structural metal workers (6473)
598 Drillers, earth (6474)
599 Construction Trades, n.e.c. (6467, 6475; 6476, 6479)

Extractive Occupations

613 Supervisors, extractive occupations (632)
614 Drillers, oil well (652)
615 Explosives workers (653)
616 Mining machine operators (654)
617 Mining occupations, n.e.c. (656)

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Census
code

Occupation category

**PRECISION PRODUCTION, CRAFT, AND
REPAIR OCCUPATIONS—Con.**

Precision Production Occupations

628 Supervisors, production occupations (67, 71)

Precision Metal Working Occupations

634 Tool and die makers (pt 6811)
635 Tool and die maker apprentices (pt 6811)
636 Precision assemblers, metal (6812)
637 Machinists (pt 6813)
639 Machinist apprentices (pt 6813)
643 Boilermakers (6814)
644 Precision grinders, filers, and tool sharpeners (6816)
645 Patternmakers and model makers, metal (6817)
646 Lay-out workers (6821)
647 Precious stones and metals workers (Jewelers) (6822, 6866)
649 Engravers, metal (6823)
653 Sheet metal workers (pt 6824)
654 Sheet metal worker apprentices (pt 6824)
655 Miscellaneous precision metal workers (6829)

Precision Woodworking Occupations

656 Patternmakers and model makers, wood (6831)
657 Cabinet makers and bench carpenters (6832)
658 Furniture and wood finishers (6835)
659 Miscellaneous precision woodworkers (6839)

Precision Textile, Apparel, and Furnishings Machine Workers

666 Dressmakers (pt 6852, pt 7752)
667 Tailors (pt 6852)
668 Upholsterers (6853)
669 Shoe repairers (6854)
674 Miscellaneous precision apparel and fabric workers (6856, 6859, pt 7752)

Precision Workers, Assorted Materials

675 Hand molders and shapers, except jewelers (6861)
676 Patternmakers, lay-out workers, and cutters (6862)
677 Optical goods workers (6864, pt 7477, pt 7677)
678 Dental laboratory and medical appliance technicians (6865)
679 Bookbinders (6844)
683 Electrical and electronic equipment assemblers (6867)
684 Miscellaneous precision workers, n.e.c. (6869)

Precision Food Production Occupations

686 Butchers and meat cutters (6871)
687 Bakers (6872)
688 Food batchmakers (6873, 6879)

Precision Inspectors, Testers, and Related Workers

689 Inspectors, testers, and graders (6881, 828)
693 Adjusters and calibrators (6882)

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Census
code

Occupation category

**PRECISION PRODUCTION, CRAFT, AND
REPAIR OCCUPATIONS—Con.**

Plant and System Operators

- 694 Water and sewage treatment plant operators (691)
- 695 Power plant operators (pt 693)
- 696 Stationary engineers (pt 693, 7668)
- 699 Miscellaneous plant and system operators (692, 694, 695, 696)

OPERATORS, FABRICATORS, AND LABORERS

Machine Operators, Assemblers, and Inspectors

Machine Operators and Tenders, Except Precision

Metalworking and Plastic Working Machine Operators

- 703 Lathe and turning machine set-up operators (7312)
- 704 Lathe and turning machine operators (7512)
- 705 Milling and planing machine operators (7313, 7513)
- 706 Punching and stamping press machine operators (7314, 7317, 7514, 7517)
- 707 Rolling machine operators (7316, 7516)
- 708 Drilling and boring machine operators (7318, 7518)
- 709 Grinding, abrading, buffing, and polishing machine operators (7322, 7324, 7522)
- 713 Forging machine operators (7319, 7519)
- 714 Numerical control machine operators (7326)
- 715 Miscellaneous metal, plastic, stone, and glass working machine operators (7329, 7529)
- 717 Fabricating machine operators, n.e.c. (7339, 7539)

Metal and Plastic Processing Machine Operators

- 719 Molding and casting machine operators (7315, 7342, 7515, 7542)
- 723 Metal plating machine operators (7343, 7543)
- 724 Heat treating equipment operators (7344, 7544)
- 725 Miscellaneous metal and plastic processing machine operators (7349, 7549)

Woodworking Machine Operators

- 726 Wood lathe, routing, and planing machine operators (7431, 7432, 7631, 7632)
- 727 Sawing machine operators (7433, 7633)
- 728 Shaping and joining machine operators (7435, 7635)
- 729 Nailing and tacking machine operators (7636)
- 733 Miscellaneous woodworking machine operators (7434, 7439, 7634, 7639)

Printing Machine Operators

- 734 Printing press operators (7443, 7643)
- 735 Photoengravers and lithographers (6842, 7444, 7644)
- 736 Typesetters and compositors (6841, 7642)
- 737 Miscellaneous printing machine operators (6849, 7449, 7649)

Textile, Apparel, and Furnishings Machine Operators

- 738 Winding and twisting machine operators (7451, 7651)
- 739 Knitting, looping, taping, and weaving machine operators (7452, 7652)
- 743 Textile cutting machine operators (7654)
- 744 Textile sewing machine operators (7655)
- 745 Shoe machine operators (7656)
- 747 Pressing machine operators (7657)
- 748 Laundering and dry cleaning machine operators (6855, 7658)
- 749 Miscellaneous textile machine operators (7459, 7659)

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Census
code

Occupation category

OPERATORS, FABRICATORS, AND LABORERS—Con.

Machine Operators, Assemblers, and Inspectors—Con.

