

1990 SSTF 14

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The files should be cited as follows:

Census of Population and Housing, 1990: Occupation by Industry on  
CD-ROM [machine-readable data files] / prepared by the Bureau of the  
Census. --Washington: The Bureau [producer and distributor], 1994.

The technical documentation should be cited as follows:

Census of Population and Housing, 1990: Occupation by Industry on  
CD-ROM Technical Documentation / prepared by the Bureau of the  
Census. --Washington: The Bureau, 1994.

For additional information concerning the files, contact Data User  
Services Division, Customer Services Branch, Bureau of the Census,  
Washington, DC 20233. Phone: 301-457-4100.

For additional information concerning the technical documentation,  
contact Data User Services Division, Data Access and Use Branch, Bureau  
of the Census, Washington, DC 20233. Phone: 301-457-1214.

## ABSTRACT

The user should note that there are limitations to many of these data. Please refer to the technical documentation provided with the Occupation by Industry on CD-ROM file for a further explanation on the limitations of the data.

## CONTENTS

Alphabetical Index of Industries and Occupations  
Citation  
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Type of File  
Universe Description

## CITATION

Census of Population and Housing, 1990: Occupation by Industry on CD-ROM  
[machine-readable data files] / prepared by the Bureau of the Census.  
--Washington: The Bureau [producer and distributor], 1994.

## TYPE OF FILE

Summary statistics.

## UNIVERSE DESCRIPTION

All employed persons 16 years and over in the United States.

## SUBJECT MATTER DESCRIPTION

The 1990 Census Occupation by Industry File on CD-ROM is based on employment data from the 1990 decennial census. The file contains a listing of 501 occupations, each arranged by 236 industries and a listing of 236 industries, each arranged by 501 occupations.

## GEOGRAPHIC COVERAGE

Totals are provided for the United States, all States and the District of Columbia.

## ALPHABETICAL INDEX OF INDUSTRIES AND OCCUPATIONS

Also included on the CD-ROM is the Alphabetical Index of Industries and Occupations developed primarily for use in classifying a respondent's industry (employer's kind of business) and occupation (employee's kind of work) as reported in the 1990 Census of Population, the Current Population Surveys, and other demographic surveys conducted by the Bureau of the Census. This index lists approximately 21,000 industry and 30,000 occupation titles in alphabetical order. It is a comprehensive list of specific industries and occupations developed over time and continuously updated through review of census and survey questionnaires.

## RELATED PRODUCTS

CPH-R-3, 1990 Census of Population and Housing: Alphabetical Index of Industries and Occupations: 1990. This document lists all the industry and occupation titles, arranged in alphabetical order. The Index is used primarily for coding operations. For further information, contact Labor Force Statistics Branch, Housing and Household Economics Statistics Division, Bureau of the Census, Washington, DC 20233. Phone: (301) 763-8574.

CPH-R-4, 1990 Census of Population and Housing: Classified Index of Industries and Occupations: 1990. This document is a companion to the Alphabetical Index. Industry and occupation titles are arranged by classification code. It presents for each category in the industrial and occupational classification systems, the individual titles that constitute the category. For further information, contact Labor Force Statistics Branch, Housing and Household Economic Statistics Division, Bureau of the Census, Washington, DC 20233. Phone: (301) 763-8574.

## RELATED REFERENCE MATERIALS

1990 Census of 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, Data User Services Division, Bureau of the Census, Washington, DC 20233. Phone: 301-457-4100. FAX: 457-457-4714.

Census '90 Basics. This booklet provides a general overview of the census activity 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).

1990 CPH-R-1A, 1990 Census of Population and Housing Guide, Part A. Text. This provides detailed information about all aspects of the census. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. GPO S/N 003-024-08574-7. Price \$11.

1990 CPH-R-1B, 1990 Census of Population and Housing Guide, Part B, Glossary. This is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. GPO S/N 003-024-08679-4. Price: \$5.50. Part C, Index, provides an index of Summary Tape Files 1-4 and will be available later.

#### RELATED ELECTRONIC MEDIA PRODUCTS

Special Tabulation Program (STP) 30 NOICC-Detailed Occupation gives detailed occupation by detailed industry by class of worker for the United States, each State and the District of Columbia, all metropolitan areas, and all counties; and age by sex by detailed occupation for the United States, each State, the District of Columbia, and all counties. For further information, contact Rose Cowan, Population Division, Bureau of the Census, Washington, DC 20233. Phone: 301-457-2408 or 2386.

#### SOFTWARE

Data retrieval software is on the CD-ROM. It can be accessed by typing GO.

#### TECHNICAL DESCRIPTION

The data files on the CD-ROM are in dBase III+™ format. See the Database Structures Section and the Database Generated Code Lists Section in the Data Dictionary chapter for more information on these files.

#### FILE AVAILABILITY

The data for all geographic entities is available on one CD-ROM. For further information contact Customer Services, Data User Services Division, Bureau of the Census, Washington, DC 20233. Phone: 301-457-4100. Fax: 301-457-4714.

## USER NOTES

User notes supply file purchasers with additional or corrected information which becomes available after the technical documentation or files are prepared. They are issued in a numbered series and automatically mailed to all users who purchase files or technical documentation from the Census Bureau.

Each user note has a cover sheet which should be filed following this page. Technical documentation replacement pages will follow the cover sheet. These pages are to be filed in their proper location and the original pages destroyed. Replacement pages can be readily identified, because they have the user note date on the lower outside portion of each page.

## DATA DICTIONARY

### CONTENTS

Identification Section  
Table (Matrix) Section

### IDENTIFICATION SECTION

Field name	Data dictionary reference name	Field size	Starting position	Data type
Record Codes				
File Identification(1)	FILEID	8	1	A/N
State/US Abbreviation	STUSAB	2	9	A
-----				
AK Alaska	GU Guam	MP Northern Mariana	PW Palau	
AL Alabama	HI Hawaii	Islands	RI Rhode Island	
AR Arkansas	IA Iowa	MS Mississippi	SC South Carolina	
AS American Samoa	ID Idaho	MT Montana	SD South Dakota	
AZ Arizona	IL Illinois	NC North Carolina	TN Tennessee	
CA California	IN Indiana	ND North Dakota	TX Texas	
CO Colorado	KS Kansas	NE Nebraska	US United States	
CT Connecticut	KY Kentucky	NH New Hampshire	UT Utah	
DC District of Columbia	LA Louisiana	NJ New Jersey	VA Virginia	
DE Delaware	MA Massachusetts	NM New Mexico	VI Virgin Islands of the United States	
FL Florida	MD Maryland	NV Nevada	VT Vermont	
FM Federated States of Micronesia	ME Maine	NY New York	WA Washington	
GA Georgia	MH Marshall Islands	OH Ohio	WV West Virginia	
	MI Michigan	OK Oklahoma	WY Wyoming	
	MN Minnesota	OR Oregon		
	MO Missouri	PA Pennsylvania		
		PR Puerto Rico		
-----				
Summary Level(2)	SUMLEV	3	11	N
Geographic Component(3)	GEOCOMP	2	14	N
-----				

- 00 Not a geographic component
- 01 Urban
- 02 Urban-in urbanized area
- 03 Urban-in urbanized area-in urbanized area central place
- 04 Urban-in urbanized area-not in urbanized area central place

- 05 Urban-not in urbanized area
- 06 Urban-not in urbanized area-place [10,000 or more persons]
- 07 Urban-not in urbanized area-place [2,500 to 9,999 persons]
- 08 Rural
- 09 Rural-place [1,000 to 2,499 population, not in an extended city]
- 10 Rural-place [0 to 999 population, not in an extended city]
- 11 Rural-not in place [or rural part of extended city]
- 12 Rural-farm
- 13 Urban portion of extended city
- 14 Rural portion of extended city
- 20 In metropolitan statistical area/consolidated metropolitan statistical area
- 21 In metropolitan statistical area/consolidated metropolitan statistical area-urban
- 22 In metropolitan statistical area/consolidated metropolitan statistical area-rural
- 23 In metropolitan statistical area/consolidated metropolitan statistical area-in metropolitan statistical area/primary metropolitan statistical area central city
- 24 In metropolitan statistical area/consolidated metropolitan statistical area-not in metropolitan statistical area/primary metropolitan statistical area central city
- 25 In metropolitan statistical area/consolidated metropolitan statistical area-not in metropolitan statistical area/primary metropolitan statistical area central city-urban
- 26 In metropolitan statistical area/consolidated metropolitan statistical area-not in metropolitan statistical area/primary metropolitan statistical area central city-urban-in urbanized area
- 27 In metropolitan statistical area/consolidated metropolitan statistical area-not in metropolitan statistical area/primary metropolitan statistical area central city-urban-not in urbanized area
- 28 In metropolitan statistical area/consolidated metropolitan statistical area-not in metropolitan statistical area/primary metropolitan statistical area central city-rural
- 30 Not in metropolitan statistical area/consolidated metropolitan statistical area
- 31 Not in metropolitan statistical area/consolidated metropolitan statistical area-urban
- 32 Not in metropolitan statistical area/consolidated metropolitan statistical area-urban-in urbanized area
- 33 Not in metropolitan statistical area/consolidated metropolitan statistical area-urban-not in urbanized area
- 34 Not in metropolitan statistical area/consolidated metropolitan statistical area-urban-not in urbanized area-place [10,000 or more population]
- 35 Not in metropolitan statistical area/consolidated metropolitan statistical area-urban-not in urbanized area-place [2,500 - 9,999 population]
- 36 Not in metropolitan statistical area/consolidated metropolitan statistical area-rural
- 40 American Indian reservation and trust land [American Indian reservations (AIR codes 0001-4989) including any trust lands]
- 42 Tribal Jurisdiction Statistical Area [Oklahoma only]
- 43 Tribal Designated Statistical Area
- 44 Alaska Native village statistical area [Alaska only]

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Characteristic Iteration(4)	CHARITER	3	16	N
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000 Not a characteristic iteration



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Logical Record Number(5)	LOGRECNU	6	19	N
Logical Record Part Number(6)	LOGRECPN	4	25	N
Total Number of Parts in Record(7)	PARTREC	4	29	N

Geographic Area Codes

Alaska Native Regional Corporation(8)	ANRC	2	33	A/N
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07 Ahtna	28 Bering Straits	49 Chugach	70 Koniag
14 Aleut	35 Bristol Bay	56 Cook Inlet	77 NANA
21 Arctic Slope	42 Calista	63 Doyon	84 Sealaska

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American Indian/Alaska Native Area (Census)(9)	AIANACE	4	35	A/N
American Indian/Alaska Native Area (FIPS)(10)	AIANAFP	5	39	A/N
American Indian/Alaska Native Area Class Code	AIANACC	2	44	A/N

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- D1 Federally recognized American Indian reservation that does not serve as a minor civil division (MCD) equivalent
  - D2 Federally recognized American Indian reservation that also serves as an MCD equivalent
  - D3 American Indian tribal government that holds property in trust "trust land" for a tribe or individual member(s) of the tribe, and the trust land(s) is not associated with a specific American Indian reservation or the associated American Indian reservation is not located in this State
  - D4 State-recognized American Indian reservation that does not serve as an MCD equivalent
  - D5 State-recognized American Indian reservation that also serves as an MCD equivalent
  - D6 Tribal designated statistical area (TDSA); tribal jurisdiction statistical area (TJSA) (TJSAs occur only in Oklahoma)
  - E1 Alaska Native village statistical area (ANVSA) that does not coincide with or approximate an incorporated place or a census designated place (CDP)
  - E2 ANVSA that coincides with or approximates a CDP
  - E6 ANVSA that coincides with or approximates an incorporated place
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American Indian Reservation Trust Land Indicator Code	ARTLI	1	46	A/N
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- 1 American Indian reservation; including Tribal Jurisdiction Statistical Area (TJSA) and Tribal Designated Statistical Area (TDSA)
  - 2 Off-reservation trust land
  - 9 Not an American Indian area

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Block(8)	BLCK	4	47	A/N
Block Group(8)	BLCKGR	1	51	A/N
Census Tract/Block Numbering Area(8)	TRACTBNA	6	52	A/N
Congressional District (101st Congress)(8)	CONGDIS	2	58	A/N

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01-45 The actual congressional district number

- 00 Applies to States whose representative is elected "at large"; i.e., the State has only one representative in the United States House of Representatives
- 98 Applies to areas that have a nonvoting delegate in the United States House of Representatives
- 99 Applies to areas that have no representation in the United States House of Representatives

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Consolidated City (Census)(8)	CONCITCE	1	60	A/N
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B Butte-Silver Bow, Montana	I Indianapolis, Indiana
C Columbus, Georgia	J Jacksonville, Florida
M Milford, Connecticut	N Nashville-Davidson, Tennessee

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Consolidated City (FIPS) (8,10)	CONCITFP	5	61	A/N
Consolidated City Class Code(10)	CONCITCC	2	66	A/N

---

C3 Consolidated city

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Consolidated City Population  
Size Code                      CONCITSC                      2                      68                      A/N

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00 Not in universe	12 2,500-4,999
01 0	13 5,000-9,999
02 1-24	14 10,000-19,999
03 25-99	15 20,000-24,999
04 100-199	16 25,000-49,999
05 200-249	17 50,000-99,999
06 250-299	18 100,000-249,999
07 300-499	19 250,000-499,999
08 500-999	20 500,000-999,999
09 1,000-1,499	21 1,000,000-2,499,999
10 1,500-1,999	22 2,500,000-4,999,999
11 2,000-2,499	23 5,000,000 or more

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Consolidated Metropolitan  
Statistical Area(9)                      CMSA                      2                      70                      A/N  
County(9)                      CNTY                      3                      72                      A/N  
County Population Size Code                      CNTYSC                      2                      75                      A/N

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00 Not in universe	12 2,500-4,999
01 0	13 5,000-9,999
02 1-24	14 10,000-19,999
03 25-99	15 20,000-24,999
04 100-199	16 25,000-49,999
05 200-249	17 50,000-99,999
06 250-299	18 100,000-249,999
07 300-499	19 250,000-499,999
08 500-999	20 500,000-999,999
09 1,000-1,499	21 1,000,000-2,499,999
10 1,500-1,999	22 2,500,000-4,999,999
11 2,000-2,499	23 5,000,000 or more

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County Subdivision (Census)(9)	COUSUBCE	3	77	A/N
County Subdivision (FIPS) (10)	COUSUBFP	5	80	A/N
County Subdivision Class Code	COUSUBCC	2	85	A/N

- 
- C2 Incorporated place that also serves as a minor civil division (MCD) equivalent because, although the place is coextensive with an MCD, the Census Bureau, in agreement with State officials, does not recognize that MCD for presenting census data because the MCD cannot provide governmental services (Ohio only)
  - C5 Incorporated place that also serves as an MCD equivalent because it is not part of an MCD or a county subdivision classified as Z5
  - C7 Incorporated place that also serves as a county equivalent and an MCD equivalent; generally referred to as an "independent city"
  - D2 Federally recognized American Indian reservation that also serves as an MCD equivalent
  - D5 State-recognized American Indian reservation that also serves as an MCD equivalent
  - T1 Governmentally active minor civil division (MCD) that is not coextensive with an incorporated place
  - T5 Governmentally active MCD that is coextensive with an incorporated place
  - Z1 MCD that is governmentally inactive or cannot provide general-purpose governmental services
  - Z3 Unorganized territory identified by the Census Bureau as an MCD equivalent for presenting census data
  - Z5 Census county division (CCD); census subarea (CSA) (Alaska only); census subdistrict (Virgin Islands only)
  - Z7 Incorporated place that the Census Bureau treats as a minor civil division (MCD) equivalent because it is not in any MCD or is coextensive with a legally established but nonfunctioning MCD that the Census Bureau does not recognize for data presentation, AND is located in a State or county whose MCDs cannot provide governmental services (Iowa and Nebraska only)

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County Subdivision Population Size Code	COUSUBSC	2	87	A/N
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00 Not in universe	12 2,500-4,999
01 0	13 5,000-9,999
02 1-24	14 10,000-19,999
03 25-99	15 20,000-24,999
04 100-199	16 25,000-49,999
05 200-249	17 50,000-99,999
06 250-299	18 100,000-249,999
07 300-499	19 250,000-499,999
08 500-999	20 500,000-999,999
09 1,000-1,499	21 1,000,000-2,499,999
10 1,500-1,999	22 2,500,000-4,999,999
11 2,000-2,499	23 5,000,000 or more

Division(8)	DIVIS	1	89	A/N
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0 Not in a division	4 West North Central	7 West South Central
1 New England	5 South Atlantic	8 Mountain
2 Middle Atlantic	6 East South Central	9 Pacific
3 East North Central		

Extended City Indicator(8)	EXTCITIN	1	90	A/N
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1 Extended city	9 Not an extended city
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Internal Use Code(11)	INTUC	15	91	A/N
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Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area(9)

MSACMSA	4	106	A/N
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MSA/CMSA Population Size Code

MSACMSAS	2	110	A/N
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00 Not in universe	12 2,500-4,999
01 0	13 5,000-9,999
02 1-24	14 10,000-19,999
03 25-99	15 20,000-24,999
04 100-199	16 25,000-49,999
05 200-249	17 50,000-99,999
06 250-299	18 100,000-249,999
07 300-499	19 250,000-499,999
08 500-999	20 500,000-999,999
09 1,000-1,499	21 1,000,000-2,499,999
10 1,500-1,999	22 2,500,000-4,999,999
11 2,000-2,499	23 5,000,000 or more

Place (Census)(9)	PLACECE	4	112	A/N
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Place (FIPS)(10)	PLACEFP	5	116	A/N
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Place Class Code	PLACECC	2	121	A/N
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C1 Incorporated place that is governmentally active, is not related to an Alaska Native village statistical area (ANVSA), and does not serve as a minor civil division (MCD) equivalent

- C2 Incorporated place that also serves as a minor civil division (MCD) equivalent because, although the place is coextensive with an MCD, the Census Bureau, in agreement with State officials, does not recognize that MCD for presenting census data because the MCD cannot provide governmental services (Iowa and Ohio only)
- C5 Incorporated place that also serves as an MCD equivalent because it is not part of an MCD
- C6 Incorporated place that coincides with or approximates an ANVSA
- C7 Incorporated place that also serves as a county equivalent; generally referred to as an "independent city"
- C8 The portion ("remainder") of a consolidated city that excludes the incorporated place(s) within that jurisdiction
- C9 Incorporated place whose government is operationally inactive and is not included in any other C subclass
- M2 Military or Coast Guard installation (or part of an installation) that serves as a census designated place (CDP)
- U1 CDP with a name that is commonly recognized for the populated area
- U2 CDP with a name that is not commonly recognized for the populated area (e.g., a combination of the names of two or three commonly recognized communities, or a name that identifies the location of the CDP in relation to an adjacent incorporated place)
- U9 CDP that coincides with or approximates an ANVSA.