Machine Operators, Assorted Materials

753	Cementing and gluing machine operators (7661)
754	Packaging and filling machine operators (7462, 7662)
755	Extruding and forming machine operators (7463, 7663)
756	Mixing and blending machine operators (7664)
757	Separating, filtering, and clarifying machine operators (7476, 7666, 7676)
758	Compressing and compacting machine operators (7467, 7667)
759	Painting and paint spraying machine operators (7669)
763	Roasting and baking machine operators, food (7472, 7672)
764	Washing, cleaning, and pickling machine operators (7673)
765	Folding machine operators (7474, 7674)
766	Furnace, kiln, and oven operators, exc. food (7675)
768	Crushing and grinding machine operators (pt 7477, pt 7677)
769	Slicing and cutting machine operators (7478, 7678)
773	Motion picture projectionists (pt 7479)
774	Photographic process machine operators (6863, 6868, 7671)
777	Miscellaneous machine operators, n.e.c. (pt 7479, 7665, 7679)
779	Machine operators, not specified

Fabricators, Assemblers, and Hand Working Occupations

783	Welders and cutters (7332, 7532, 7714)
784	Solderers and brazers (7333, 7533, 7717)
785	Assemblers (772, 774)
786	Hand cutting and trimming occupations (7753)
787	Hand molding, casting, and forming occupations (7754, 7755)
789	Hand painting, coating, and decorating occupations (7756)
793	Hand engraving and printing occupations (7757)
795	Miscellaneous hand working occupations (7758, 7759)

Production Inspectors, Testers, Samplers, and Weighers

796	Production inspectors, checkers, and examiners (782, 787)
797	Production testers (783)
798	Production samplers and weighers (784)
799	Graders and sorters, exc. agricultural (785)

Transportation and Material Moving Occupations

Motor Vehicle Operators

803	Supervisors, motor vehicle operators (8111)
804	Truck drivers (8212-8214)
806	Driver-sales workers (8218)
808	Bus drivers (8215)
809	Taxicab drivers and chauffeurs (8216)
813	Parking lot attendants (874)
814	Motor transportation occupations, n.e.c. (8219)

Transportation Occupations, Except Motor Vehicles

Rail Transportation Occupations

823	Railroad conductors and yardmasters (8113)
824	Locomotive operating occupations (8232)
825	Railroad brake, signal, and switch operators (8233)

1990
Census
code

Occupation category

OPERATORS, FABRICATORS, AND LABORERS—Con.

Transportation and Material Moving Occupations—Con.

- 826 Rail vehicle operators, n.e.c. (8239)
- Water Transportation Occupations
- 828 Ship captains and mates, except fishing boats (pt 8241, 8242)
- 829 Sailors and deckhands (8243)
- 833 Marine engineers (8244)
- 834 Bridge, lock, and lighthouse tenders (8245)

Material Moving Equipment Operators

- 843 Supervisors, material moving equipment operators (812)
- 844 Operating engineers (8312)
- 845 Longshore equipment operators (8313)
- 848 Hoist and winch operators (8314)
- 849 Crane and tower operators (8315)
- 853 Excavating and loading machine operators (8316)
- 855 Grader, dozer, and scraper operators (8317)
- 856 Industrial truck and tractor equipment operators (8318)
- 859 Miscellaneous material moving equipment operators (8319)
- 864 Supervisors, handlers, equipment cleaners, and laborers, n.e.c. (85)
- 865 Helpers, mechanics and repairers (863)

Helpers, Construction and Extractive Occupations

- 866 Helpers, construction trades (8641-8645, 8648)
- 867 Helpers, surveyor (8646)
- 868 Helpers, extractive occupations (865)
- 869 Construction laborers (871)
- 874 Production helpers (861, 862)

Freight, Stock, and Material Handlers

- 875 Garbage collectors (8722)
- 876 Stevedores (8723)
- 877 Stock handlers and baggers (8724)
- 878 Machine feeders and offbearers (8725)
- 883 Freight, stock, and material handlers, n.e.c. (8726)
- 885 Garage and service station related occupations (873)
- 887 Vehicle washers and equipment cleaners (875)
- 888 Hand packers and packagers (8761)
- 889 Laborers, except construction (8769)

MILITARY OCCUPATIONS

- 903 Commissioned Officers and Warrant Officers
- 904 Non-commissioned Officers and Other Enlisted Personnel
- 905 Military occupation, rank not specified

EXPERIENCED UNEMPLOYED NOT CLASSIFIED BY OCCUPATION

- 909 Last worked 1984 or earlier

PLACE OF BIRTH

This section contains the code list for place of birth. An alphabetical list of U.S. States and territories, foreign countries, and other areas was used to assign a three-digit code to the birthplace reported by each person. The alphabetical list used in coding included abbreviations and alternate names, including some historical names for countries and names of States, provinces, counties, or other subdivisions of countries.

The following list does not include any of these alternate names, but does include continent and area names used as defaults if a specific country was not named but a broader region or area of birth was reported. The names for foreign countries shown on this list and in the publications reflect the most commonly used names in this country, not their official or legal names. Each entry shown on the following list has a unique code.

The U.S. States and territories were assigned their Federal Information Processing Standards (FIPS) code preceded by a zero. For foreign countries, codes were generally assigned by listing the countries or areas in alphabetical order (followed by default codes) within eight broad continent or regional areas: (1) Europe, (2) Asia, (3) North America, (4) Central America, (5) Caribbean, (6) South America, (7) Africa, and (8) Oceania. The entries for the USSR and the Baltic States are listed following the other entries for Europe for convenience in combining with either Europe or Asia. The entries for Germany also do not follow strict alphabetical order; codes 110-114 can be combined to tabulate an overall figure including Germany (not specified), East Germany, West Germany, and Berlin. The entries for the United Kingdom also do not follow strict alphabetical order; codes 138-145 can be combined to tabulate an overall figure including United Kingdom (not specified), England, Scotland, Wales, Northern Ireland, Guernsey, Jersey, and the Isle of Man. The codes for Asia also include a code for Korea (not specified) since it is often reported in that fashion.

001-059	United States	001-059	United States—Con.
001	Alabama	038	North Dakota
002-003	Alaska	039	Ohio
004	Arizona	040	Oklahoma
005	Arkansas	041	Oregon
006-007	California	042-043	Pennsylvania
008	Colorado	044	Rhode Island
009	Connecticut	045	South Carolina
010	Delaware	046	South Dakota
011	District of Columbia	047	Tennessee
012	Florida	048	Texas
013-014	Georgia	049	Utah
015	Hawaii	050	Vermont
016	Idaho	051-052	Virginia
017	Illinois	053	Washington
018	Indiana	054	West Virginia
019	Iowa	055	Wisconsin
020	Kansas	056-059	Wyoming
021	Kentucky		
022	Louisiana	060-099	U.S. Outlying Areas and Puerto Rico
023	Maine		
024	Maryland	060-065	American Samoa
025	Massachusetts	066	Guam
026	Michigan	067-068	Johnston Atoll
027	Minnesota	069-070	Northern Mariana Islands
028	Mississippi	071	Midway Islands
029	Missouri	072-075	Puerto Rico
030	Montana	076-077	Navassa Island
031	Nebraska	078	U.S. Virgin Islands
032	Nevada	079-080	Wake Island
033	New Hampshire	081-083	Baker Island
034	New Jersey	084-085	Howland Island
035	New Mexico	086-088	Jarvis Island
036	New York	089-094	Kingman Reef
037	North Carolina		

060-099	U.S. Outlying Areas and Puerto Rico—Con.	100-199	Europe—Con.
095	Palmyra Atoll	151	Lapland, not specified
096-099	U.S. territory, not specified	152	Northern Europe, not specified
100-199	Europe	153	Southern Europe, not specified
100	Albania	154-179	Western Europe, not specified
101	Andorra	180	Union of Soviet Socialist Republics (USSR)
102	Austria	181	Baltic States, not specified
103	Belgium	182	Estonia
104	Bulgaria	183	Latvia
105	Czechoslovakia	184-199	Lithuania
106	Denmark	200-299	Asia
107	Faroe Islands	200	Afghanistan
108	Finland	201	Bahrain
109	France	202	Bangladesh
110	Germany, not specified	203	Bhutan
111	West Germany	204	Brunei
112	West Berlin	205	Burma
113	East Berlin	206	Cambodia
114	East Germany	207	China
115	Gibraltar	208	Cyprus
116	Greece	209	Hong Kong
117	Hungary	210	India
118	Iceland	211	Indonesia
119	Ireland	212	Iran
120	Italy	213	Iraq
121	Jan Mayen	214	Israel
122	Liechtenstein	215	Japan
123	Luxembourg	216	Jordan
124	Malta	217	Korea, not specified
125	Monaco	218	South Korea
126	Netherlands	219	North Korea
127	Norway	220	Kuwait
128	Poland	221	Laos
129	Portugal	222	Lebanon
130	Azores Islands	223	Macau
131	Madeira Islands	224	Malaysia
132	Romania	225	Maldives
133	San Marino	226	Mongolia
134	Spain	227	Nepal
135	Svalbard	228	Oman
136	Sweden	229	Pakistan
137	Switzerland	230	Paracel Islands
138	United Kingdom, not specified	231	Philippines
139	England	232	Qatar
140	Scotland	233	Saudi Arabia
141	Wales	234	Singapore
142	Northern Ireland	235	Spratley Islands
143	Guernsey	236	Sri Lanka
144	Jersey	237	Syria
145	Isle of Man	238	Taiwan
146	Vatican City	239	Thailand
147	Yugoslavia	240	Turkey
148	Europe, not specified	241	United Arab Emirates
149	Central Europe, not specified	242	Vietnam
150	Eastern Europe, not specified	243	Yemen, People's Democratic Republic

200-299	Asia—Con.	330-374	Caribbean—Con.
244	Yemen Arab Republic	351	Trinidad and Tobago
245	Asia, not specified	352	Turks and Caicos Islands
246	Asia Minor, not specified	353	Caribbean, not specified
247	East Asia, not specified	354	Antilles, not specified
248	Gaza Strip	355	British West Indies, not specified
249	Indochina, not specified	356	Latin America, not specified
250	Iraq-Saudi Arabia Neutral Zone	357	Leeward Islands, not specified
251	Mesopotamia, not specified	358	West Indies, not specified
252	Middle East, not specified	359-374	Windward Islands, not specified
253	Palestine, not specified		
254	Persian Gulf States, not specified	375-399	South America
255	Southeast Asia, not specified	375	Argentina
256-299	West Bank	376	Bolivia
		377	Brazil
300-399	America	378	Chile
300-309	North America	379	Colombia
300	Bermuda	380	Ecuador
301	Canada	381	Falkland Islands
302	Greenland	382	French Guiana
303	St. Pierre and Miquelon	383	Guyana
304-309	North America, not specified	384	Paraguay
		385	Peru
310-329	Central America	386	Suriname
310	Belize	387	Uruguay
311	Costa Rica	388	Venezuela
312	El Salvador	389-399	South America, not specified
313	Guatemala		
314	Honduras	400-499	Africa
315	Mexico	400	Algeria
316	Nicaragua	401	Angola
317	Panama	402	Bassas da India
318-329	Central America, not specified	403	Benin
		404	Botswana
330-374	Caribbean	405	British Indian Ocean Territory
330	Anguilla	406	Burkina Faso
331	Antigua and Barbuda	407	Burundi
332	Aruba	408	Cameroon
333	Bahamas	409	Cape Verde
334	Barbados	410	Central African Republic
335	British Virgin Islands	411	Chad
336	Cayman Islands	412	Comoros
337	Cuba	413	Congo
338	Dominica	414	Djibouti
339	Dominican Republic	415	Egypt
340	Grénada	416	Equatorial Guinea
341	Guadeloupe	417	Ethiopia
342	Haiti	418	Europa Island
343	Jamaica	419	Gabon
344	Martinique	420	Gambia
345	Montserrat	421	Ghana
346	Netherlands Antilles	422	Glorioso Islands
347	St. Barthelemy	423	Guinea
348	St. Kitts-Nevis	424	Guinea-Bissau
349	St. Lucia	425	Ivory Coast
350	St. Vincent and the Grenadines	426	Juan de Nova Island
		427	Kenya