Note: In Ohio, a multi-county place that has a different MCD relationship in each county is assigned only a single class code of C1, C2, or C5.

Place Description Code	PLACEDC	1	123	A/N
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- 1 Incorporated central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA), but not a central place of an urbanized area (UA)
- 2 Incorporated central place of an urbanized area (UA), but not a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- 3 Incorporated central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) and a central place of an urbanized area (UA)
- 4 Consolidated city or an incorporated place that is not a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) and not a central place of an urbanized area (UA)
- 5 Incorporated place, which is the central place of an urbanized area (UA), but only part of which is the central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- 6 Incorporated place, which is not a central place of an urbanized area (UA), but part of which is the central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- A Census designated place (CDP) that is a central place of an urbanized area (UA), but not a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- B Census designated place (CDP) that is a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA), but not a central place of an urbanized area (UA)
- C Census designated place (CDP) that is a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) and a central place of an urbanized area (UA)
- D Census designated place (CDP) that is in a 1980 or special census urbanized area (UA) and is not a central city or a central place; these CDP's must have a 1990 population of at least 300 in Hawaii and the Virgin Islands of the United States, 1,000 in Puerto Rico, and 2,500 elsewhere
- E Census designated place (CDP) not classified elsewhere; these CDP's must meet the following minimum population requirements:

-- 300 in Hawaii and the Virgin Islands of the United States

- 25 in Alaska
- 1,000 in all other States and Puerto Rico

- F Zona urbana that is a central place of an urbanized area (UA) in Puerto Rico, but not a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- G Zona urbana that is a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) in Puerto Rico, but not a central place of an urbanized area (UA)
- H Zona urbana that is a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) and a central place of an urbanized area (UA)
- I Zona urbana in Puerto Rico that is not a central city or a central place
- J Census designated place that is the capital of an outlying area
- L Census designated place (CDP) entirely within an American Indian reservation and entirely outside of a 1980 or special census urbanized area (UA); these CDP's must have a 1990 population of at least 25 in Alaska and 250 elsewhere

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 Place Population Size Code      PLACESC                      2                      124                      A/N  
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00	Not in universe	12	2,500-4,999
01	0	13	5,000-9,999
02	1-24	14	10,000-19,999
03	25-99	15	20,000-24,999
04	100-199	16	25,000-49,999
05	200-249	17	50,000-99,999
06	250-299	18	100,000-249,999
07	300-499	19	250,000-499,999
08	500-999	20	500,000-999,999
09	1,000-1,499	21	1,000,000-2,499,999
10	1,500-1,999	22	2,500,000-4,999,999
11	2,000-2,499	23	5,000,000 or more

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 Primary Metropolitan Statis-  
 tical Area(9)                      PMSA                      4                      126                      A/N  
 Region(8)                              REG                        1                      130                      A/N  
 -----

1 Northeast                      2 Midwest                      3 South                      4 West

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 State (Census)(8)                      STATECE                      2                      131                      A/N  
 -----

01 Northern Mariana Islands	15 Rhode Island	47 Kansas	72 Louisiana
	16 Connecticut	51 Delaware	73 Oklahoma

02 Palau	21 New York	52 Maryland	74 Texas
03 American Samoa	22 New Jersey	53 District of Columbia	81 Montana
04 Guam	23 Pennsylvania	54 Virginia	82 Idaho
06 Puerto Rico	31 Ohio	55 West Virginia	83 Wyoming
07 Virgin Islands of the United States	32 Indiana	56 North Carolina	84 Colorado
09 Federated States of Micronesia and Marshall Islands	33 Illinois	57 South Carolina	85 New Mexico
11 Maine	34 Michigan	58 Georgia	86 Arizona
12 New Hampshire	35 Wisconsin	59 Florida	87 Utah
13 Vermont	41 Minnesota	61 Kentucky	88 Nevada
14 Massachusetts	42 Iowa	62 Tennessee	91 Washington
	43 Missouri	63 Alabama	92 Oregon
	44 North Dakota	64 Mississippi	93 California
	45 South Dakota	71 Arkansas	94 Alaska
	46 Nebraska		95 Hawaii

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State (FIPS)(8)	STATEFP	2	133	A/N
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01 Alabama	19 Iowa	35 New Mexico	53 Washington
02 Alaska	20 Kansas	36 New York	54 West Virginia
04 Arizona	21 Kentucky	37 North Carolina	55 Wisconsin
05 Arkansas	22 Louisiana	38 North Dakota	56 Wyoming
06 California	23 Maine	39 Ohio	60 American Samoa
08 Colorado	24 Maryland	40 Oklahoma	64 Federated States of Micronesia
09 Connecticut	25 Massachusetts	41 Oregon	66 Guam
10 Delaware	26 Michigan	42 Pennsylvania	68 Marshall Islands
11 District of Columbia	27 Minnesota	44 Rhode Island	69 Northern Mariana Islands
12 Florida	28 Mississippi	45 South Carolina	70 Palau
13 Georgia	29 Missouri	46 South Dakota	72 Puerto Rico
15 Hawaii	30 Montana	47 Tennessee	78 Virgin Islands of the United States
16 Idaho	31 Nebraska	48 Texas	
17 Illinois	32 Nevada	49 Utah	
18 Indiana	33 New Hampshire	50 Vermont	
	34 New Jersey	51 Virginia	

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Urban/Rural(8)	URBANRUR	1	135	A/N
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1 Urban	2 Rural
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Urbanized Area(9)	URBAREA	4	136	A/N
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Urbanized Area Population Size Code	UASC	2	140	A/N
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00 Not in universe	12 2,500-4,999
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01 0	13 5,000-9,999
02 1-24	14 10,000-19,999
03 25-99	15 20,000-24,999
04 100-199	16 25,000-49,999
05 200-249	17 50,000-99,999
06 250-299	18 100,000-249,999
07 300-499	19 250,000-499,999
08 500-999	20 500,000-999,999
09 1,000-1,499	21 1,000,000-2,499,999
10 1,500-1,999	22 2,500,000-4,999,999
11 2,000-2,499	23 5,000,000 or more

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Special Area Code (1)	SAC1	5	142	A/N
Special Area Code (2)	SAC2	5	147	A/N
Special Area Code (3)	SAC3	4	152	A/N
Special Area Code (4)	SAC4	4	156	A/N
Special Area Code (5)	SAC5	3	160	A/N
Special Area Code (6)	SAC6	3	163	A/N
Special Area Code (7)	SAC7	2	166	A/N
Special Area Code (8)	SAC8	2	168	A/N
Special Area Code (9)	SAC9	1	170	A/N
Special Area Code (10)	SAC10	1	171	A/N

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Area Characteristics

Area (land)(12)	AREALAND	10	172	A/N
Area (water)(13)	AREAWAT	10	182	A/N
Area Name/PSAD Term/ Part Indicator 14	ANPSADPI	66	192	A/N
Functional Status Code	FUNCSTAT	1	258	A/N

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- A Active governmental unit, except American Indian reservations and Alaska Native village statistical areas. An active governmental unit has the legal capacity to have officers, to raise revenue, and to conduct governmental activities under State laws, and currently is doing so.
- B Functioning governmental unit providing no substantive governmental services.--These areas may be coextensive with and administered by officials of another governmental unit (such as towns in Connecticut that are coextensive with cities), or the number of officials and/or the functions they perform are so minimal and/or vestigial that the Census Bureau does not recognize them as governmental units for census purposes (such as townships in Iowa).
- F False entity.--In order to maintain complete coverage of every State at the county level and of every county at the county subdivision level, we create false entities at these levels for any place that is independent of a

county or independent of a minor civil division (MCD). This code also is used for place records that represent the remainder of a consolidated city or the remainder of a county subdivision. I Inactive governmental unit.--An inactive governmental unit has the legal capacity to be active, but currently has no legal officers, raises no revenues, and conducts no activities.

N Nonfunctioning governmental unit. A nonfunctioning governmental unit has legally established boundaries, but has no legal capacity to conduct governmental activity.

R An American Indian reservation, an American Indian tribe whose name is associated with trust lands, or an Alaska Native village statistical area.

S Statistical entity, except Alaska Native village statistical areas and tribal jurisdiction statistical areas. A statistical entity has no governmental status and is defined by or in cooperation with the Census Bureau or other Federal agency. This category includes census regions, census divisions, census county divisions (CCDs), census designated places (CDPs), metropolitan areas (MSA/CMSA/PMSAs), urbanized areas (UAs), unorganized territories (UTs), tribal designated statistical areas (TDSAs), census areas and census subareas in Alaska, and comunidades and zonas urbanas in Puerto Rico.

T Tribal jurisdiction statistical area. A tribal jurisdiction statistical area (TJSA) is not a legally defined governmental unit, but is recognized as a statistical area for the 1990 census. These areas exist only in the State of Oklahoma and were not recognized separately in 1980.

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 Geographic Change User Note

Indicator	GCUNI	1	259	A/N
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0	No geographic change note for the area within the summary level			
1	See User Notes for a geographic change note			
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 Housing Unit Count (100%)

(15)	HU100	9	260	A/N
Internal Point (latitude)				
(16)	INTPTLAT	9	269	A/N
Internal Point (longitude)				
(17)	INTPTLNG	10	278	A/N
Part Flag	PARTFLAG	1	288	A/N
-----				

0 Not a part

1 Part

-----  
 Political/Statistical Area

Description Code	PSADC	2	289	A/N
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01 State or State equivalent - no status is appended to the name of the entity in census publications and related data products.

04 Borough - county equivalent in Alaska; "Borough" is appended to the name of the entity in census publications and related data products.

05 Census area - county equivalent in Alaska; "Census Area" is appended to the name of the entity in census publications and related data products.

06 County - "County" is appended to the name of the entity in census publications and related data products.

- 07 District county equivalent in American Samoa; "District" is appended to the name of the entity in census publications and related data products.
- 08 Independent city - county equivalent in Maryland, Missouri, and Virginia; "city" is appended to the name of the entity in census publications and related data products.
- 09 Independent city - county equivalent in Nevada; no status is appended to the name of the entity in census publications and related data products.
- 10 Island - county equivalent in Virgin Islands of the United States; "Island" is appended to the name of the entity in census publications and related data products.
- 11 Island county equivalent in American Samoa; no status is appended to the name of the entity in census publications and related data products.
- 12 Municipality county equivalent in Northern Mariana Islands; "Municipality" is appended to the name of the entity in census publications and related data products.
- 13 Municipio - county equivalent in Puerto Rico; "Municipio" is appended to the name of the entity in census publications and related data products.
- 14 (none) - county equivalent; used at county level for the District of Columbia and Yellowstone National Park (Montana). No status is appended to the name of the entity in census publications and related data products.
- 15 Parish - county equivalent in Louisiana; "Parish" is appended to the name of the entity in census publications and related data products.
- 16 State county equivalent in Palau; "State" is appended to the name of the entity in census publications and related data products.
- 19 American Indian reservation - minor civil division (MCD) in Maine and New York; "Reservation" is appended to the name of the entity in census publications and related data products.
- 20 Barrio - minor civil division (MCD) in Puerto Rico; "barrio" is appended to the name of the entity in census publications and related data products.
- 21 Borough - minor civil division (MCD) in New York; MCD equivalent in New Jersey and Pennsylvania; "borough" is appended to the name of the entity in census publications and related data products.
- 22 Census county division (CCD) - minor civil division (MCD) equivalent in  
21 States; "division" is appended to the name of the entity in census publications and related data products.
- 23 Census subarea - minor civil division (MCD) equivalent in Alaska; "census subarea" is appended to the name of the entity in census publications and related data products.
- 24 Census subdistrict - minor civil division (MCD) equivalent in the Virgin Islands of the United States; "subdistrict" is appended to the name of the entity in census publications and related data products.
- 25 City - minor civil division (MCD) equivalent in 20 States and the District of Columbia; "city" is appended to the name of the entity in census publications and related data products.
- 26 County minor civil division (MCD) of a district in American Samoa; "county" is appended to the name of the entity in census publications and related data products.
- 27 District (magisterial, road) - minor civil division (MCD) in Pennsylvania, Virginia, and West Virginia; "district" is appended to the name of the entity in census publications and related data products.
- 28 District (assessment, election, magisterial, supervisors', or parish governing authority) - minor civil division (MCD) in Louisiana, Maryland, Mississippi, and West Virginia; no status is appended to the name of the entity in census publications and related data products.
- 29 Election precinct - minor civil division (MCD) in Illinois and Nebraska; "precinct" is appended to the name of the entity in census publications and related data products.
- 30 Election precinct - minor civil division (MCD) in Illinois and Nebraska; no status is appended to the name of the entity in census publications and related data products.

- 31 Gore - minor civil division (MCD) in Maine and Vermont; "gore" is appended to the name of the entity in census publications and related data products.
- 32 Grant - minor civil division (MCD) in New Hampshire and Vermont; "grant" is appended to the name of the entity in census publications and related data products.
- 33 Independent city - minor civil division (MCD) equivalent in Maryland, Missouri, and Virginia; "city" is appended to the name of the entity in census publications and related data products.
- 34 Not used.
- 35 Island minor civil division (MCD) in American Samoa; no status is appended to the name of the entity in census publications and related data products.
- 36 Location - minor civil division (MCD) in New Hampshire; "location" is appended to the name of the entity in census publications and related data products.
- 37 Municipality minor civil division (MCD) in Palau; "municipality" is appended to the name of the entity in census publications and related data products.
- 38 (none) - minor civil division (MCD) equivalent Arlington County, Virginia; no status is appended to the name of the entity in census publications and related data products.
- 39 Plantation - minor civil division (MCD) in Maine; "plantation" is appended to the name of the entity in census publications and related data products.
- 40 Plantation - minor civil division (MCD) in Maine; no status is appended to the name of the entity in census publications and related data products.
- 41 Barrio-pueblo - minor civil division (MCD) in Puerto Rico; "barrio pueblo" is appended to the name of the entity in census publications and related data products.
- 42 Purchase - minor civil division (MCD) in New Hampshire; "purchase" is appended to the name of the entity in census publications and related data products.
- 43 Town - minor civil division (MCD) in 8 States; MCD equivalent in New Jersey, Pennsylvania, and South Dakota; "town" is appended to the name of the entity in census publications and related data products.
- 44 Township - minor civil division (MCD) in 16 States; "township" is appended to the name of the entity in census publications and related data products.
- 45 Township - minor civil division (MCD) in Kansas, Nebraska, and North Carolina; no status is appended to the name of the entity in census publications and related data products.
- 46 Unorganized territory - minor civil division (MCD) in 9 States; "unorg." is appended to the name of the entity in census publications and related data products.
- 47 Village - minor civil division (MCD) equivalent in New Jersey, Ohio, South Dakota, and Wisconsin; "village" is appended to the name of the entity in census publications and related data products.
- 48 State minor civil division (MCD) in Palau; "state" is appended to the name of the entity in census publications and related data products.
- 49 Charter township minor civil division (MCD) in Michigan; "charter township" is appended to the name of the entity in Census Bureau publications and other data products.
- 51 Subbarrio - sub-minor civil division (sub-MCD) in Puerto Rico; "subbarrio" is appended to the name of the entity in census publications and related data products.
- 55 Comunidad - place (census designated place) in Puerto Rico; "comunidad" is appended to the name of the entity in census publications and related data products.
- 56 Borough - place in Connecticut, New Jersey, and Pennsylvania; "borough" is appended to the name of the entity in census publications and related data products.
- 57 Census designated place - place; "CDP" is appended to the name of the entity in census publications and related data products.
- 58 City - place; "city" is appended to the name of the entity in census publications and related data products.