400-499	Africa—Con.	400-499	Africa—Con.
428	Lesotho	469	Western Africa, not specified
429	Liberia	470-499	Southern Africa, not specified
430	Libya		
431	Madagascar	500-553	Oceania
432	Malawi	500	Ashmore and Cartier Islands
433	Mali	501	Australia
434	Mauritania	502	Christmas Island, Indian Ocean
435	Mayotte	503	Clipperton Island
436	Morocco	504	Cocos Islands
437	Mozambique	505	Cook Islands
438	Namibia	506	Coral Sea Islands
439	Niger	507	Fiji
440	Nigeria	508	French Polynesia
441	Reunion	509	Kiribati
442	Rwanda	510	Marshall Islands
443	Sao Tome and Principe	511	Micronesia
444	Senegal	512	Nauru
445	Mauritius	513	New Caledonia
446	Seychelles	514	New Zealand
447	Sierra Leone	515	Niue
448	Somalia	516	Norfolk Island
449	South Africa	517	Palau
450	St. Helena	518	Papua New Guinea
451	Sudan	519	Pitcairn Islands
452	Swaziland	520	Solomon Islands
453	Tanzania	521	Tokelau
454	Togo	522	Tonga
455	Tromelin Island	523	Tuvalu
456	Tunisia	524	Vanuatu
457	Uganda	525	Wallis and Futuna Islands
458	Western Sahara	526	Western Samoa
459	Zaire	527	Oceania, not specified
460	Zambia	528	Polynesia, not specified
461	Zimbabwe	529-549	Melanesia, not specified
462	Africa, not specified	550	Antarctica
463	Central Africa, not specified	551	Bouvet Island
464	Eastern Africa, not specified	552	French Southern and Antarctic Lands
465	Equatorial Africa, not specified	553	Heard and McDonald Islands
466	French Equatorial Africa, not specified	554-999	At Sea/Abroad, Not Specified
467	French West Africa, not specified	554	At sea
468	North Africa, not specified	555-999	Abroad, not specified

RACE

This section contains the alphabetical code list for race and American Indian tribes. The list of race groups and American Indian tribes with their associated 3-digit numerical code was used to code the Asian or Pacific Islander, American Indian, Eskimo, or Aleut, and the Other race write-in entries. A separate set of 3-digit numerical codes were used to identify FOSDIC circles for the race categories listed in the race item on the questionnaire. These codes and their respective race categories are: White-971, Black or Negro-972, Indian (Amer.)-973, Eskimo-974, Aleut-975, Chinese-976, Filipino-977, Hawaiian-978, Korean-979, Vietnamese-980, Japanese-981, Asian Indian-982, Samoan-983, Guamanian-984, Other Asian or Pacific Islander-985, and Other race-986.

000-599, 973 American Indian

000-001	Ahtna
002	Biorka
003	Reserve American Indian 1
004-005	Bristol Bay
006	Chaneliak
007	Chugach
008	Tanaina
009	Doyon
010	Kodiak
011	Reserve American Indian 2
012	Sealaska
013	Umpqua
014	Alaskan Athabaskan
015	Alaska Native
016	Haida
017	Tlingit
018	Tsimshian
019	Alaska Indian
020	Chehalis
021	Chemakum
022	Klallam
023	Jamestown
024	Lower Elwha
025	Port Gamble Klallam
026	Coquilles
027	Cowlitz
028	Lummi
029	Nooksack
030	Puget Sound Salish
031	Duwamish
032	Kikiallus
033	Lower Skagit
034	Muckleshoot
035	Nisqually
036	Puyallup
037	Samish
038	Sauk-Suiattle
039	Upper Skagit
040	Skykomish
041	Snohomish
042	Snoqualmie
043	Squaxin Island

000-599, 973 American Indian—Con.

044	Steilacoom
045	Stillaguamish
046	Suquamish
047	Swinomish
048	Tulalip
049	Port Madison
050	Quinault
051	Quileute
052	Hoh
053	Makah
054	Talakamish
055	Chinook
056	Clatsop
057	Kathlamet
058	Columbia River Chinook
059	Upper Chinook
060	Wakiakum Chinook
061	Willapa Chinook
062	Alsea
063	Cayuse
064	Celilo
065	Coos
066	Kalapuya
067	Klamath
068	Molala
069	Oregon Athabaskan
070	Siuslaw
071	Takelma
072	Tenino
073	Tillamook
074	Tygh
075	Umatilla
076	Walla-Walla
077	Yahooskin
078	Yakima
079	Skokomish
080	Agua Caliente Cahuilla
081	Augustine
082	Cabazon
083	Cahto
084	Cahuilla
085	Campo
086	Capitan Grande
087	Chemehuevi

000-599, 973 American Indian—Con.

088	Chimariko
089	Chumash
090	Costanoan
091	Cupeno
092	Cuyapaipe
093	Diegueno
094	Digger
095	Gabrieleno
096	Hoopa
097	Inaja Cosmit
098	Karok
099	Kawaiisu
100	La Jolla
101	Lassik
102	La Posta
103	Luiseno
104	Maidu
105	Manzanita
106	Mesa Grande
107	Mountain Maidu
108	Nishinam
109	Konkow
110	Mattole
111	Miwok
112	Coast Miwok
113	Modoc
114	Mono
115	Nomalaki
116	Pala
117	Pechanga
118	Pauma
119	Pit River
120	Pomo
121	Dry Creek
122	Northern Pomo
123	Kashaya
124	Central Pomo
125	Stonyford
126	Eastern Pomo
127	Sulphur Bank
128	Salinan
129	San Manual
130	San Pascual
131	Santa Rosa Cahuilla
132	Santa Ynez
133	Santa Ysabel
134	Serrano
135	Shasta
136	Soboba
137	Sycuan
138	Tolowa
139	Torres-Martinez

000-599, 973 American Indian—Con.

140	Kern River
141	Tule River
142	Twenty-Nine Palms
143	Wailaki
144	Wappo
145	Whilkut
146	Wintu
147	Wiyot
148	Yana
149	Yokuts
150	Tachi
151	Chukchansi
152	Yuki
153	Yurok
154	Reserve American Indian 3
155	Columbia
156	Kalispel
157	Salish
158	Coeur D'Alene
159	Colville
160	Spokane
161	Nez Perce
162	Washo
163	Alpine
164	Carson
165	Dresslerville
166	Stewart
167	Wishram
168	Hoopa Extension
169	Trinity
170	Ute
171	Allen Canyon
172	Uintah Ute
173	Ute Mountain Ute
174	Shoshone Paiute
175	Paiute
176	Northern Paiute
177	Cedarville
178	Pyramid Lake
179	Fort Bidwell
180	Las Vegas
181	Lovelock
182	Utu Utu Gwaitu Paiute
183	Fort Independence
184	Bridgeport
185	Burns Paiute
186	Yerington Paiute
187	Walker River
188	Southern Paiute
189	Kaibab
190	Moapa
191	Owens Valley
192	Summit Lake

000-599, 973 American Indian—Con.

193	Aroostook
194	Reserve American Indian 5
195	Shoshone
196	Battle Mountain
197	Duck Water
198	Elko
199	Ely
200	Goshute
201	Panamint
202	Ruby Valley
203	South Fork Shoshone
204	Washakie
205	Yomba
206	Te-Moak Western Shoshone
207	Bannock
208	Kootenai
209-210	Havasupai
211	Hualapai
212	Yavapai
213	Maricopa
214	Quechan
215	Cocopah
216	Mohave
217	Pima
218	Tohono O'Odham
219	Gila Bend
220	Ak-Chin
221	San Xavier
222	Sells
223	Yaqui
224	Pascua Yaqui
225	Barrio Libre
226	Mississippi Choctaw
227	Reserve American Indian 6
228	Jena Choctaw
229	Pueblo
230	Tigua
231	Taos
232	Picuris
233	Sandia
234	Isleta
235	Keres
236	Acoma
237	Cochiti
238	Laguna
239	San Felipe
240	Santa Ana
241	Santo Domingo
242	Zia
243	Tewa
244	Nambe
245	Pojoaque

000-599, 973 American Indian—Con.

246	San Ildefonso
247	San Juan Pueblo
248	Santa Clara
249	Tesuque
250	Arizona Tewa
251	Jemez
252	Hopi
253	Zuni
254	San Juan de
255	Apache
256	Oklahoma Apache
257	Jicarilla Apache
258	Lipan Apache
259	Mescalero Apache
260	Chiricahua
261	Fort Sill Apache
262	San Carlos Apache
263	Payson Apache
264	White Mountain Apache
265	Reserve American Indian 7
266	Reserve American Indian 8
267	Reserve American Indian 9
268	Reserve American Indian 10
269	Reserve American Indian 11
270	Reserve American Indian 12
271	Reserve American Indian 13
272	Reserve American Indian 14
273	Reserve American Indian 15
274	Reserve American Indian 16
275	Navajo
276	Kiowa
277	Tonkawa
278	Oklahoma Caddo
279	Arikara
280	Oklahoma Pawnee
281	Wichita
282	Sioux
283	Cheyenne River Sioux
284	Crow Creek Sioux
285	Devils Lake Sioux
286	Flandreau Santee
287	Fort Peck
288	Standing Rock Sioux
289	Lake Traverse Sioux
290	Lower Sioux
291	Pine Ridge Sioux
292	Pipestone Sioux
293	Prairie Island Sioux
294	Prior Lake
295	Rosebud Sioux
296	Upper Sioux
297	Sisseton-Wahpeton Sioux
298	Teton Sioux

000-599, 973 American Indian—Con.

299	Brule Sioux
300	Lower Brule Sioux
301	Sans Arc Sioux
302	Two Kettle Sioux
303	Blackfoot Sioux
304	Oglala Sioux
305	Miniconjou
306	Yanktonai Sioux
307	Yankton Sioux
308	Santee Sioux
309	Sisseton Sioux
310	Mdewakanton Sioux
311	Wahpekute Sioux
312	Wahpeton Sioux
313	Assiniboine
314	Iowa
315	Otoe-Missouria
316	Winnebago
317	Kaw
318	Omaha
319	Ponca
320	Osage
321	Quapaw
322	Crow
323	Hidatsa
324	Mandan
325	Comanche
326	Dakota Sioux
327	Wazhaza Sioux
328	Nebraska Winnebago
329	Wisconsin Winnebago
330	Chippewa
331	Bay Mills Chippewa
332	Sault Ste. Marie Chippewa
333	Saginaw Chippewa
334	Keweenaw
335	Lac Vieux Desert Chippewa
336	Ontonagon
337	Leelanau
338	Minnesota Chippewa
339	Boise Forte
340	Grand Portage
341	Fond Du Lac
342	Leech Lake
343	Mille Lac
344	White Earth
345	Red Lake Chippewa
346	Lake Superior
347	Bad River
348	Lac Courte Oreilles
349	Lac Du Flambeau
350	Red Cliff Chippewa

000-599, 973 American Indian—Con.