59 City - place; used for some cities that have a unique description, no description, or a description included with their name, as follows:

Anaconda-Deer Lodge County (Montana): incorporated municipality;  
Butte-Silver Bow (remainder) (Montana): (none);  
Carson City, Nevada: (none);  
Columbus city (remainder) (Georgia): (none);  
Indianapolis city (remainder) (Indiana): (none);  
Jacksonville city (remainder) (Florida): (none);  
Lexington-Fayette (Kentucky): Urban County Government;  
Lynchburg-Moore County (Tennessee): (none);  
Milford city (remainder) (Connecticut): (none);  
Nashville-Davidson (remainder) (Tennessee): "Metropolitan Government of Nashville and Davidson County";

No status is appended to the name of the entity in census publications and related data products.

- 60 Town - place; place in 30 States and the Virgin Islands of the United States; "town" is appended to the name of the entity in census publications and related data products.
- 61 Village - place; place in 19 States; "village" is appended to the name of the entity in census publications and related data products.
- 62 Zona urbana - place (census designated place) in Puerto Rico; "zona urbana" is appended to the name of the entity in census publications and related data products.
- 65 Consolidated city in Connecticut, Florida, Georgia, and Indiana - "city" is appended to the name of the entity in census publications and related data products.
- 66 Consolidated city - used for some consolidated cities that have unique descriptions or no descriptions, as follows:

Butte-Silver Bow (Montana): (none);  
Nashville-Davidson (Tennessee): "Metropolitan Government of Nashville and Davidson County";

No status is appended to the name of the entity in census publications and related data products.

- 68 Census region - no status is appended to the name of the entity in census publications and related data products.
- 69 Census division - no status is appended to the name of the entity in census publications and related data products.
- 71 Consolidated metropolitan statistical area (CMSA) - "CMSA" is appended to the name of the entity in census publications and related data products.
- 72 Metropolitan statistical area (MSA) - "MSA" is appended to the name of the entity in census publications and related data products.
- 73 Primary metropolitan statistical area (PMSA) - "PMSA" is appended to the name of the entity in census publications and related data products.
- 75 Urbanized area (UA) - no status is appended to the name of the entity in census publications and related data products.
- 77 Alaska Native Regional Corporation - no status is appended to the name of the entity in census publications and related data products.

- 79 Alaska Native village statistical area - no status is appended to the name of the entity in census publications and related data products.
- 80 Tribal designated statistical area - American Indian reservation equivalent for non-land-based tribes outside of Oklahoma; "TDSA" is appended to the name of the entity in census publications and related data products.
- 81 Colony - American Indian reservation; "Colony" is appended to the name of the entity in census publications and related data products.
- 82 Community - American Indian reservation; "Community" is appended to the name of the entity in census publications and related data products.
- 83 Joint area - American Indian reservation equivalent; "joint area" is appended to the name of the entity in census publications and related data products.
- 84 Pueblo - American Indian reservation; "Pueblo" is appended to the name of the entity in census publications and related data products.
- 85 Rancheria - American Indian reservation; "Rancheria" is appended to the name of the entity in census publications and related data products.
- 86 Reservation - American Indian reservation; "Reservation" is appended to the name of the entity in census publications and related data products.
- 87 Reserve - American Indian reservation; "Reserve" is appended to the name of the entity in census publications and related data products.
- 88 Tribal jurisdiction statistical area - American Indian reservation equivalent representing historic tribal areas in Oklahoma; "TJSA" is appended to the name of the entity in census publications and related data products.
- 89 Trust lands - American Indian reservation equivalent; no status is appended to the name of the entity in census publications and related data products.
- 90 (none) - American Indian reservation; no status is appended to the name of the entity in census publications and related data products.

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Population Count (100%)(18)	POP100	9	291	A/N
Special Flag	SPFLAG	1	300	A/N

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**FOOTNOTES**

1. A unique identifier for each file series. Dress rehearsal files have a "D" in the character following the last character in the file identification code for the equivalent 1990 decennial census file; for example, PL94171D is the identifier for the dress rehearsal file for the P.L. 94-171 data. File identification code for the P.L. 94-171 file is PL94171. File identification codes for summary tape files are STFnn where nn = file number; for example, STF1A is the identification for Summary Tape File 1A. File identification codes for subject summary tape files are SSTFnn where nn = the number of the subject report. File identification codes for special project files are identified by SPmmm where mmm = a three digit special project number. See How to Use This File for further information.
2. Identifies the geographic level for which the data matrices on the summary tape file have been summarized. The summary level sequence chart describes the hierarchical arrangement of the specified geographic areas with other geographic areas, if any. The summary level must be used in combination with the geographic area codes to identify a specific geographic area (for example, summary level 050 and a specific county

code must be used together to locate the data for a particular county). See How to Use This File for further information.

3. Indicates an iteration (repetition), for the specified summary level, of the data matrices on the summary tape file for the geographic components listed in the Geographic Component field. See How To Use This File for further information.
4. Indicates an iteration (repetition), for the specified summary level, of the data matrices on the summary tape file for a population or housing characteristic. Only matrices containing a "B" in the prefix have characteristic iterations. See How to Use This File for further information.
5. The logical record is the complete record [identification and set of tables (matrices)] for a geographic entity defined by the summary level, but exclusive of the characteristic iteration. A logical record may have one or more parts (or segments). Each logical record has an assigned sequential integer number within the file. See How to Use This File for further information.
6. Within the logical record, each part is identified uniquely in terms of its sequence. See How to Use This File for further information.
7. This field identifies how many parts (or segments) comprise the entire logical record. See How to Use This File for further information.
8. See appendix A, Area Classifications, for definition of this field if it is applicable to this file.
9. See the publication, Geographic Identification Code Scheme, for codes in this field and related terminology if it is applicable to this file. See appendix A, Area Classifications, for definition of this field if it is applicable to this file.
10. See the publication, Geographic Identification Code Scheme, for FIPS 55 codes in this field and related terminology if it is applicable to this file. See appendix A, Area Classifications, for definition of this field if it is applicable to this file.
11. Codes in unspecified arrangement for Census Bureau use.
12. Land area measurement in thousandths (.001) of a square kilometer. The accuracy of the area measurement is limited by the inaccuracy inherent in 1) the mapping of the various boundary features in the TIGER File and 2) rounding affecting the last digit in all operations that compute and/or sum the area measurements. Land area includes intermittent water and glaciers, which appear on census maps and in the TIGER File as hydrographic features. An area of .0005 square kilometer is rounded to .001; an area smaller than .0005 is rounded to .000. The decimal point is implied on the file. Square miles can be derived by dividing square kilometers by 2.59. See appendix A, Area Classifications, for definition of this field if it is applicable to this file.
13. Water area measurement in thousandths (.001) of a square kilometer. Water area is excluded from census blocks by definition, so the water area for a block always will be zero. The accuracy of the area

measurement is limited by the inaccuracy inherent in 1) the mapping of the various boundary features in the TIGER File and 2) rounding affecting the last digit in all operations that compute and/or sum the area measurements. Water area excludes intermittent water and glaciers, which are treated as land even though they appear on census maps and in the TIGER File as hydrographic features. An area of .0005 square kilometer is rounded to .001; an area smaller than .0005 is rounded to .000. The decimal point is implied on the file. Square miles can be derived by dividing square kilometers by 2.59. See appendix A, Area Classifications, for definition of this field if it is applicable to this file.

14. Name of the lowest-level entity represented by the summary level. In addition to the name of the entity, the name field contains the political/statistical area description (PSAD) when appropriate, and sometimes contains the State abbreviation.

For legal entities, the name is the one reported to the Bureau of the Census in the Boundary and Annexation Survey and by other appropriate sources; for statistical entities, the name is determined by the Office of Management and Budget for metropolitan areas and, for other areas, the name is determined by the Bureau of the Census, usually in cooperation with local officials.

When the summary level represents only part of the area specified in the name, the name usually will have "(pt.)" appended to the name/code terminology to designate that this entry for the entity represents only a part of the total entity.

15. The total number of housing units enumerated in the specified summary level as determined in the 100-percent processing.
16. Latitude in degrees, to six decimal places, of a point within the geographic area represented by the summary level. The decimal point is implied on the file. The character immediately preceding the first digit of the latitude of an internal point identifies the direction (hemisphere): a plus sign (+) indicates the Northern Hemisphere; a minus sign (-) indicates the Southern Hemisphere. See appendix A, Area Classifications, for definition of this field if it is applicable to this file.
17. Longitude in degrees, to six decimal places, of a point with the geographic area represented by the summary level. The decimal point is implied on the file. The character immediately preceding the first digit of the longitude of an internal point identifies the direction (hemisphere): a plus sign (+) indicates the Eastern Hemisphere; a minus sign (-) indicates the Western Hemisphere. A point on the 180th meridian is assigned to the Western Hemisphere (-180000000). See appendix A, Area Classifications, for definition of this field if it is applicable to this file.
18. The total number of persons enumerated in the specified summary level as determined in the 100-percent processing.



## DATABASE - GENERATED CODE LISTS SECTION

### Occupation Codes

The following file contains a list of occupations and a computer assigned occupation code between one and 501

Occupation	dBASE Code
Legislators (003)	001
Chief executives and general administrators, public administration (004)	002
Administrators and officials, public administration (005)	003
Administrators, protective services (006)	004
Financial managers (007)	005
Personnel and labor relations managers (008)	006
Purchasing managers (009)	007
Managers, marketing, advertising, and public relations (013)	008
Administrators, education and related fields (014)	009
Managers, medicine and health (015)	010
Postmasters and mail superintendents (016)	011
Managers, food serving and lodging establishments (017)	012
Managers, properties and real estate (018)	013
Funeral directors (019)	014
Managers, service organizations, n.e.c. (021)	015
Managers and administrators, n.e.c. (022)	016
Accountants and auditors (023)	017
Underwriters (024)	018
Other financial officers (025)	019
Management analysts (026)	020
Personnel, training, and labor relations specialists (027)	021
Purchasing agents and buyers, farm products (028)	022
Buyers, wholesale and retail trade, except farm products (029)	023
Purchasing agents and buyers, n.e.c. (033)	024
Business and promotion agents (034)	025
Construction inspectors (035)	026
Inspectors and compliance officers, except construction (036)	027
Management related occupations, n.e.c. (037)	028
Architects (043)	029
Aerospace engineers (044)	030
Metallurgical and materials engineers (045)	031
Mining engineers (046)	032
Petroleum engineers (047)	033
Chemical engineers (048)	034
Nuclear engineers (049)	035

Civil engineers (053)	036
Agricultural engineers (054)	037
Electrical and electronic engineers (055)	038
Industrial engineers (056)	039
Mechanical engineers (057)	040
Marine and naval architects (058)	041
Engineers, n.e.c. (059)	042
Surveyors and mapping scientists (063)	043
Computer systems analysts and scientists (064)	044
Operations and systems researchers and analysts (065)	045
Actuaries (066)	046
Statisticians (067)	047
Mathematical scientists, n.e.c. (068)	048
Physicists and astronomers (069)	049
Chemists, except biochemists (073)	050
Atmospheric and space scientists (074)	051
Geologists and geodesists (075)	052
Physical scientists, n.e.c. (076)	053
Agricultural and food scientists (077)	054
Biological and life scientists (078)	055
Forestry and conservation scientists (079)	056
Medical scientists (083)	057
Physicians (084)	058
Dentists (085)	059
Veterinarians (086)	060
Optometrists (087)	061
Podiatrists (088)	062
Health diagnosing practitioners, n.e.c. (089)	063
Registered nurses (095)	064
Pharmacists (096)	065
Dietitians (097)	066
Respiratory therapists (098)	067
Occupational therapists (099)	068
Physical therapists (103)	069
Speech therapists (104)	070
Therapists, n.e.c. (105)	071
Physicians' assistants (106)	072
Earth, environmental, and marine science teachers (113)	073
Biological science teachers (114)	074
Chemistry teachers (115)	075
Physics teachers (116)	076
Natural science teachers, n.e.c. (117)	077
Psychology teachers (118)	078
Economics teachers (119)	079
History teachers (123)	080
Political science teachers (124)	081

Sociology teachers (125)	082
Social science teachers, n.e.c. (126)	083
Engineering teachers (127)	084
Mathematical science teachers (128)	085
Computer science teachers (129)	086
Medical science teachers (133)	087
Health specialties teachers (134)	088
Business, commerce, and marketing teachers (135)	089
Agriculture and forestry teachers (136)	090
Art, drama, and music teachers (137)	091
Physical education teachers (138)	092
Education teachers (139)	093
English teachers (143)	094
Foreign language teachers (144)	095
Law teachers (145)	096
Social work teachers (146)	097
Theology teachers (147)	098
Trade and industrial teachers (148)	099
Home economics teachers (149)	100
Teachers, postsecondary, n.e.c. (153)	101
Postsecondary teachers, subject not specified (154)	102
Teachers, prekindergarten and kindergarten (155)	103
Teachers, elementary school (156)	104
Teachers, secondary school (157)	105
Teachers, special education (158)	106
Teachers, n.e.c. (159)	107
Counselors, Educational and Vocational (163)	108
Librarians (164)	109
Archivists and curators (165)	110
Economists (166)	111
Psychologists (167)	112
Sociologists (168)	113
Social scientists, n.e.c. (169)	114
Urban planners (173)	115
Social workers (174)	116
Recreation workers (175)	117
Clergy (176)	118
Religious workers, n.e.c. (177)	119
Lawyers (178)	120
Judges (179)	121
Authors (183)	122
Technical writers (184)	123
Designers (185)	124
Musicians and composers (186)	125
Actors and directors (187)	126
Painters, sculptors, craft-artists, and artist	

printmakers (188)	127
Photographers (189)	128
Dancers (193)	129
Artists, performers, and related workers, n.e.c. (194)	130
Editors and reporters (195)	131
Public relations specialists (197)	132
Announcers (198)	133
Athletes (199)	134
Clinical laboratory technologists and technicians (203)	135
Dental hygienists (204)	136
Health record technologists and technicians (205)	137
Radiologic technicians (206)	138
Licensed practical nurses (207)	139
Health technologists and technicians, n.e.c. (208)	140
Electrical and electronic technicians (213)	141
Industrial engineering technicians (214)	142
Mechanical engineering technicians (215)	143
Engineering technicians, n.e.c. (216)	144
Drafting occupations (217)	145
Surveying and mapping technicians (218)	146
Biological technicians (223)	147
Chemical technicians (224)	148
Science technicians, n.e.c. (225)	149
Airplane pilots and navigators (226)	150
Air traffic controllers (227)	151
Broadcast equipment operators (228)	152
Computer programmers (229)	153
Tool programmers, numerical control (233)	154
Legal assistants (234)	155
Technicians, n.e.c. (235)	156
Supervisors and proprietors, sales occupations (243)	157
Insurance sales occupations (253)	158
Real estate sales occupations (254)	159
Securities and financial services sales occupations (255)	160
Advertising and related sales occupations (256)	161
Sales occupations, other business services (257)	162
Sales engineers (258)	163
Sales representatives, mining, manufacturing, and wholesale (259)	164
Sales workers, motor vehicles and boats (263)	165
Sales workers, apparel (264)	166
Sales workers, shoes (265)	167
Sales workers, furniture and home furnishings (266)	168
Sales workers, radio, TV, hi-fi, and appliances (267)	169
Sales workers, hardware and building supplies (268)	170
Sales workers, parts (269)	171