351	St. Croix Chippewa
352	Sokoagon Chippewa
353	Turtle Mountain
354	Rocky Boy's Cree
355	Burt Lake Chippewa
356	Burt Lake Band
357	Reserve American Indian 19
358	Reserve American Indian 20
359	Burt Lake Ottawa
360	Blackfoot
361	Cheyenne
362	Northern Cheyenne
363	Southern Cheyenne
364	Arapaho
365	Atsina
366	Menominee
367	Potawatomie
368	Citizen Band Potawatomi
369	Forest County
370	Hannahville
371	Huron Potawatomi
372	Pogagon Potawatomi
373	Prairie Band
374	Wisconsin Potawatomi
375	Ottawa
376	Miami
377	Sac and Fox
378	Peoria
379	Sac and Fox-Mesquakie
380	Kickapoo
381	Shawnee
382	Algonquian
383	Micmac
384	Mailseet
385	Passamaquoddy
386	Pleasant Point Passamaquoddy
387	Indian Township
388	Penobscot
389	Abenaki
390	Wampanoag
391	Nipmuc
392	Narragansett
393	Pequot
394	Mohegan
395	Paugussett
396	Schaghticoke
397	Brotherton
398	Shinnecock
399	Stockbridge
400	Munsee
401	Delaware
402	Sand Hill

000-599, 973 American Indian—Con.

403	Absentee Shawnee
404	Clifton Choctaw
405	Iroquois
406	Seneca
407	Seneca Nation
408	Tonawanda Seneca
409	Seneca-Cayuga
410	Cayuga
411	Onondaga
412	Oneida
413	Mohawk
414	Tuscarora
415	Wyandotte
416	Cherokee
417	Eastern Cherokee
418	Western Cherokee
419	Etowah Cherokee
420	United Keetoowah Band
421	Tuscola
422	Northern Cherokee
423	Eastern Muskogee
424	Agua Caliente
425	Creek
426	Thlopthlocco
427	Yuchi
428	Hitchiti
429	Eastern Creek
430	Principal Creek Indian Nation
431	Poarch Band
432	Lower Muskogee
433	Alabama Coushatta
434	Choctaw
435	Houma
436	Chickasaw
437	Miccosukee
438	Seminole
439	Oklahoma Seminole
440	Florida Seminole
441	Big Cypress
442	Brighton
443	Hollywood Seminole
444	Natchez
445	Matinecock
446	Montauk
447	Poospatuck
448	Setauket
449	Tuckabachee
450	Nanticoke
451	Piscataway
452	Nansemond
453	Chickahominy
454	Pamunkey
455	Mattaponi

000-599, 973 American Indian—Con.

456	Rappahannock
457	Attacapa
458	Biloxi
459	Catawba
460	Chitimacha
461	Coharie
462	Croatan
463	Haliwa
464	Lumbee
465	Moor
466	Powhatan
467	Tunica
468	Wesort
469	Southeastern Indians
470	Cajun
471	Coushatta
472	Reserve American Indian 23
473	Reserve American Indian 24
474	Reserve American Indian 25
475	Reserve American Indian 26
476	Colorado River
477	Duck Valley
478	Fallon
479	Fort Belknap
480	Fort Berthold
481	Fort Hall
482	Fort McDermitt
483	Fort McDowell
484	Cow Creek Umpqua
485	Gila River
486	Grand Ronde
487	Los Coyotes
488	Mission Indians
489	Morongo
490	Reno-Sparks
491	Round Valley
492	Shoalwater
493	Siletz
494	Skull Valley
495	Susanville
496	Table Bluff
497	Wascopum
498	Wind River
499	Winnemucca
500	Yavapai Apache
501	Reserve American Indian 27
502	Gros Ventres
503	Scott Valley
504	Warm Springs
505	Santa Rosa
506	San Juan
507	Red Wood

000-599, 973 American Indian—Con.

508 Salish and Kootenai
 509 Georgetown
 510 Clear Lake
 511 Yakima Cowlitz
 512 Scotts Valley
 513 Cheyenne-Arapaho
 514 Northern Arapaho
 515 Southern Arapaho
 516 Mashpee Wampanoag
 517 Gay Head Wampanoag
 518 Timbi-Sha Shoshone
 519 Juaneno
 520 Oklahoma Choctaw
 521 Oklahoma Modoc
 522 Oklahoma Kiowa
 523 Oklahoma Comanche
 524 Oklahoma Iowa
 525 Canadian Indian
 526 Oklahoma Ponca
 527 Oklahoma Ottawa
 528 Oklahoma Miami
 529 Oklahoma Peoria
 530 Oklahoma Sac and Fox
 531 Oklahoma Kickapoo
 532 Oklahoma Delaware
 533 Caddo
 534 Pawnee
 535 Michigan Ottawa
 536 Indiana Miami
 537 Missouri Sac and Fox
 538 Eastern Shawnee
 539 Cherokee Shawnee
 540 Kialegee
 541 Alabama Quassarte
 542 Malheur Paiute
 543 Wenatchee
 544 Little Shell Chippewa
 545 Illinois
 546 Rampough Mountain
 547 Lenni-Lenape
 548 Amerind White
 549 Amerind Black
 550 Mexican American Indian
 551 Central American Indian
 552 South American Indian
 553 French American Indian
 554 Spanish American Indian
 555 Cherokees of Southeast Alabama
 556 Cherokees of Northeast Alabama
 557 Echota Cherokee
 558 MaChis Lower Creek Indian
 559 MOWA Band of Choctaw

000-599, 973 American Indian—Con.