Sales workers, other commodities (274)	172
Sales counter clerks (275)	173
Cashiers (276)	174
Street and door-to-door sales workers (277)	175
News vendors (278)	176
Demonstrators, promoters and models, sales (283)	177
Auctioneers (284)	178
Sales support occupations, n.e.c. (285)	179
Supervisors, general office (303)	180
Supervisors, computer equipment operators (304)	181
Supervisors, financial records processing (305)	182
Chief communications operators (306)	183
Supervisors, distribution, scheduling, and adjusting clerks (307)	184
Computer operators (308)	185
Peripheral equipment operators (309)	186
Secretaries (313)	187
Stenographers (314)	188
Typists (315)	189
Interviewers (316)	190
Hotel clerks (317)	191
Transportation ticket and reservation agents (318)	192
Receptionists (319)	193
Information clerks, n.e.c. (323)	194
Classified-ad clerks (325)	195
Correspondence clerks (326)	196
Order clerks (327)	197
Personnel clerks, except payroll and timekeeping (328)	198
Library clerks (329)	199
File clerks (335)	200
Records clerks (336)	201
Bookkeepers, accounting, and auditing clerks (337)	202
Payroll and timekeeping clerks (338)	203
Billing clerks (339)	204
Cost and rate clerks (343)	205
Billing, posting, and calculating machine operators (344)	206
Duplicating machine operators (345)	207
Mail preparing and paper handling machine operators (346)	208
Office machine operators, n.e.c. (347)	209
Telephone operators (348)	210
Communications equipment operators, n.e.c. (353)	211
Postal clerks, except mail carriers (354)	212
Mail carriers, postal service (355)	213
Mail clerks, except postal service (356)	214
Messengers (357)	215
Dispatchers (359)	216

Production coordinators (363)	217
Traffic, shipping, and receiving clerks (364)	218
Stock and inventory clerks (365)	219
Meter readers (366)	220
Weighers, measurers, checkers, and samplers (368)	221
Expeditors (373)	222
Material recording, scheduling, and distributing clerks, n.e.c. (374)	223
Insurance adjusters, examiners, and investigators (375)	224
Investigators and adjusters, except insurance (376)	225
Eligibility clerks, social welfare (377)	226
Bill and account collectors (378)	227
General office clerks (379)	228
Bank tellers (383)	229
Proofreaders (384)	230
Data-entry keyers (385)	231
Statistical clerks (386)	232
Teachers' aides (387)	233
Administrative support occupations, n.e.c. (389)	234
Launderers and ironers (403)	235
Cooks, private household (404)	236
Housekeepers and butlers (405)	237
Child care workers, private household (406)	238
Private household cleaners and servants (407)	239
Supervisors, firefighting and fire prevention occupations (413)	240
Supervisors, police and detectives (414)	241
Supervisors, guards (415)	242
Fire inspection and fire prevention occupations (416)	243
Firefighting occupations (417)	244
Police and detectives, public service (418)	245
Sheriffs, bailiffs, and other law enforcement officers (423)	246
Correctional institution officers (424)	247
Crossing guards (425)	248
Guards and police, except public service (426)	249
Protective service occupations, n.e.c. (427)	250
Supervisors, food preparation and service occupations (433)	251
Bartenders (434)	252
Waiters and waitresses (435)	253
Cooks (436)	254
Food counter, fountain and related occupations (438)	255
Kitchen workers, food preparation (439)	256
Waiters'/waitresses' assistants (443)	257
Miscellaneous food preparation occupations (444)	258
Dental assistants (445)	259
Health aides, except nursing (446)	260

Nursing aides, orderlies, and attendants (447)	261
Supervisors, cleaning and building service workers (448)	262
Maids and housemen (449)	263
Janitors and cleaners (453)	264
Elevator operators (454)	265
Pest control occupations (455)	266
Supervisors, personal service occupations (456)	267
Barbers (457)	268
Hairdressers and cosmetologists (458)	269
Attendants, amusement and recreation facilities (459)	270
Guides (461)	271
Ushers (462)	272
Public transportation attendants (463)	273
Baggage porters and bellhops (464)	274
Welfare service aides (465)	275
Family child care providers (466)	276
Early childhood teacher's assistants (467)	277
Child care workers, n.e.c. (468)	278
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Farmers, except horticultural (473)	280
Horticultural specialty farmers (474)	281
Managers, farms, except horticultural (475)	282
Managers, horticultural specialty farms (476)	283
Supervisors, farm workers (477)	284
Farm workers (479)	285
Marine life cultivation workers (483)	286
Nursery workers (484)	287
Supervisors, related agricultural occupations (485)	288
Groundskeepers and gardeners, except farm (486)	289
Animal caretakers, except farm (487)	290
Graders and sorters, agricultural products (488)	291
Inspectors, agricultural products (489)	292
Supervisors, forestry and logging workers (494)	293
Forestry workers, except logging (495)	294
Timber cutting and logging occupations (496)	295
Captains and other officers, fishing vessels (497)	296
Fishers (498)	297
Hunters and trappers (499)	298
Supervisors, mechanics and repairers (503)	299
Automobile mechanics, except apprentices (505)	300
Automobile mechanic apprentices (506)	301
Bus, truck, and stationary engine mechanics (507)	302
Aircraft engine mechanics (508)	303
Small engine repairers (509)	304
Automobile body and related repairers (514)	305
Aircraft mechanics, except engine (515)	306

Heavy equipment mechanics (516)	307
Farm equipment mechanics (517)	308
Industrial machinery repairers (518)	309
Machinery maintenance occupations (519)	310
Electronic repairers, communications and industrial equipment (523)	311
Data processing equipment repairers (525)	312
Household appliance and power tool repairers (526)	313
Telephone line installers and repairers (527)	314
Telephone installers and repairers (529)	315
Miscellaneous electrical and electronic equipment repairers (533)	316
Heating, air conditioning, and refrigeration mechanics (534)	317
Camera, watch, and musical instrument repairers (535)	318
Locksmiths and safe repairers (536)	319
Office machine repairers (538)	320
Mechanical controls and valve repairers (539)	321
Elevator installers and repairers (543)	322
Millwrights (544)	323
Specified mechanics and repairers, n.e.c. (547)	324
Not specified mechanics and repairers (549)	325
Supervisors, brickmasons, stonemasons, and tile setters (553)	326
Supervisors, carpenters and related workers (554)	327
Supervisors, electricians and power transmission installers (555)	328
Supervisors, painters, paperhangers, and plasterers (556)	329
Supervisors, plumbers, pipefitters, and steamfitters (557)	330
Supervisors, construction n.e.c. (558)	331
Brickmasons and stonemasons, except apprentices (563)	332
Brickmason and stonemason apprentices (564)	333
Tile setters, hard and soft (565)	334
Carpet installers (566)	335
Carpenters, except apprentices (567)	336
Carpenter apprentices (569)	337
Drywall installers (573)	338
Electricians, except apprentices (575)	339
Electrician apprentices (576)	340
Electrical power installers and repairers (577)	341
Painters, construction and maintenance (579)	342
Paperhangers (583)	343
Plasterers (584)	344
Plumbers, pipefitters, and steamfitters, except apprentices (585)	345
Plumber, pipefitter, and steamfitter apprentices (587)	346
Concrete and terrazzo finishers (588)	347



Glaziers (589)	348
Insulation workers (593)	349
Paving, surfacing, and tamping equipment operators (594)	350
Roofers (595)	351
Sheetmetal duct installers (596)	352
Structural metal workers (597)	353
Drillers, earth (598)	354
Construction trades, n.e.c. (599)	355
Supervisors, extractive occupations (613)	356
Drillers, oil well (614)	357
Explosives workers (615)	358
Mining machine operators (616)	359
Mining occupations, n.e.c. (617)	360
Supervisors, production occupations (628)	361
Tool and die makers, except apprentices (634)	362
Tool and die maker apprentices (635)	363
Precision assemblers, metal (636)	364
Machinists, except apprentices (637)	365
Machinist apprentices (639)	366
Boilermakers (643)	367
Precision grinders, filers, and tool sharpeners (644)	368
Patternmakers and model makers, metal (645)	369
Lay-out workers (646)	370
Precious stones and metals workers (Jewelers) (647)	371
Engravers, metal (649)	372
Sheet metal workers, except apprentices (653)	373
Sheet metal worker apprentices (654)	374
Miscellaneous precision metal workers (655)	375
Patternmakers and model makers, wood (656)	376
Cabinet makers and bench carpenters (657)	377
Furniture and wood finishers (658)	378
Miscellaneous precision woodworkers (659)	379
Dressmakers (666)	380
Tailors (667)	381
Upholsterers (668)	382
Shoe repairers (669)	383
Miscellaneous precision apparel and fabric workers (674)	384
Hand molders and shapers, except jewelers (675)	385
Patternmakers, lay-out workers, and cutters (676)	386
Optical goods workers (677)	387
Dental laboratory and medical appliance technicians (678)	388
Bookbinders (679)	389
Electrical and electronic equipment assemblers (683)	390
Miscellaneous precision workers, n.e.c. (684)	391
Butchers and meat cutters (686)	392
Bakers (687)	393

Food batchmakers (688)	394
Inspectors, testers, and graders (689)	395
Adjusters and calibrators (693)	396
Water and sewage treatment plant operators (694)	397
Power plant operators (695)	398
Stationary engineers (696)	399
Miscellaneous plant and system operators (699)	400
Lathe and turning machine set-up operators (703)	401
Lathe and turning machine operators (704)	402
Milling and planing machine operators (705)	403
Punching and stamping press machine operators (706)	404
Rolling machine operators (707)	405
Drilling and boring machine operators (708)	406
Grinding, abrading, buffing, and polishing machine operators (709)	407
Forging machine operators (713)	408
Numerical control machine operators (714)	409
Miscellaneous metal, plastic, stone, and glass working machine operators (715)	410
Fabricating machine operators, n.e.c. (717)	411
Molding and casting machine operators (719)	412
Metal plating machine operators (723)	413
Heat treating equipment operators (724)	414
Miscellaneous metal and plastic processing machine operators (725)	415
Wood lathe, routing, and planing machine operators (726)	416
Sawing machine operators (727)	417
Shaping and joining machine operators (728)	418
Nailing and tacking machine operators (729)	419
Miscellaneous woodworking machine operators (733)	420
Printing press operators (734)	421
Photoengravers and lithographers (735)	422
Typesetters and compositors (736)	423
Miscellaneous printing machine operators (737)	424
Winding and twisting machine operators (738)	425
Knitting, looping, taping, and weaving machine operators (739)	426
Textile cutting machine operators (743)	427
Textile sewing machine operators (744)	428
Shoe machine operators (745)	429
Pressing machine operators (747)	430
Laundering and dry cleaning machine operators (748)	431
Miscellaneous textile machine operators (749)	432
Cementing and gluing machine operators (753)	433
Packaging and filling machine operators (754)	434
Extruding and forming machine operators (755)	435

Mixing and blending machine operators (756)	436
Separating, filtering, and clarifying machine operators (757)	437
Compressing and compacting machine operators (758)	438
Painting and paint spraying machine operators (759)	439
Roasting and baking machine operators, food (763)	440
Washing, cleaning, and pickling machine operators (764)	441
Folding machine operators (765)	442
Furnace, kiln, and oven operators, except food (766)	443
Crushing and grinding machine operators (768)	444
Slicing and cutting machine operators (769)	445
Motion picture projectionists (773)	446
Photographic process machine operators (774)	447
Misc. machine oper. (777)	448
Machine oper., not spec. (779)	449
Welders and cutters (783)	450
Solderers and brazers (784)	451
Assemblers (785)	452
Hand cutting and trimming occupations (786)	453
Hand molding, casting, and forming occupations (787)	454
Hand painting, coating, and decorating occupations (789)	455
Hand engraving and printing occupations (793)	456
Miscellaneous hand working occupations (795)	457
Production inspectors, checkers, and examiners (796)	458
Production testers (797)	459
Production samplers and weighers (798)	460
Graders and sorters, except agricultural (799)	461
Supervisors, motor vehicle operators (803)	462
Truck drivers (804)	463
Driver-sales workers (806)	464
Bus drivers (808)	465
Taxicab drivers and chauffeurs (809)	466
Parking lot attendants (813)	467
Motor transportation occupations, n.e.c. (814)	468
Railroad conductors and yardmasters (823)	469
Locomotive operating occupations (824)	470
Railroad brake, signal, and switch operators (825)	471
Rail vehicle operators, n.e.c. (826)	472
Ship captains and mates, except fishing boats (828)	473
Sailors and deckhands (829)	474
Marine engineers (833)	475
Bridge, lock, and lighthouse tenders (834)	476
Supervisors, material moving equipment operators (843)	477
Operating engineers (844)	478
Longshore equipment operators (845)	479
Hoist and winch operators (848)	480
Crane and tower operators (849)	481

Excavating and loading machine operators (853)	482
Grader, dozer, and scraper operators (855)	483
Industrial truck and tractor equipment operators (856)	484
Miscellaneous material moving equipment operators (859)	485
Supervisors, handlers, equipment cleaners, and laborers, n.e.c. (864)	486
Helpers, mechanics, and repairers (865)	487
Helpers, construction trades (866)	488
Helpers, surveyor (867)	489
Helpers, extractive occupations (868)	490
Construction laborers (869)	491
Production helpers (874)	492
Garbage collectors (875)	493
Stevedores (876)	494
Stock handlers and baggers (877)	495
Machine feeders and offbearers (878)	496
Freight, stock, and material handlers, n.e.c. (883)	497
Garage and service station related occupations (885)	498
Vehicle washers and equipment cleaners (887)	499
Hand packers and packagers (888)	500
Laborers, exc. Const. (889)	501

The following file contains a list of occupations and their associated 1990 Census Occupation Codes

Occupation	Census Code
Legislators (003)	003
Chief executives and general administrators, public administration (004)	004
Administrators and officials, public administration (005)	005
Administrators, protective services (006)	006
Financial managers (007)	007
Personnel and labor relations managers (008)	008
Purchasing managers (009)	009
Managers, marketing, advertising, and public relations (013)	013
Administrators, education and related fields (014)	014
Managers, medicine and health (015)	015
Postmasters and mail superintendents (016)	016
Managers, food serving and lodging establishments (017)	017
Managers, properties and real estate (018)	018
Funeral directors (019)	019
Managers, service organizations, n.e.c. (021)	021

Managers and administrators, n.e.c. (022)	022
Accountants and auditors (023)	023
Underwriters (024)	024
Other financial officers (025)	025
Management analysts (026)	026
Personnel, training, and labor relations specialists (027)	027
Purchasing agents and buyers, farm products (028)	028
Buyers, wholesale and retail trade, except farm products (029)	029
Purchasing agents and buyers, n.e.c. (033)	033
Business and promotion agents (034)	034
Construction inspectors (035)	035
Inspectors and compliance officers, except construction (036)	036
Management related occupations, n.e.c. (037)	037
Architects (043)	043
Aerospace engineers (044)	044
Metallurgical and materials engineers (045)	045
Mining engineers (046)	046
Petroleum engineers (047)	047
Chemical engineers (048)	048
Nuclear engineers (049)	049
Civil engineers (053)	053
Agricultural engineers (054)	054
Electrical and electronic engineers (055)	055
Industrial engineers (056)	056
Mechanical engineers (057)	057
Marine and naval architects (058)	058
Engineers, n.e.c. (059)	059
Surveyors and mapping scientists (063)	063
Computer systems analysts and scientists (064)	064
Operations and systems researchers and analysts (065)	065
Actuaries (066)	066
Statisticians (067)	067
Mathematical scientists, n.e.c. (068)	068
Physicists and astronomers (069)	069
Chemists, except biochemists (073)	073
Atmospheric and space scientists (074)	074
Geologists and geodesists (075)	075
Physical scientists, n.e.c. (076)	076
Agricultural and food scientists (077)	077
Biological and life scientists (078)	078
Forestry and conservation scientists (079)	079
Medical scientists (083)	083
Physicians (084)	084
Dentists (085)	085
Veterinarians (086)	086
Optometrists (087)	087

Podiatrists (088)	088
Health diagnosing practitioners, n.e.c. (089)	089
Registered nurses (095)	095
Pharmacists (096)	096
Dietitians (097)	097
Respiratory therapists (098)	098
Occupational therapists (099)	099
Physical therapists (103)	103
Speech therapists (104)	104
Therapists, n.e.c. (105)	105
Physicians' assistants (106)	106
Earth, environmental, and marine science teachers (113)	113
Biological science teachers (114)	114
Chemistry teachers (115)	115
Physics teachers (116)	116
Natural science teachers, n.e.c. (117)	117
Psychology teachers (118)	118
Economics teachers (119)	119
History teachers (123)	123
Political science teachers (124)	124
Sociology teachers (125)	125
Social science teachers, n.e.c. (126)	126
Engineering teachers (127)	127
Mathematical science teachers (128)	128
Computer science teachers (129)	129
Medical science teachers (133)	133
Health specialties teachers (134)	134
Business, commerce, and marketing teachers (135)	135
Agriculture and forestry teachers (136)	136
Art, drama, and music teachers (137)	137
Physical education teachers (138)	138
Education teachers (139)	139
English teachers (143)	143
Foreign language teachers (144)	144
Law teachers (145)	145
Social work teachers (146)	146
Theology teachers (147)	147
Trade and industrial teachers (148)	148
Home economics teachers (149)	149
Teachers, postsecondary, n.e.c. (153)	153
Postsecondary teachers, subject not specified (154)	154
Teachers, prekindergarten and kindergarten (155)	155
Teachers, elementary school (156)	156
Teachers, secondary school (157)	157
Teachers, special education (158)	158
Teachers, n.e.c. (159)	159

Counselors, Educational and Vocational (163)	163
Librarians (164)	164
Archivists and curators (165)	165
Economists (166)	166
Psychologists (167)	167
Sociologists (168)	168
Social scientists, n.e.c. (169)	169
Urban planners (173)	173
Social workers (174)	174
Recreation workers (175)	175
Clergy (176)	176
Religious workers, n.e.c. (177)	177
Lawyers (178)	178
Judges (179)	179
Authors (183)	183
Technical writers (184)	184
Designers (185)	185
Musicians and composers (186)	186
Actors and directors (187)	187
Painters, sculptors, craft-artists, and artist printmakers (188)	188
Photographers (189)	189
Dancers (193)	193
Artists, performers, and related workers, n.e.c. (194)	194
Editors and reporters (195)	195
Public relations specialists (197)	197
Announcers (198)	198
Athletes (199)	199
Clinical laboratory technologists and technicians (203)	203
Dental hygienists (204)	204
Health record technologists and technicians (205)	205
Radiologic technicians (206)	206
Licensed practical nurses (207)	207
Health technologists and technicians, n.e.c. (208)	208
Electrical and electronic technicians (213)	213
Industrial engineering technicians (214)	214
Mechanical engineering technicians (215)	215
Engineering technicians, n.e.c. (216)	216
Drafting occupations (217)	217
Surveying and mapping technicians (218)	218
Biological technicians (223)	223
Chemical technicians (224)	224
Science technicians, n.e.c. (225)	225
Airplane pilots and navigators (226)	226
Air traffic controllers (227)	227
Broadcast equipment operators (228)	228
Computer programmers (229)	229

Tool programmers, numerical control (233)	233
Legal assistants (234)	234
Technicians, n.e.c. (235)	235
Supervisors and proprietors, sales occupations (243)	243
Insurance sales occupations (253)	253
Real estate sales occupations (254)	254
Securities and financial services sales occupations (255)	255
Advertising and related sales occupations (256)	256
Sales occupations, other business services (257)	257
Sales engineers (258)	258
Sales representatives, mining, manufacturing, and wholesale (259)	259
Sales workers, motor vehicles and boats (263)	263
Sales workers, apparel (264)	264
Sales workers, shoes (265)	265
Sales workers, furniture and home furnishings (266)	266
Sales workers, radio, TV, hi-fi, and appliances (267)	267
Sales workers, hardware and building supplies (268)	268
Sales workers, parts (269)	269
Sales workers, other commodities (274)	274
Sales counter clerks (275)	275
Cashiers (276)	276
Street and door-to-door sales workers (277)	277
News vendors (278)	278
Demonstrators, promoters and models, sales (283)	283
Auctioneers (284)	284
Sales support occupations, n.e.c. (285)	285
Supervisors, general office (303)	303
Supervisors, computer equipment operators (304)	304
Supervisors, financial records processing (305)	305
Chief communications operators (306)	306
Supervisors, distribution, scheduling, and adjusting clerks (307)	307
Computer operators (308)	308
Peripheral equipment operators (309)	309
Secretaries (313)	313
Stenographers (314)	314
Typists (315)	315
Interviewers (316)	316
Hotel clerks (317)	317
Transportation ticket and reservation agents (318)	318
Receptionists (319)	319
Information clerks, n.e.c. (323)	323
Classified-ad clerks (325)	325
Correspondence clerks (326)	326
Order clerks (327)	327
Personnel clerks, except payroll and timekeeping (328)	328
Library clerks (329)	329



File clerks (335)	335
Records clerks (336)	336
Bookkeepers, accounting, and auditing clerks (337)	337
Payroll and timekeeping clerks (338)	338
Billing clerks (339)	339
Cost and rate clerks (343)	343
Billing, posting, and calculating machine operators (344)	344
Duplicating machine operators (345)	345
Mail preparing and paper handling machine operators (346)	346
Office machine operators, n.e.c. (347)	347
Telephone operators (348)	348
Communications equipment operators, n.e.c. (353)	353
Postal clerks, except mail carriers (354)	354
Mail carriers, postal service (355)	355
Mail clerks, except postal service (356)	356
Messengers (357)	357
Dispatchers (359)	359
Production coordinators (363)	363
Traffic, shipping, and receiving clerks (364)	364
Stock and inventory clerks (365)	365
Meter readers (366)	366
Weighers, measurers, checkers, and samplers (368)	368
Expeditors (373)	373
Material recording, scheduling, and distributing clerks, n.e.c. (374)	374
Insurance adjusters, examiners, and investigators (375)	375
Investigators and adjusters, except insurance (376)	376
Eligibility clerks, social welfare (377)	377
Bill and account collectors (378)	378
General office clerks (379)	379
Bank tellers (383)	383
Proofreaders (384)	384
Data-entry keyers (385)	385
Statistical clerks (386)	386
Teachers' aides (387)	387
Administrative support occupations, n.e.c. (389)	389
Launderers and ironers (403)	403
Cooks, private household (404)	404
Housekeepers and butlers (405)	405
Child care workers, private household (406)	406
Private household cleaners and servants (407)	407
Supervisors, firefighting and fire prevention occupations (413)	413
Supervisors, police and detectives (414)	414
Supervisors, guards (415)	415
Fire inspection and fire prevention occupations (416)	416
Firefighting occupations (417)	417

Police and detectives, public service (418)	418
Sheriffs, bailiffs, and other law enforcement officers (423)	423
Correctional institution officers (424)	424
Crossing guards (425)	425
Guards and police, except public service (426)	426
Protective service occupations, n.e.c. (427)	427
Supervisors, food preparation and service occupations (433)	433
Bartenders (434)	434
Waiters and waitresses (435)	435
Cooks (436)	436
Food counter, fountain and related occupations (438)	438
Kitchen workers, food preparation (439)	439
Waiters'/waitresses' assistants (443)	443
Miscellaneous food preparation occupations (444)	444
Dental assistants (445)	445
Health aides, except nursing (446)	446
Nursing aides, orderlies, and attendants (447)	447
Supervisors, cleaning and building service workers (448)	448
Maids and housemen (449)	449
Janitors and cleaners (453)	453
Elevator operators (454)	454
Pest control occupations (455)	455
Supervisors, personal service occupations (456)	456
Barbers (457)	457
Hairdressers and cosmetologists (458)	458
Attendants, amusement and recreation facilities (459)	459
Guides (461)	461
Ushers (462)	462
Public transportation attendants (463)	463
Baggage porters and bellhops (464)	464
Welfare service aides (465)	465
Family child care providers (466)	466
Early childhood teacher's assistants (467)	467
Child care workers, n.e.c. (468)	468
Personal service occupations, n.e.c. (469)	469
Farmers, except horticultural (473)	473
Horticultural specialty farmers (474)	474
Managers, farms, except horticultural (475)	475
Managers, horticultural specialty farms (476)	476
Supervisors, farm workers (477)	477
Farm workers (479)	479
Marine life cultivation workers (483)	483
Nursery workers (484)	484
Supervisors, related agricultural occupations (485)	485
Groundskeepers and gardeners, except farm (486)	486
Animal caretakers, except farm (487)	487

Graders and sorters, agricultural products (488)	488
Inspectors, agricultural products (489)	489
Supervisors, forestry and logging workers (494)	494
Forestry workers, except logging (495)	495
Timber cutting and logging occupations (496)	496
Captains and other officers, fishing vessels (497)	497
Fishers (498)	498
Hunters and trappers (499)	499
Supervisors, mechanics and repairers (503)	503
Automobile mechanics, except apprentices (505)	505
Automobile mechanic apprentices (506)	506
Bus, truck, and stationary engine mechanics (507)	507
Aircraft engine mechanics (508)	508
Small engine repairers (509)	509
Automobile body and related repairers (514)	514
Aircraft mechanics, except engine (515)	515
Heavy equipment mechanics (516)	516
Farm equipment mechanics (517)	517
Industrial machinery repairers (518)	518
Machinery maintenance occupations (519)	519
Electronic repairers, communications and industrial equipment (523)	523
Data processing equipment repairers (525)	525
Household appliance and power tool repairers (526)	526
Telephone line installers and repairers (527)	527
Telephone installers and repairers (529)	529
Miscellaneous electrical and electronic equipment repairers (533)	533
Heating, air conditioning, and refrigeration mechanics (534)	534
Camera, watch, and musical instrument repairers (535)	535
Locksmiths and safe repairers (536)	536
Office machine repairers (538)	538
Mechanical controls and valve repairers (539)	539
Elevator installers and repairers (543)	543
Millwrights (544)	544
Specified mechanics and repairers, n.e.c. (547)	547
Not specified mechanics and repairers (549)	549
Supervisors, brickmasons, stonemasons, and tile setters (553)	553
Supervisors, carpenters and related workers (554)	554
Supervisors, electricians and power transmission installers (555)	555
Supervisors, painters, paperhangers, and plasterers (556)	556
Supervisors, plumbers, pipefitters, and steamfitters (557)	557
Supervisors, construction n.e.c. (558)	558
Brickmasons and stonemasons, except apprentices (563)	563
Brickmason and stonemason apprentices (564)	564

Tile setters, hard and soft (565)	565
Carpet installers (566)	566
Carpenters, except apprentices (567)	567
Carpenter apprentices (569)	569
Drywall installers (573)	573
Electricians, except apprentices (575)	575
Electrician apprentices (576)	576
Electrical power installers and repairers (577)	577
Painters, construction and maintenance (579)	579
Paperhangers (583)	583
Plasterers (584)	584
Plumbers, pipefitters, and steamfitters, except apprentices (585)	585
Plumber, pipefitter, and steamfitter apprentices (587)	587
Concrete and terrazzo finishers (588)	588
Glaziers (589)	589
Insulation workers (593)	593
Paving, surfacing, and tamping equipment operators (594)	594
Roofers (595)	595
Sheetmetal duct installers (596)	596
Structural metal workers (597)	597
Drillers, earth (598)	598
Construction trades, n.e.c. (599)	599
Supervisors, extractive occupations (613)	613
Drillers, oil well (614)	614
Explosives workers (615)	615
Mining machine operators (616)	616
Mining occupations, n.e.c. (617)	617
Supervisors, production occupations (628)	628
Tool and die makers, except apprentices (634)	634
Tool and die maker apprentices (635)	635
Precision assemblers, metal (636)	636
Machinists, except apprentices (637)	637
Machinist apprentices (639)	639
Boilermakers (643)	643
Precision grinders, filers, and tool sharpeners (644)	644
Patternmakers and model makers, metal (645)	645
Lay-out workers (646)	646
Precious stones and metals workers (Jewelers) (647)	647
Engravers, metal (649)	649
Sheet metal workers, except apprentices (653)	653
Sheet metal worker apprentices (654)	654
Miscellaneous precision metal workers (655)	655
Patternmakers and model makers, wood (656)	656
Cabinet makers and bench carpenters (657)	657
Furniture and wood finishers (658)	658

Miscellaneous precision woodworkers (659)	659
Dressmakers (666)	666
Tailors (667)	667
Upholsterers (668)	668
Shoe repairers (669)	669
Miscellaneous precision apparel and fabric workers (674)	674
Hand molders and shapers, except jewelers (675)	675
Patternmakers, lay-out workers, and cutters (676)	676
Optical goods workers (677)	677
Dental laboratory and medical appliance technicians (678)	678
Bookbinders (679)	679
Electrical and electronic equipment assemblers (683)	683
Miscellaneous precision workers, n.e.c. (684)	684
Butchers and meat cutters (686)	686
Bakers (687)	687
Food batchmakers (688)	688
Inspectors, testers, and graders (689)	689
Adjusters and calibrators (693)	693
Water and sewage treatment plant operators (694)	694
Power plant operators (695)	695
Stationary engineers (696)	696
Miscellaneous plant and system operators (699)	699
Lathe and turning machine set-up operators (703)	703
Lathe and turning machine operators (704)	704
Milling and planing machine operators (705)	705
Punching and stamping press machine operators (706)	706
Rolling machine operators (707)	707
Drilling and boring machine operators (708)	708
Grinding, abrading, buffing, and polishing machine operators (709)	709
Forging machine operators (713)	713
Numerical control machine operators (714)	714
Miscellaneous metal, plastic, stone, and glass working machine operators (715)	715
Fabricating machine operators, n.e.c. (717)	717
Molding and casting machine operators (719)	719
Metal plating machine operators (723)	723
Heat treating equipment operators (724)	724
Miscellaneous metal and plastic processing machine operators (725)	725
Wood lathe, routing, and planing machine operators (726)	726
Sawing machine operators (727)	727
Shaping and joining machine operators (728)	728
Nailing and tacking machine operators (729)	729
Miscellaneous woodworking machine operators (733)	733
Printing press operators (734)	734

Photoengravers and lithographers (735)	735
Typesetters and compositors (736)	736
Miscellaneous printing machine operators (737)	737
Winding and twisting machine operators (738)	738
Knitting, looping, taping, and weaving machine operators (739)	739
Textile cutting machine operators (743)	743
Textile sewing machine operators (744)	744
Shoe machine operators (745)	745
Pressing machine operators (747)	747
Laundering and dry cleaning machine operators (748)	748
Miscellaneous textile machine operators (749)	749
Cementing and gluing machine operators (753)	753
Packaging and filling machine operators (754)	754
Extruding and forming machine operators (755)	755
Mixing and blending machine operators (756)	756
Separating, filtering, and clarifying machine operators (757)	757
Compressing and compacting machine operators (758)	758
Painting and paint spraying machine operators (759)	759
Roasting and baking machine operators, food (763)	763
Washing, cleaning, and pickling machine operators (764)	764
Folding machine operators (765)	765
Furnace, kiln, and oven operators, except food (766)	766
Crushing and grinding machine operators (768)	768
Slicing and cutting machine operators (769)	769
Motion picture projectionists (773)	773
Photographic process machine operators (774)	774
Misc. machine oper. (777)	777
Machine oper., not spec. (779)	779
Welders and cutters (783)	783
Solderers and brazers (784)	784
Assemblers (785)	785
Hand cutting and trimming occupations (786)	786
Hand molding, casting, and forming occupations (787)	787
Hand painting, coating, and decorating occupations (789)	789
Hand engraving and printing occupations (793)	793
Miscellaneous hand working occupations (795)	795
Production inspectors, checkers, and examiners (796)	796
Production testers (797)	797
Production samplers and weighers (798)	798
Graders and sorters, except agricultural (799)	799
Supervisors, motor vehicle operators (803)	803
Truck drivers (804)	804
Driver-sales workers (806)	806
Bus drivers (808)	808
Taxicab drivers and chauffeurs (809)	809
Parking lot attendants (813)	813

Motor transportation occupations, n.e.c. (814)	814
Railroad conductors and yardmasters (823)	823
Locomotive operating occupations (824)	824
Railroad brake, signal, and switch operators (825)	825
Rail vehicle operators, n.e.c. (826)	826
Ship captains and mates, except fishing boats (828)	828
Sailors and deckhands (829)	829
Marine engineers (833)	833
Bridge, lock, and lighthouse tenders (834)	834
Supervisors, material moving equipment operators (843)	843
Operating engineers (844)	844
Longshore equipment operators (845)	845
Hoist and winch operators (848)	848
Crane and tower operators (849)	849
Excavating and loading machine operators (853)	853
Grader, dozer, and scraper operators (855)	855
Industrial truck and tractor equipment operators (856)	856
Miscellaneous material moving equipment operators (859)	859
Supervisors, handlers, equipment cleaners, and laborers, n.e.c. (864)	864
Helpers, mechanics, and repairers (865)	865
Helpers, construction trades (866)	866
Helpers, surveyor (867)	867
Helpers, extractive occupations (868)	868
Construction laborers (869)	869
Production helpers (874)	874
Garbage collectors (875)	875
Stevedores (876)	876
Stock handlers and baggers (877)	877
Machine feeders and offbearers (878)	878
Freight, stock, and material handlers, n.e.c. (883)	883
Garage and service station related occupations (885)	885
Vehicle washers and equipment cleaners (887)	887
Hand packers and packagers (888)	888
Laborers, exc. Const. (889)	889

## DATABASE - GENERATED CODE LISTS SECTION

### Industry Codes

The following file contains the industry name and a computer assigned code between one and 236