560 Star Clan of Muskogee Creeks
 561 Eastern Delaware
 562 Cherokee Alabama
 563 Reserve American Indian 36
 564 Reserve American Indian 37
 565 Mexican Indian Cherokee
 566 Eastern Chickahominy
 567 Western Chickahominy
 568 Waccamaw-Siouan
 569 Nausu Waiwash
 570 Pocomoke Acohonock
 571 Susquehanock
 572 Wicomico
 573 Piro
 574 Illinois Miami
 575 Tunica Biloxi
 576-597 American Indian
 598 Tribal response, not elsewhere
 classified
 599 Reserve American Indian 38
 973 American Indian (FOSDIC circle)

600-699, 976-985 Asian or Pacific Islander

600-652, 976, 977, 979-982, 985 Asian

600 Asian Indian
 601 Bangladeshi
 602 Bhutanese
 603 Burmese
 604 Cambodian (Kampuchean)
 605 Chinese
 606 Taiwanese
 607 Formosan
 608 Filipino
 609 Hmong
 610 Indonesian
 611 Japanese
 612 Korean
 613 Laotian
 614 Malayan
 615 Okinawan
 616 Pakistani
 617 Sri Lankan
 618 Thai
 619 Vietnamese
 620 Amerasian
 621 Asian
 622 Asiatic
 623 Eurasian
 624 Mongolian
 625 Oriental

600-652, 976, 977, 979-982, 985 Asian—Con.

626	Whello
627	Yellow
628	Borneo
629	Celebesian
630	Ceram
631	Indo-Chinese
632	Iwo Jiman
633	Javanese
634	Maldivian
635	Nepali
636	Sikkim
637	Singaporean
638	Sumatran
639	Madagascar
640	Reserve Asian 2
641	Reserve Asian 3
642	Reserve Asian 4
643	Reserve Asian 5
644	Reserve Asian 6
645	Reserve Asian 7
646	Reserve Asian 8
647	Reserve Asian 9
648	Reserve Asian 10
649	Reserve Asian 11
650	Reserve Asian 12
651	Reserve Asian 13
652	Reserve Asian 14
976	Chinese (FOSDIC circle)
977	Filipino (FOSDIC circle)
979	Korean (FOSDIC circle)
980	Vietnamese (FOSDIC circle)
981	Japanese (FOSDIC circle)
982	Asian Indian (FOSDIC circle)
985	Other Asian or Pacific Islander (FOSDIC circle)

653-699, 978, 983, 984 Pacific Islander**653-659, 978, 983 Polynesian**

653	Hawaiian
654	Part Hawaiian
655	Samoa
656	Tahitian
657	Tongan
658	Polynesian
659	Tokelauan
978	Hawaiian (FOSDIC circle)
983	Samoa (FOSDIC circle)

660-675, 984 Micronesian

660	Guamanian
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660-675, 984 Micronesian—Con.

661	Mariana Islander
662	Marshallese
663	Palauan
664	Bikinian
665	Carolinian
666	Eniwetok
667	Kosraean
668	Kwajalein
669	Micronesian
670	Ponapean (Pohnpeian)
671	Saipanese
672	Tarawa Islander
673	Tinian
674	Trukese (Chuukese)
675	Yapese
984	Guamanian (FOSDIC circle)

676-680 Melanesian

676	Fijian
677	Melanesian
678	Papua New Guinean
679	Solomon Islander
680	New Hebrides

681-699 Other Pacific Islander

681	Pacific Islander
682	Reserve Pacific Islander 1
683	Reserve Pacific Islander 2
684	Reserve Pacific Islander 3
685	Reserve Pacific Islander 4
686	Reserve Pacific Islander 5
687	Reserve Pacific Islander 6
688	Reserve Pacific Islander 7
689	Reserve Pacific Islander 8
690	Reserve Pacific Islander 9
691	Reserve Pacific Islander 10
692	Reserve Pacific Islander 11
693	Reserve Pacific Islander 12
694	Reserve Pacific Islander 13
695	Reserve Pacific Islander 14
696	Asian or Pacific Islander
697	Reserve Asian or Pacific Islander 1
698	Reserve Asian or Pacific Islander 2
699	Reserve Asian or Pacific Islander 3

700-799, 986, 987-999 Other Race**700-748 Hispanic Origin**

700	Argentinian
701	Bolivian

700-748 Hispanic Origin—Con.

702	Boricua
703	Californio
704	Central American
705	Chicano
706	Chilean
707	Colombian
708	Costa Rican
709	Cuban
710	Dominican
711	Ecuadorian (Ecuadorian)
712	Salvadoran
713-714	Galapagos
715	Guajiro
716	Guatemalan
717	Hispanic
718	Honduran
719	La Raza
720	Latin American
721	Mestizo
722	Mexican
723	Nicaraguan
724	Panamanian
725	Paraguayo
726	Peruvian
727	Puerto Rican
728	Morena
729	South American
730	Spanish
731	Spanish-American
732	Spanish-Mexican
733	Sudamericano
734	Uruguayan
735	Venezuelan
736	Reserve Hispanic 2
737	Reserve Hispanic 3
738	Reserve Hispanic 4
739	Reserve Hispanic 5
740	Reserve Hispanic 6
741	Reserve Hispanic 7
742	Reserve Hispanic 8
743	Reserve Hispanic 9
744	Reserve Hispanic 10
745	Reserve Hispanic 11
746	Reserve Hispanic 12
747	Reserve Hispanic 13
748	Reserve Hispanic 14

749-799, 986, 987-999 Not of Hispanic Origin

749-750	Brava
751	Brazil
752	Brown
753	Bushwacker

749-799, 986, 987-999 Not of Hispanic Origin—Con.