Industry	dBASE Code
Agricultural production, crops	001
Agricultural production, livestock	002
Veterinary services	003
Landscape and horticultural services	004
Agricultural services, n.e.c.	005
Forestry	006
Fishing, hunting, and trapping	007
Metal mining	008
Coal mining	009
Oil and gas extraction	010
Nonmetallic mining and quarrying, except fuels	011
Construction	012
Meat products	013
Dairy products	014
Canned, frozen, and preserved fruits and vegetables	015
Grain mill products	016
Bakery products	017
Sugar and confectionery products	018
Beverage industries	019
Miscellaneous food preparations and kindred products	020
Not specified food industries	021
Tobacco manufactures	022
Knitting mills	023
Dyeing and finishing textiles, except wool and knit	024
Carpets and rugs	025
Yarn, thread, and fabric mills	026
Miscellaneous textile mill products	027
Apparel and accessories, except knit	028
Miscellaneous fabricated textile products	029
Pulp, paper, and paperboard mills	030
Miscellaneous paper and pulp products	031
Paperboard containers and boxes	032
Newspaper publishing and printing	033
Printing, publishing and allied industries, except newspaper	034
Plastics, synthetics, and resins	035
Drugs	036
Soaps and cosmetics	037



Paints, varnishes, and related products	038
Agricultural chemicals	039
Industrial and miscellaneous chemicals	040
Petroleum refining	041
Miscellaneous petroleum and coal products	042
Tires and inner tubes	043
Other rubber products and plastics footwear and belting	044
Miscellaneous plastics products	045
Leather tanning and finishing	046
Footwear, except rubber and plastic	047
Leather products, except footwear	048
Logging	049
Sawmills, planing mills and millwork	050
Wood buildings and mobile homes	051
Miscellaneous wood products	052
Furniture and fixtures	053
Glass and glass products	054
Cement, concrete, gypsum, and plaster products	055
Structural clay products	056
Pottery and related products	057
Miscellaneous nonmetallic mineral and stone products	058
Blast furnaces, steelworks, and finishing mills	059
Iron and steel foundries	060
Primary aluminum industries	061
Other primary metal industries	062
Cutlery, handtools, and general hardware	063
Fabricated structural metal products	064
Screw machine products	065
Metal forgings and stampings	066
Ordnance	067
Miscellaneous fabricated metal products	068
Not specified metal industries	069
Engines and turbines	070
Farm machinery and equipment	071
Construction and material handling machines	072
Metalworking machinery	073
Office and accounting machines	074
Computers and related equipment	075
Machinery, except electrical, n.e.c.	076
Not specified machinery	077
Household appliances	078
Radio, TV, and communication equipment	079
Electrical machinery, equipment, and supplies, n.e.c.	080
Not specified electrical machinery, equipment, and supplies	081
Motor vehicles and motor vehicle equipment	082
Aircraft and parts	083

Ship and boat building and repairing	084
Railroad locomotives and equipment	085
Guided missiles, space vehicles, and parts	086
Cycles and miscellaneous transportation equipment	087
Scientific and controlling instruments	088
Medical, dental, and optical instruments and supplies	089
Photographic equipment and supplies	090
Watches, clocks, and clockwork operated devices	091
Toys, amusement, and sporting goods	092
Miscellaneous manufacturing industries	093
Not specified manufacturing industries	094
Railroads	095
Bus service and urban transit	096
Taxicab service	097
Trucking service	098
Warehousing and storage	099
U.S. Postal Service	100
Water transportation	101
Air transportation	102
Pipe lines, except natural gas	103
Services incidental to transportation	104
Radio and television broadcasting and cable	105
Telephone communications	106
Telegraph and miscellaneous communications services	107
Electric light and power	108
Gas and steam supply systems	109
Electric and gas, and other combinations	110
Water supply and irrigation	111
Sanitary services	112
Not specified utilities	113
Motor vehicles and equipment	114
Furniture and home furnishings	115
Lumber and construction materials	116
Professional and commercial equipment and supplies	117
Metals and minerals, except petroleum	118
Electrical goods	119
Hardware, plumbing and heating supplies	120
Machinery, equipment, and supplies	121
Scrap and waste materials	122
Miscellaneous wholesale, durable goods	123
Paper and paper products	124
Drugs, chemicals and allied products	125
Apparel, fabrics, and notions	126
Groceries and related products	127
Farm-product raw materials	128
Petroleum products	129

Alcoholic beverages	130
Farm supplies	131
Miscellaneous wholesale, nondurable goods	132
Not specified wholesale trade	133
Lumber and building material retailing	134
Hardware stores	135
Retail nurseries and garden stores	136
Mobile home dealers	137
Department stores	138
Variety stores	139
Miscellaneous general merchandise stores	140
Grocery stores	141
Dairy products stores	142
Retail bakeries	143
Food stores, n.e.c.	144
Motor vehicle dealers	145
Auto and home supply stores	146
Gasoline service stations	147
Miscellaneous vehicle dealers	148
Apparel and accessory stores, except shoe	149
Shoe stores	150
Furniture and home furnishings stores	151
Household appliance stores	152
Radio, TV, and computer stores	153
Music stores	154
Eating and drinking places	155
Drug stores	156
Liquor stores	157
Sporting goods, bicycles, and hobby stores	158
Book and stationery stores	159
Jewelry stores	160
Gift, novelty, and souvenir shops	161
Sewing, needlework and piece goods stores	162
Catalog and mail order houses	163
Vending machine operators	164
Direct selling establishments	165
Fuel dealers	166
Retail florists	167
Miscellaneous retail stores	168
Not specified retail trade	169
Banking	170
Savings institutions, including credit unions	171
Credit agencies, n.e.c.	172
Security, commodity brokerage, and investment companies	173
Insurance	174
Real estate, including real estate-insurance offices	175

Advertising	176
Services to dwellings and other buildings	177
Personnel supply services	178
Computer and data processing services	179
Detective and protective services	180
Business services, n.e.c.	181
Automotive rental and leasing, without drivers	182
Automobile parking and carwashes	183
Automotive repair and related services	184
Electrical repair shops	185
Miscellaneous repair services	186
Private households	187
Hotels and motels	188
Lodging places, except hotels and motels	189
Laundry, cleaning, and garment services	190
Beauty shops	191
Barber shops	192
Funeral service and crematories	193
Shoe repair shops	194
Dressmaking shops	195
Miscellaneous personal services	196
Theaters and motion pictures	197
Video tape rental	198
Bowling centers	199
Miscellaneous entertainment and recreation services	200
Offices and clinics of physicians	201
Offices and clinics of dentists	202
Offices and clinics of chiropractors	203
Offices and clinics of optometrists	204
Offices and clinics of health practitioners, n.e.c.	205
Hospitals	206
Nursing and personal care facilities	207
Health services, n.e.c.	208
Legal services	209
Elementary and secondary schools	210
Colleges and universities	211
Vocational schools	212
Libraries	213
Educational services, n.e.c.	214
Job training and vocational rehabilitation services	215
Child day care services	216
Family child care homes	217
Residential care facilities, without nursing	218
Social services, n.e.c.	219
Museums, art galleries, and zoos	220
Labor unions	221

Religious organizations	222
Membership organizations, n.e.c.	223
Engineering, architectural, and surveying services	224
Accounting, auditing, and bookkeeping services	225
Research, development, and testing services	226
Management and public relations services	227
Miscellaneous professional and related services	228
Executive and legislative offices	229
General government, n.e.c.	230
Justice, public order, and safety	231
Public finance, taxation, and monetary policy	232
Administration of human resources programs	233
Administration of environmental quality and housing programs	234
Administration of economic programs	235
National security and international affairs	236

The following file contains the industry name and the 1990 Census Industry Code

Industry	Census Code
Agricultural production, crops	010
Agricultural production, livestock	011
Veterinary services	012
Landscape and horticultural services	020
Agricultural services, n.e.c.	030
Forestry	031
Fishing, hunting, and trapping	032
Metal mining	040
Coal mining	041
Oil and gas extraction	042
Nonmetallic mining and quarrying, except fuels	050
Construction	060
Meat products	100
Dairy products	101
Canned, frozen, and preserved fruits and vegetables	102
Grain mill products	110
Bakery products	111
Sugar and confectionery products	112
Beverage industries	120
Miscellaneous food preparations and kindred products	121
Not specified food industries	122
Tobacco manufactures	130
Knitting mills	132
Dyeing and finishing textiles, except wool and knit	140
Carpets and rugs	141
Yarn, thread, and fabric mills	142
Miscellaneous textile mill products	150
Apparel and accessories, except knit	151
Miscellaneous fabricated textile products	152
Pulp, paper, and paperboard mills	160
Miscellaneous paper and pulp products	161
Paperboard containers and boxes	162
Newspaper publishing and printing	171
Printing, publishing and allied industries, except newspaper	172
Plastics, synthetics, and resins	180
Drugs	181
Soaps and cosmetics	182
Paints, varnishes, and related products	190
Agricultural chemicals	191
Industrial and miscellaneous chemicals	192

Petroleum refining	200
Miscellaneous petroleum and coal products	201
Tires and inner tubes	210
Other rubber products and plastics footwear and belting	211
Miscellaneous plastics products	212
Leather tanning and finishing	220
Footwear, except rubber and plastic	221
Leather products, except footwear	222
Logging	230
Sawmills, planing mills and millwork	231
Wood buildings and mobile homes	232
Miscellaneous wood products	241
Furniture and fixtures	242
Glass and glass products	250
Cement, concrete, gypsum, and plaster products	251
Structural clay products	252
Pottery and related products	261
Miscellaneous nonmetallic mineral and stone products	262
Blast furnaces, steelworks, and finishing mills	270
Iron and steel foundries	271
Primary aluminum industries	272
Other primary metal industries	280
Cutlery, handtools, and general hardware	281
Fabricated structural metal products	282
Screw machine products	290
Metal forgings and stampings	291
Ordnance	292
Miscellaneous fabricated metal products	300
Not specified metal industries	301
Engines and turbines	310
Farm machinery and equipment	311
Construction and material handling machines	312
Metalworking machinery	320
Office and accounting machines	321
Computers and related equipment	322
Machinery, except electrical, n.e.c.	331
Not specified machinery	332
Household appliances	340
Radio, TV, and communication equipment	341
Electrical machinery, equipment, and supplies, n.e.c.	342
Not specified electrical machinery, equipment, and supplies	350
Motor vehicles and motor vehicle equipment	351
Aircraft and parts	352
Ship and boat building and repairing	360
Railroad locomotives and equipment	361
Guided missiles, space vehicles, and parts	362

Cycles and miscellaneous transportation equipment	370
Scientific and controlling instruments	371
Medical, dental, and optical instruments and supplies	372
Photographic equipment and supplies	380
Watches, clocks, and clockwork operated devices	381
Toys, amusement, and sporting goods	390
Miscellaneous manufacturing industries	391
Not specified manufacturing industries	392
Railroads	400
Bus service and urban transit	401
Taxicab service	402
Trucking service	410
Warehousing and storage	411
U.S. Postal Service	412
Water transportation	420
Air transportation	421
Pipe lines, except natural gas	422
Services incidental to transportation	432
Radio and television broadcasting and cable	440
Telephone communications	441
Telegraph and miscellaneous communications services	442
Electric light and power	450
Gas and steam supply systems	451
Electric and gas, and other combinations	452
Water supply and irrigation	470
Sanitary services	471
Not specified utilities	472
Motor vehicles and equipment	500
Furniture and home furnishings	501
Lumber and construction materials	502
Professional and commercial equipment and supplies	510
Metals and minerals, except petroleum	511
Electrical goods	512
Hardware, plumbing and heating supplies	521
Machinery, equipment, and supplies	530
Scrap and waste materials	531
Miscellaneous wholesale, durable goods	532
Paper and paper products	540
Drugs, chemicals and allied products	541
Apparel, fabrics, and notions	542
Groceries and related products	550
Farm-product raw materials	551
Petroleum products	552
Alcoholic beverages	560
Farm supplies	561
Miscellaneous wholesale, nondurable goods	562



Not specified wholesale trade	571
Lumber and building material retailing	580
Hardware stores	581
Retail nurseries and garden stores	582
Mobile home dealers	590
Department stores	591
Variety stores	592
Miscellaneous general merchandise stores	600
Grocery stores	601
Dairy products stores	602
Retail bakeries	610
Food stores, n.e.c.	611
Motor vehicle dealers	612
Auto and home supply stores	620
Gasoline service stations	621
Miscellaneous vehicle dealers	622
Apparel and accessory stores, except shoe	623
Shoe stores	630
Furniture and home furnishings stores	631
Household appliance stores	632
Radio, TV, and computer stores	633
Music stores	640
Eating and drinking places	641
Drug stores	642
Liquor stores	650
Sporting goods, bicycles, and hobby stores	651
Book and stationery stores	652
Jewelry stores	660
Gift, novelty, and souvenir shops	661
Sewing, needlework and piece goods stores	662
Catalog and mail order houses	663
Vending machine operators	670
Direct selling establishments	671
Fuel dealers	672
Retail florists	681
Miscellaneous retail stores	682
Not specified retail trade	691
Banking	700
Savings institutions, including credit unions	701
Credit agencies, n.e.c.	702
Security, commodity brokerage, and investment companies	710
Insurance	711
Real estate, including real estate-insurance offices	712
Advertising	721
Services to dwellings and other buildings	722
Personnel supply services	731

Computer and data processing services	732
Detective and protective services	740
Business services, n.e.c.	741
Automotive rental and leasing, without drivers	742
Automobile parking and carwashes	750
Automotive repair and related services	751
Electrical repair shops	752
Miscellaneous repair services	760
Private households	761
Hotels and motels	762
Lodging places, except hotels and motels	770
Laundry, cleaning, and garment services	771
Beauty shops	772
Barber shops	780
Funeral service and crematories	781
Shoe repair shops	782
Dressmaking shops	790
Miscellaneous personal services	791
Theaters and motion pictures	800
Video tape rental	801
Bowling centers	802
Miscellaneous entertainment and recreation services	810
Offices and clinics of physicians	812
Offices and clinics of dentists	820
Offices and clinics of chiropractors	821
Offices and clinics of optometrists	822
Offices and clinics of health practitioners, n.e.c.	830
Hospitals	831
Nursing and personal care facilities	832
Health services, n.e.c.	840
Legal services	841
Elementary and secondary schools	842
Colleges and universities	850
Vocational schools	851
Libraries	852
Educational services, n.e.c.	860
Job training and vocational rehabilitation services	861
Child day care services	862
Family child care homes	863
Residential care facilities, without nursing	870
Social services, n.e.c.	871
Museums, art galleries, and zoos	872
Labor unions	873
Religious organizations	880
Membership organizations, n.e.c.	881
Engineering, architectural, and surveying services	882

Accounting, auditing, and bookkeeping services	890
Research, development, and testing services	891
Management and public relations services	892
Miscellaneous professional and related services	893
Executive and legislative offices	900
General government, n.e.c.	901
Justice, public order, and safety	910
Public finance, taxation, and monetary policy	921
Administration of human resources programs	922
Administration of environmental quality and housing programs	930
Administration of economic programs	931
National security and international affairs	932

## DATABASE STRUCTURES SECTION

Structure for database: GEOGSGMT.dbf

Number of data records: 52

Date of last update : 09/19/94

This file consists of geographic identification section records. There is one record for each level of geography. See the Identification Section of this chapter for a complete explanation of each field name.

Field Name	Field Type	Field Size	Decimal	Description
FILEID	Character	8	0	
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
GEOCOMP	Character	2	0	
CHARITER	Character	3	0	
LOGRECNU	Character	6	0	
LOGRECPN	Character	4	0	
PARTREC	Character	4	0	
ANRC	Character	2	0	
AIANACE	Character	4	0	
AIANAFP	Character	5	0	
AIANACC	Character	2	0	
ARTLI	Character	1	0	
BLCK	Character	4	0	
BLCKGR	Character	1	0	
TRACTBNA	Character	6	0	
CONGDIS	Character	2	0	
CONCITCE	Character	1	0	
CONCITFP	Character	5	0	
CONCITCC	Character	2	0	
CONCITSC	Character	2	0	
CMSA	Character	2	0	
CNTY	Character	3	0	
CNTYSC	Character	2	0	
COUSUBCE	Character	3	0	
COUSUBFP	Character	5	0	
COUSUBCC	Character	2	0	
COUSUBSC	Character	2	0	
DIVIS	Character	1	0	
EXTCITIN	Character	1	0	
INTUC	Character	15	0	
MSACMSA	Character	4	0	
MSACMSAS	Character	2	0	

PLACECE	Character	4	0
PLACEFP	Character	5	0
PLACECC	Character	2	0
PLACEDC	Character	1	0
PLACESC	Character	2	0
PMSA	Character	4	0
REG	Character	1	0
STATECE	Character	2	0
STATEFP	Character	2	0
URBANRUR	Character	1	0
URBAREA	Character	4	0
UASC	Character	2	0
SAC1	Character	5	0
SAC2	Character	5	0
SAC3	Character	4	0
SAC4	Character	4	0
SAC5	Character	3	0
SAC6	Character	3	0
SAC7	Character	2	0
SAC8	Character	2	0
SAC9	Character	1	0
SAC10	Character	1	0
AREALAND	Numeric	10	0
AREAWAT	Numeric	10	0
ANPSADPI	Character	66	0
FUNCSTAT	Character	1	0
GCUNI	Character	1	0
HU100	Numeric	9	0
INTPTLAT	Character	9	0
INTPTLNG	Character	10	0
PARTFLAG	Character	1	0
PSADC	Character	2	0
POP100	Numeric	9	0
SPFLAG	Character	1	0
Total Size		301	0

The following four databases comprise one logical file where a record consists of one occupation broken down by 236 industries for a unique geography. There are 501 occupation records for each geographical unit.

TAB1PT1.DBF Alias: TAB1PT1

Master index file: TABLE1.ndx Key: SUMLEV+STATEFP+OCCUCODE

Structure for database: TAB1PT1.DBF

Number of data records: 0

Date of last update : 11/14/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
IND_001	Numeric	9	0	
IND_002	Numeric	9	0	
IND_003	Numeric	9	0	
IND_004	Numeric	9	0	
IND_005	Numeric	9	0	
IND_006	Numeric	9	0	
IND_007	Numeric	9	0	
IND_008	Numeric	9	0	
IND_009	Numeric	9	0	
IND_010	Numeric	9	0	
IND_011	Numeric	9	0	
IND_012	Numeric	9	0	
IND_013	Numeric	9	0	
IND_014	Numeric	9	0	
IND_015	Numeric	9	0	
IND_016	Numeric	9	0	
IND_017	Numeric	9	0	
IND_018	Numeric	9	0	
IND_019	Numeric	9	0	
IND_020	Numeric	9	0	
IND_021	Numeric	9	0	
IND_022	Numeric	9	0	
IND_023	Numeric	9	0	
IND_024	Numeric	9	0	
IND_025	Numeric	9	0	
IND_026	Numeric	9	0	
IND_027	Numeric	9	0	

IND_028	Numeric	9	0
IND_029	Numeric	9	0
IND_030	Numeric	9	0
IND_031	Numeric	9	0
IND_032	Numeric	9	0
IND_033	Numeric	9	0
IND_034	Numeric	9	0
IND_035	Numeric	9	0
IND_036	Numeric	9	0
IND_037	Numeric	9	0
IND_038	Numeric	9	0
IND_039	Numeric	9	0
IND_040	Numeric	9	0
IND_041	Numeric	9	0
IND_042	Numeric	9	0
IND_043	Numeric	9	0
IND_044	Numeric	9	0
IND_045	Numeric	9	0
IND_046	Numeric	9	0
IND_047	Numeric	9	0
IND_048	Numeric	9	0
IND_049	Numeric	9	0
IND_050	Numeric	9	0
IND_051	Numeric	9	0
IND_052	Numeric	9	0
IND_053	Numeric	9	0
IND_054	Numeric	9	0
IND_055	Numeric	9	0
IND_056	Numeric	9	0
IND_057	Numeric	9	0
IND_058	Numeric	9	0
IND_059	Numeric	9	0
OCCUCODE	Character	3	0

Total Size            542        0

TAB1PT2.DBF Alias: TAB1PT2

Master index file: TABLE1.ndx Key: SUMLEV+STATEFP+OCCUCODE

Structure for database: TAB1PT2.DBF

Number of data records: 0

Date of last update : 11/14/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
IND_060	Numeric	9	0	
IND_061	Numeric	9	0	
IND_062	Numeric	9	0	
IND_063	Numeric	9	0	
IND_064	Numeric	9	0	
IND_065	Numeric	9	0	
IND_066	Numeric	9	0	
IND_067	Numeric	9	0	
IND_068	Numeric	9	0	
IND_069	Numeric	9	0	
IND_070	Numeric	9	0	
IND_071	Numeric	9	0	
IND_072	Numeric	9	0	
IND_073	Numeric	9	0	
IND_074	Numeric	9	0	
IND_075	Numeric	9	0	
IND_076	Numeric	9	0	
IND_077	Numeric	9	0	
IND_078	Numeric	9	0	
IND_079	Numeric	9	0	
IND_080	Numeric	9	0	
IND_081	Numeric	9	0	
IND_082	Numeric	9	0	
IND_083	Numeric	9	0	
IND_084	Numeric	9	0	
IND_085	Numeric	9	0	
IND_086	Numeric	9	0	
IND_087	Numeric	9	0	
IND_088	Numeric	9	0	
IND_089	Numeric	9	0	
IND_090	Numeric	9	0	



IND_091	Numeric	9	0
IND_092	Numeric	9	0
IND_093	Numeric	9	0
IND_094	Numeric	9	0
IND_095	Numeric	9	0
IND_096	Numeric	9	0
IND_097	Numeric	9	0
IND_098	Numeric	9	0
IND_099	Numeric	9	0
IND_100	Numeric	9	0
IND_101	Numeric	9	0
IND_102	Numeric	9	0
IND_103	Numeric	9	0
IND_104	Numeric	9	0
IND_105	Numeric	9	0
IND_106	Numeric	9	0
IND_107	Numeric	9	0
IND_108	Numeric	9	0
IND_109	Numeric	9	0
IND_110	Numeric	9	0
IND_111	Numeric	9	0
IND_112	Numeric	9	0
IND_113	Numeric	9	0
IND_114	Numeric	9	0
IND_115	Numeric	9	0
IND_116	Numeric	9	0
IND_117	Numeric	9	0
IND_118	Numeric	9	0
OCCUCODE	Character	3	0
Total Size		542	0

TAB1PT3.DBF Alias: TAB1PT3

Master index file: TABLE1.ndx Key: SUMLEV+STATEFP+OCCUCODE

Structure for database: TAB1PT3.DBF

Number of data records: 0

Date of last update : 11/14/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
IND_119	Numeric	9	0	
IND_120	Numeric	9	0	
IND_121	Numeric	9	0	
IND_122	Numeric	9	0	
IND_123	Numeric	9	0	
IND_124	Numeric	9	0	
IND_125	Numeric	9	0	
IND_126	Numeric	9	0	
IND_127	Numeric	9	0	
IND_128	Numeric	9	0	
IND_129	Numeric	9	0	
IND_130	Numeric	9	0	
IND_131	Numeric	9	0	
IND_132	Numeric	9	0	
IND_133	Numeric	9	0	
IND_134	Numeric	9	0	
IND_135	Numeric	9	0	
IND_136	Numeric	9	0	
IND_137	Numeric	9	0	
IND_138	Numeric	9	0	
IND_139	Numeric	9	0	
IND_140	Numeric	9	0	
IND_141	Numeric	9	0	
IND_142	Numeric	9	0	
IND_143	Numeric	9	0	
IND_144	Numeric	9	0	
IND_145	Numeric	9	0	
IND_146	Numeric	9	0	
IND_147	Numeric	9	0	
IND_148	Numeric	9	0	
IND_149	Numeric	9	0	

IND_150	Numeric	9	0
IND_151	Numeric	9	0
IND_152	Numeric	9	0
IND_153	Numeric	9	0
IND_154	Numeric	9	0
IND_155	Numeric	9	0
IND_156	Numeric	9	0
IND_157	Numeric	9	0
IND_158	Numeric	9	0
IND_159	Numeric	9	0
IND_160	Numeric	9	0
IND_161	Numeric	9	0
IND_162	Numeric	9	0
IND_163	Numeric	9	0
IND_164	Numeric	9	0
IND_165	Numeric	9	0
IND_166	Numeric	9	0
IND_167	Numeric	9	0
IND_168	Numeric	9	0
IND_169	Numeric	9	0
IND_170	Numeric	9	0
IND_171	Numeric	9	0
IND_172	Numeric	9	0
IND_173	Numeric	9	0
IND_174	Numeric	9	0
IND_175	Numeric	9	0
IND_176	Numeric	9	0
IND_177	Numeric	9	0
OCCUCODE	Character	3	0
Total Size		542	0

TAB1PT4.DBF Alias: TAB1PT4

Master index file: TABLE1.ndx Key: SUMLEV+STATEFP+OCCUCODE

Structure for database: TAB1PT4.DBF

Number of data records: 0

Date of last update : 11/14/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
IND_178	Numeric	9	0	
IND_179	Numeric	9	0	
IND_180	Numeric	9	0	
IND_181	Numeric	9	0	
IND_182	Numeric	9	0	
IND_183	Numeric	9	0	
IND_184	Numeric	9	0	
IND_185	Numeric	9	0	
IND_186	Numeric	9	0	
IND_187	Numeric	9	0	
IND_188	Numeric	9	0	
IND_189	Numeric	9	0	
IND_190	Numeric	9	0	
IND_191	Numeric	9	0	
IND_192	Numeric	9	0	
IND_193	Numeric	9	0	
IND_194	Numeric	9	0	
IND_195	Numeric	9	0	
IND_196	Numeric	9	0	
IND_197	Numeric	9	0	
IND_198	Numeric	9	0	
IND_199	Numeric	9	0	
IND_200	Numeric	9	0	
IND_201	Numeric	9	0	
IND_202	Numeric	9	0	
IND_203	Numeric	9	0	
IND_204	Numeric	9	0	
IND_205	Numeric	9	0	
IND_206	Numeric	9	0	
IND_207	Numeric	9	0	
IND_208	Numeric	9	0	

IND_209	Numeric	9	0
IND_210	Numeric	9	0
IND_211	Numeric	9	0
IND_212	Numeric	9	0
IND_213	Numeric	9	0
IND_214	Numeric	9	0
IND_215	Numeric	9	0
IND_216	Numeric	9	0
IND_217	Numeric	9	0
IND_218	Numeric	9	0
IND_219	Numeric	9	0
IND_220	Numeric	9	0
IND_221	Numeric	9	0
IND_222	Numeric	9	0
IND_223	Numeric	9	0
IND_224	Numeric	9	0
IND_225	Numeric	9	0
IND_226	Numeric	9	0
IND_227	Numeric	9	0
IND_228	Numeric	9	0
IND_229	Numeric	9	0
IND_230	Numeric	9	0
IND_231	Numeric	9	0
IND_232	Numeric	9	0
IND_233	Numeric	9	0
IND_234	Numeric	9	0
IND_235	Numeric	9	0
IND_236	Numeric	9	0
OCCUCODE	Character	3	0
Total Size		542	0

The following four databases comprise one logical file where a record consists of one occupation GROUP broken down by 236 industries for a unique geography. These files are aggregated summary files.

INDUSPT1.SUM Alias: INDUSPT1

Structure for database: INDUSPT1.SUM

Number of data records: 0

Date of last update : 11/07/94

Field Name	Field Type	Field Size	Decimal	Description
FILEID	Character	8	0	
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
GEOCOMP	Character	2	0	
CHARITER	Character	3	0	
LOGRECNU	Character	6	0	
LOGRECPN	Character	4	0	
PARTREC	Character	4	0	
ANRC	Character	2	0	
AIANACE	Character	4	0	
AIANAFP	Character	5	0	
AIANACC	Character	2	0	
ARTLI	Character	1	0	
BLCK	Character	4	0	
BLCKGR	Character	1	0	
TRACTBNA	Character	6	0	
CONGDIS	Character	2	0	
CONCITCE	Character	1	0	
CONCITFP	Character	5	0	
CONCITCC	Character	2	0	
CONCITSC	Character	2	0	
CMSA	Character	2	0	
CNTY	Character	3	0	
CNTYSC	Character	2	0	
COUSUBCE	Character	3	0	
COUSUBFP	Character	5	0	
COUSUBCC	Character	2	0	
COUSUBSC	Character	2	0	
DIVIS	Character	1	0	
EXTCITIN	Character	1	0	

INTUC	Character	15	0
MSACMSA	Character	4	0
MSACMSAS	Character	2	0
PLACECE	Character	4	0
PLACEFP	Character	5	0
PLACECC	Character	2	0
PLACEDC	Character	1	0
PLACESC	Character	2	0
PMSA	Character	4	0
REG	Character	1	0
STATECE	Character	2	0
STATEFP	Character	2	0
URBANRUR	Character	1	0
URBAREA	Character	4	0
UASC	Character	2	0
SAC1	Character	5	0
SAC2	Character	5	0
SAC3	Character	4	0
SAC4	Character	4	0
SAC5	Character	3	0
SAC6	Character	3	0
SAC7	Character	2	0
SAC8	Character	2	0
SAC9	Character	1	0
SAC10	Character	1	0
AREALAND	Numeric	10	0
AREAWAT	Numeric	10	0
ANPSADPI	Character	66	0
FUNCSTAT	Character	1	0
GCUNI	Character	1	0
HU100	Numeric	9	0
INTPTLAT	Character	9	0
INTPTLNG	Character	10	0
PARTFLAG	Character	1	0
PSADC	Character	2	0
POP100	Numeric	9	0
SPFLAG	Character	1	0
IND_001	Numeric	9	0
IND_002	Numeric	9	0
IND_003	Numeric	9	0
IND_004	Numeric	9	0
IND_005	Numeric	9	0
IND_006	Numeric	9	0
IND_007	Numeric	9	0
IND_008	Numeric	9	0
IND_009	Numeric	9	0

IND_010	Numeric	9	0
IND_011	Numeric	9	0
IND_012	Numeric	9	0
IND_013	Numeric	9	0
IND_014	Numeric	9	0
IND_015	Numeric	9	0
IND_016	Numeric	9	0
IND_017	Numeric	9	0
IND_018	Numeric	9	0
IND_019	Numeric	9	0
IND_020	Numeric	9	0
IND_021	Numeric	9	0
IND_022	Numeric	9	0
IND_023	Numeric	9	0
IND_024	Numeric	9	0
IND_025	Numeric	9	0
IND_026	Numeric	9	0
IND_027	Numeric	9	0
IND_028	Numeric	9	0
IND_029	Numeric	9	0
IND_030	Numeric	9	0
IND_031	Numeric	9	0
IND_032	Numeric	9	0
IND_033	Numeric	9	0
IND_034	Numeric	9	0
IND_035	Numeric	9	0
IND_036	Numeric	9	0
IND_037	Numeric	9	0
IND_038	Numeric	9	0
IND_039	Numeric	9	0
IND_040	Numeric	9	0
IND_041	Numeric	9	0
IND_042	Numeric	9	0
IND_043	Numeric	9	0
IND_044	Numeric	9	0
IND_045	Numeric	9	0
IND_046	Numeric	9	0
IND_047	Numeric	9	0
IND_048	Numeric	9	0
IND_049	Numeric	9	0
IND_050	Numeric	9	0
IND_051	Numeric	9	0
IND_052	Numeric	9	0
IND_053	Numeric	9	0
IND_054	Numeric	9	0
IND_055	Numeric	9	0



IND_056	Numeric	9	0
IND_057	Numeric	9	0
IND_058	Numeric	9	0
IND_059	Numeric	9	0
GROUPNUMB	Character	3	0
Total Size		835	0

INDUSPT2.SUM Alias: INDUSPT2

Structure for database: INDUSPT2.SUM

Number of data records: 0

Date of last update : 11/07/94

Field Name	Field Type	Field Size	Decimal	Description
FILEID	Character	8	0	
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
GEOCOMP	Character	2	0	
CHARITER	Character	3	0	
LOGRECNU	Character	6	0	
LOGRECPN	Character	4	0	
PARTREC	Character	4	0	
ANRC	Character	2	0	
AIANACE	Character	4	0	
AIANAFP	Character	5	0	
AIANACC	Character	2	0	
ARTLI	Character	1	0	
BLCK	Character	4	0	
BLCKGR	Character	1	0	
TRACTBNA	Character	6	0	
CONGDIS	Character	2	0	
CONCITCE	Character	1	0	
CONCITFP	Character	5	0	
CONCITCC	Character	2	0	
CONCITSC	Character	2	0	
CMSA	Character	2	0	
CNTY	Character	3	0	
CNTYSC	Character	2	0	
COUSUBCE	Character	3	0	
COUSUBFP	Character	5	0	
COUSUBCC	Character	2	0	
COUSUBSC	Character	2	0	
DIVIS	Character	1	0	
EXTCITIN	Character	1	0	
INTUC	Character	15	0	
MSACMSA	Character	4	0	
MSACMSAS	Character	2	0	
PLACECE	Character	4	0	
PLACEFP	Character	5	0	
PLACECC	Character	2	0	
PLACEDC	Character	1	0	