754	Cajun
755	Cape Verdean
756	Chocolate
757	Coe Clan
758	Coffee
759	Cosmopolitan
760	Issues
761	Jackson White
762	Lapp
763	Melungeon
764	Mixed
765	Ramp
766	Tunica
767	Wesort
768	Mulatto
769	Moor
770	Biracial/Interracial
771	Creole
772	Indian
773	Turk
774	Half-Breed
775	Rainbow
776	Octoroon
777	Quadroon
778	Reserve Non-Hispanic 3
779	Reserve Non-Hispanic 4
780	Reserve Non-Hispanic 5
781	Reserve Non-Hispanic 6
782	Reserve Non-Hispanic 7
783	Reserve Non-Hispanic 8
784	Reserve Non-Hispanic 9
785	Reserve Non-Hispanic 10
786	Reserve Non-Hispanic 11
787	Reserve Non-Hispanic 12
788	Reserve Non-Hispanic 13
789	Reserve Non-Hispanic 14
790	Reserve Non-Hispanic 15
791	Reserve Non-Hispanic 16
792	Reserve Non-Hispanic 17
793	Reserve Non-Hispanic 18
794	Reserve Non-Hispanic 19
795	Reserve Non-Hispanic 20
796	Reserve Non-Hispanic 21
797	Reserve Non-Hispanic 22
798	Trinidad
799	Other race, not elsewhere classified
986	Other race (FOSDIC circle)
987-999	Reserve Other race

800-869, 971 White

800	White
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800-869, 971 White—Con.

801	Arab
802	English
803	French
804	German
805	Irish
806	Italian
807	Near Easterner
808	Polish
809	Scottish
810	White and Black
811	White Amerind
812	White Chinese
813	White Formosan/Taiwanese
814	White Filipino
815	White Hawaiian
816	White Korean
817	White Vietnamese
818	White Japanese
819	White Asian Indian
820	White Samoan
821	White Guamanian
822	White Bangladeshi
823	White Burmese
824	White Cambodian (Kampuchean)
825	White Hmong
826	White Indonesian
827	White Laotian
828	White Malayan
829	White Okinawan
830	White Pakistani
831	White Sri Lankan
832	White Thai
833	White Fijian
834	White Palauan
835	White Tahitian
836	White Tongan
837	White Other Asian or Pacific Islander
838	White Eskimo
839	White Aleut
840	Reserve White 3
841	Reserve White 4
842	Reserve White 5
843	Reserve White 6
844	Reserve White 7
845	Reserve White 8
846	Reserve White 9
847	Reserve White 10
848	Reserve White 11
849	Reserve White 12
850	Reserve White 13
851	Reserve White 14
852	Reserve White 15

800-869, 971 White—Con.

853	Reserve White 16
854	Reserve White 17
855	Reserve White 18
856	Reserve White 19
857	Reserve White 20
858	Reserve White 21
859	Reserve White 22
860	Reserve White 23
861	Reserve White 24
862	Reserve White 25
863	Reserve White 26
864	Reserve White 27
865	Reserve White 28
866	Reserve White 29
867	Reserve White 30
868	Reserve White 31
869	White Cherokee
971	White (FOSDIC circle)

870-934, 972 Black or Negro

870	Black
871	African
872	African American
873	Afro-American
874	Nigritia
875	Black and White
876	Black Amerind
877	Black Chinese
878	Black Formosan/Taiwanese
879	Black Filipino
880	Black Hawaiian
881	Black Korean
882	Black Vietnamese
883	Black Japanese
884	Black Asian Indian
885	Black Samoan
886	Black Guamanian
887	Black Bangladeshi
888	Black Burmese
889	Black Cambodian (Kampuchean)
890	Black Hmong
891	Black Indonesian
892	Black Laotian
893	Black Malayan
894	Black Okinawan
895	Black Pakistani
896	Black Sri Lankan
897	Black Thai
898	Black Fijian
899	Black Palauan
900	Black Tahitian
901	Black Tongan

870-934, 972 Black or Negro—Con.

902 Black Other Asian or Pacific Islander
903 Black Eskimo
904 Black Aleut
905 Reserve Black 3
906 Reserve Black 4
907 Reserve Black 5
908 Reserve Black 6
909 Reserve Black 7
910 Reserve Black 8
911 Reserve Black 9
912 Reserve Black 10
913 Reserve Black 11
914 Reserve Black 12
915 Reserve Black 13
916 Reserve Black 14
917 Reserve Black 15
918 Reserve Black 16
919 Reserve Black 17
920 Reserve Black 18
921 Reserve Black 19
922 Reserve Black 20
923 Reserve Black 21
924 Reserve Black 22
925 Reserve Black 23
926 Reserve Black 24
927 Reserve Black 25
928 Reserve Black 26
929 Reserve Black 27
930 Reserve Black 28
931 Reserve Black 29
932 Reserve Black 30
933 Reserve Black 31
934 Black Cherokee
972 Black or Negro (FOSDIC circle)

935-940, 974 Eskimo

935 Eskimo
936 Reserve Eskimo 1
937 Reserve Eskimo 2
938 Reserve Eskimo 3
939 Reserve Eskimo 4
940 Wales
974 Eskimo (FOSDIC circle)

941-970, 975 Aleut

941 Aleut
942 Reserve Aleut 1
943 Reserve Aleut 2
944 Reserve Aleut 3
945 Reserve Aleut 4
946-970 Reserve Aleut 5
975 Aleut (FOSDIC circle)

971-986 FOSDIC Circle Codes

971 See White
972 See Black or Negro
973 See American Indian
974 See Eskimo
975 See Aleut
976 See Asian
977 See Asian
978 See Pacific Islander
979 See Asian
980 See Asian
981 See Asian
982 See Asian
983 See Pacific Islander
984 See Pacific Islander
985 See Asian
986 See Other race

987-999 Reserve Other Race