PLACESC	Character	2	0
PMSA	Character	4	0
REG	Character	1	0
STATECE	Character	2	0
STATEFP	Character	2	0
URBANRUR	Character	1	0
URBAREA	Character	4	0
UASC	Character	2	0
SAC1	Character	5	0
SAC2	Character	5	0
SAC3	Character	4	0
SAC4	Character	4	0
SAC5	Character	3	0
SAC6	Character	3	0
SAC7	Character	2	0
SAC8	Character	2	0
SAC9	Character	1	0
SAC10	Character	1	0
AREALAND	Numeric	10	0
AREAWAT	Numeric	10	0
ANPSADPI	Character	66	0
FUNCSTAT	Character	1	0
GCUNI	Character	1	0
HU100	Numeric	9	0
INTPTLAT	Character	9	0
INTPTLNG	Character	10	0
PARTFLAG	Character	1	0
PSADC	Character	2	0
POP100	Numeric	9	0
SPFLAG	Character	1	0
IND_060	Numeric	9	0
IND_061	Numeric	9	0
IND_062	Numeric	9	0
IND_063	Numeric	9	0
IND_064	Numeric	9	0
IND_065	Numeric	9	0
IND_066	Numeric	9	0
IND_067	Numeric	9	0
IND_068	Numeric	9	0
IND_069	Numeric	9	0
IND_070	Numeric	9	0
IND_071	Numeric	9	0
IND_072	Numeric	9	0
IND_073	Numeric	9	0
IND_074	Numeric	9	0
IND_075	Numeric	9	0

IND_076	Numeric	9	0
IND_077	Numeric	9	0
IND_078	Numeric	9	0
IND_079	Numeric	9	0
IND_080	Numeric	9	0
IND_081	Numeric	9	0
IND_082	Numeric	9	0
IND_083	Numeric	9	0
IND_084	Numeric	9	0
IND_085	Numeric	9	0
IND_086	Numeric	9	0
IND_087	Numeric	9	0
IND_088	Numeric	9	0
IND_089	Numeric	9	0
IND_090	Numeric	9	0
IND_091	Numeric	9	0
IND_092	Numeric	9	0
IND_093	Numeric	9	0
IND_094	Numeric	9	0
IND_095	Numeric	9	0
IND_096	Numeric	9	0
IND_097	Numeric	9	0
IND_098	Numeric	9	0
IND_099	Numeric	9	0
IND_100	Numeric	9	0
IND_101	Numeric	9	0
IND_102	Numeric	9	0
IND_103	Numeric	9	0
IND_104	Numeric	9	0
IND_105	Numeric	9	0
IND_106	Numeric	9	0
IND_107	Numeric	9	0
IND_108	Numeric	9	0
IND_109	Numeric	9	0
IND_110	Numeric	9	0
IND_111	Numeric	9	0
IND_112	Numeric	9	0
IND_113	Numeric	9	0
IND_114	Numeric	9	0
IND_115	Numeric	9	0
IND_116	Numeric	9	0
IND_117	Numeric	9	0
IND_118	Numeric	9	0
GROUPNUMB	Character	3	0

Total Size            835        0

INDUSPT3.SUM Alias: INDUSPT3

Structure for database: INDUSPT3.SUM

Number of data records: 0

Date of last update : 11/07/94

Field Name	Field Type	Field Size	Decimal	Description
FILEID	Character	8	0	
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
GEOCOMP	Character	2	0	
CHARITER	Character	3	0	
LOGRECNU	Character	6	0	
LOGRECPN	Character	4	0	
PARTREC	Character	4	0	
ANRC	Character	2	0	
AIANACE	Character	4	0	
AIANAFP	Character	5	0	
AIANACC	Character	2	0	
ARTLI	Character	1	0	
BLCK	Character	4	0	
BLCKGR	Character	1	0	
TRACTBNA	Character	6	0	
CONGDIS	Character	2	0	
CONCITCE	Character	1	0	
CONCITFP	Character	5	0	
CONCITCC	Character	2	0	
CONCITSC	Character	2	0	
CMSA	Character	2	0	
CNTY	Character	3	0	
CNTYSC	Character	2	0	
COUSUBCE	Character	3	0	
COUSUBFP	Character	5	0	
COUSUBCC	Character	2	0	
COUSUBSC	Character	2	0	
DIVIS	Character	1	0	
EXTCITIN	Character	1	0	
INTUC	Character	15	0	
MSACMSA	Character	4	0	
MSACMSAS	Character	2	0	
PLACECE	Character	4	0	
PLACEFP	Character	5	0	
PLACECC	Character	2	0	
PLACEDC	Character	1	0	

PLACESC	Character	2	0
PMSA	Character	4	0
REG	Character	1	0
STATECE	Character	2	0
STATEFP	Character	2	0
URBANRUR	Character	1	0
URBAREA	Character	4	0
UASC	Character	2	0
SAC1	Character	5	0
SAC2	Character	5	0
SAC3	Character	4	0
SAC4	Character	4	0
SAC5	Character	3	0
SAC6	Character	3	0
SAC7	Character	2	0
SAC8	Character	2	0
SAC9	Character	1	0
SAC10	Character	1	0
AREALAND	Numeric	10	0
AREAWAT	Numeric	10	0
ANPSADPI	Character	66	0
FUNCSTAT	Character	1	0
GCUNI	Character	1	0
HU100	Numeric	9	0
INTPTLAT	Character	9	0
INTPTLNG	Character	10	0
PARTFLAG	Character	1	0
PSADC	Character	2	0
POP100	Numeric	9	0
SPFLAG	Character	1	0
IND_119	Numeric	9	0
IND_120	Numeric	9	0
IND_121	Numeric	9	0
IND_122	Numeric	9	0
IND_123	Numeric	9	0
IND_124	Numeric	9	0
IND_125	Numeric	9	0
IND_126	Numeric	9	0
IND_127	Numeric	9	0
IND_128	Numeric	9	0
IND_129	Numeric	9	0
IND_130	Numeric	9	0
IND_131	Numeric	9	0
IND_132	Numeric	9	0
IND_133	Numeric	9	0
IND_134	Numeric	9	0

IND_135	Numeric	9	0
IND_136	Numeric	9	0
IND_137	Numeric	9	0
IND_138	Numeric	9	0
IND_139	Numeric	9	0
IND_140	Numeric	9	0
IND_141	Numeric	9	0
IND_142	Numeric	9	0
IND_143	Numeric	9	0
IND_144	Numeric	9	0
IND_145	Numeric	9	0
IND_146	Numeric	9	0
IND_147	Numeric	9	0
IND_148	Numeric	9	0
IND_149	Numeric	9	0
IND_150	Numeric	9	0
IND_151	Numeric	9	0
IND_152	Numeric	9	0
IND_153	Numeric	9	0
IND_154	Numeric	9	0
IND_155	Numeric	9	0
IND_156	Numeric	9	0
IND_157	Numeric	9	0
IND_158	Numeric	9	0
IND_159	Numeric	9	0
IND_160	Numeric	9	0
IND_161	Numeric	9	0
IND_162	Numeric	9	0
IND_163	Numeric	9	0
IND_164	Numeric	9	0
IND_165	Numeric	9	0
IND_166	Numeric	9	0
IND_167	Numeric	9	0
IND_168	Numeric	9	0
IND_169	Numeric	9	0
IND_170	Numeric	9	0
IND_171	Numeric	9	0
IND_172	Numeric	9	0
IND_173	Numeric	9	0
IND_174	Numeric	9	0
IND_175	Numeric	9	0
IND_176	Numeric	9	0
IND_177	Numeric	9	0
GROUPNUMB	Character	3	0
Total Size		835	0

INDUSPT4.SUM Alias: INDUSPT4

Structure for database: INDUSPT4.SUM

Number of data records: 0

Date of last update : 11/18/94

Field Name	Field Type	Field Size	Decimal	Description
FILEID	Character	8	0	
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
GEOCOMP	Character	2	0	
CHARITER	Character	3	0	
LOGRECNU	Character	6	0	
LOGRECPN	Character	4	0	
PARTREC	Character	4	0	
ANRC	Character	2	0	
AIANACE	Character	4	0	
AIANAFP	Character	5	0	
AIANACC	Character	2	0	
ARTLI	Character	1	0	
BLCK	Character	4	0	
BLCKGR	Character	1	0	
TRACTBNA	Character	6	0	
CONGDIS	Character	2	0	
CONCITCE	Character	1	0	
CONCITFP	Character	5	0	
CONCITCC	Character	2	0	
CONCITSC	Character	2	0	
CMSA	Character	2	0	
CNTY	Character	3	0	
CNTYSC	Character	2	0	
COUSUBCE	Character	3	0	
COUSUBFP	Character	5	0	
COUSUBCC	Character	2	0	
COUSUBSC	Character	2	0	
DIVIS	Character	1	0	
EXTCITIN	Character	1	0	
INTUC	Character	15	0	
MSACMSA	Character	4	0	
MSACMSAS	Character	2	0	
PLACECE	Character	4	0	
PLACEFP	Character	5	0	
PLACECC	Character	2	0	
PLACEDC	Character	1	0	



PLACESC	Character	2	0
PMSA	Character	4	0
REG	Character	1	0
STATECE	Character	2	0
STATEFP	Character	2	0
URBANRUR	Character	1	0
URBAREA	Character	4	0
UASC	Character	2	0
SAC1	Character	5	0
SAC2	Character	5	0
SAC3	Character	4	0
SAC4	Character	4	0
SAC5	Character	3	0
SAC6	Character	3	0
SAC7	Character	2	0
SAC8	Character	2	0
SAC9	Character	1	0
SAC10	Character	1	0
AREALAND	Numeric	10	0
AREAWAT	Numeric	10	0
ANPSADPI	Character	66	0
FUNCSTAT	Character	1	0
GCUNI	Character	1	0
HU100	Numeric	9	0
INTPTLAT	Character	9	0
INTPTLNG	Character	10	0
PARTFLAG	Character	1	0
PSADC	Character	2	0
POP100	Numeric	9	0
SPFLAG	Character	1	0
IND_178	Numeric	9	0
IND_179	Numeric	9	0
IND_180	Numeric	9	0
IND_181	Numeric	9	0
IND_182	Numeric	9	0
IND_183	Numeric	9	0
IND_184	Numeric	9	0
IND_185	Numeric	9	0
IND_186	Numeric	9	0
IND_187	Numeric	9	0
IND_188	Numeric	9	0
IND_189	Numeric	9	0
IND_190	Numeric	9	0
IND_191	Numeric	9	0
IND_192	Numeric	9	0
IND_193	Numeric	9	0

IND_194	Numeric	9	0
IND_195	Numeric	9	0
IND_196	Numeric	9	0
IND_197	Numeric	9	0
IND_198	Numeric	9	0
IND_199	Numeric	9	0
IND_200	Numeric	9	0
IND_201	Numeric	9	0
IND_202	Numeric	9	0
IND_203	Numeric	9	0
IND_204	Numeric	9	0
IND_205	Numeric	9	0
IND_206	Numeric	9	0
IND_207	Numeric	9	0
IND_208	Numeric	9	0
IND_209	Numeric	9	0
IND_210	Numeric	9	0
IND_211	Numeric	9	0
IND_212	Numeric	9	0
IND_213	Numeric	9	0
IND_214	Numeric	9	0
IND_215	Numeric	9	0
IND_216	Numeric	9	0
IND_217	Numeric	9	0
IND_218	Numeric	9	0
IND_219	Numeric	9	0
IND_220	Numeric	9	0
IND_221	Numeric	9	0
IND_222	Numeric	9	0
IND_223	Numeric	9	0
IND_224	Numeric	9	0
IND_225	Numeric	9	0
IND_226	Numeric	9	0
IND_227	Numeric	9	0
IND_228	Numeric	9	0
IND_229	Numeric	9	0
IND_230	Numeric	9	0
IND_231	Numeric	9	0
IND_232	Numeric	9	0
IND_233	Numeric	9	0
IND_234	Numeric	9	0
IND_235	Numeric	9	0
IND_236	Numeric	9	0
GROUPNUMB	Character	3	0
Total Size		835	0

The following five databases comprise one logical file where a record consists of one industry GROUP broken down by 501 occupations for a unique geography. These files are aggregated summary files.

OCCUPPT1.SUM Alias: OCCUPPT1

Structure for database: OCCUPPT1.SUM

Number of data records: 0

Date of last update : 11/22/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
OCC_001	Numeric	9	0	
OCC_002	Numeric	9	0	
OCC_003	Numeric	9	0	
OCC_004	Numeric	9	0	
OCC_005	Numeric	9	0	
OCC_006	Numeric	9	0	
OCC_007	Numeric	9	0	
OCC_008	Numeric	9	0	
OCC_009	Numeric	9	0	
OCC_010	Numeric	9	0	
OCC_011	Numeric	9	0	
OCC_012	Numeric	9	0	
OCC_013	Numeric	9	0	
OCC_014	Numeric	9	0	
OCC_015	Numeric	9	0	
OCC_016	Numeric	9	0	
OCC_017	Numeric	9	0	
OCC_018	Numeric	9	0	
OCC_019	Numeric	9	0	
OCC_020	Numeric	9	0	
OCC_021	Numeric	9	0	
OCC_022	Numeric	9	0	
OCC_023	Numeric	9	0	
OCC_024	Numeric	9	0	
OCC_025	Numeric	9	0	
OCC_026	Numeric	9	0	
OCC_027	Numeric	9	0	
OCC_028	Numeric	9	0	
OCC_029	Numeric	9	0	
OCC_030	Numeric	9	0	

OCC_031	Numeric	9	0
OCC_032	Numeric	9	0
OCC_033	Numeric	9	0
OCC_034	Numeric	9	0
OCC_035	Numeric	9	0
OCC_036	Numeric	9	0
OCC_037	Numeric	9	0
OCC_038	Numeric	9	0
OCC_039	Numeric	9	0
OCC_040	Numeric	9	0
OCC_041	Numeric	9	0
OCC_042	Numeric	9	0
OCC_043	Numeric	9	0
OCC_044	Numeric	9	0
OCC_045	Numeric	9	0
OCC_046	Numeric	9	0
OCC_047	Numeric	9	0
OCC_048	Numeric	9	0
OCC_049	Numeric	9	0
OCC_050	Numeric	9	0
OCC_051	Numeric	9	0
OCC_052	Numeric	9	0
OCC_053	Numeric	9	0
OCC_054	Numeric	9	0
OCC_055	Numeric	9	0
OCC_056	Numeric	9	0
OCC_057	Numeric	9	0
OCC_058	Numeric	9	0
OCC_059	Numeric	9	0
OCC_060	Numeric	9	0
OCC_061	Numeric	9	0
OCC_062	Numeric	9	0
OCC_063	Numeric	9	0
OCC_064	Numeric	9	0
OCC_065	Numeric	9	0
OCC_066	Numeric	9	0
OCC_067	Numeric	9	0
OCC_068	Numeric	9	0
OCC_069	Numeric	9	0
OCC_070	Numeric	9	0
OCC_071	Numeric	9	0
OCC_072	Numeric	9	0
OCC_073	Numeric	9	0
OCC_074	Numeric	9	0
OCC_075	Numeric	9	0
OCC_076	Numeric	9	0

OCC_077	Numeric	9	0
OCC_078	Numeric	9	0
OCC_079	Numeric	9	0
OCC_080	Numeric	9	0
OCC_081	Numeric	9	0
OCC_082	Numeric	9	0
OCC_083	Numeric	9	0
OCC_084	Numeric	9	0
OCC_085	Numeric	9	0
OCC_086	Numeric	9	0
OCC_087	Numeric	9	0
OCC_088	Numeric	9	0
OCC_089	Numeric	9	0
OCC_090	Numeric	9	0
OCC_091	Numeric	9	0
OCC_092	Numeric	9	0
OCC_093	Numeric	9	0
OCC_094	Numeric	9	0
OCC_095	Numeric	9	0
OCC_096	Numeric	9	0
OCC_097	Numeric	9	0
OCC_098	Numeric	9	0
OCC_099	Numeric	9	0
OCC_100	Numeric	9	0
GROUPNUMB	Character	2	0
Total Size		910	0

OCCUPPT2.SUM Alias: OCCUPPT2

Structure for database: OCCUPPT2.SUM

Number of data records: 0

Date of last update : 11/21/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
OCC_101	Numeric	9	0	
OCC_102	Numeric	9	0	
OCC_103	Numeric	9	0	
OCC_104	Numeric	9	0	
OCC_105	Numeric	9	0	
OCC_106	Numeric	9	0	
OCC_107	Numeric	9	0	
OCC_108	Numeric	9	0	
OCC_109	Numeric	9	0	
OCC_110	Numeric	9	0	
OCC_111	Numeric	9	0	
OCC_112	Numeric	9	0	
OCC_113	Numeric	9	0	
OCC_114	Numeric	9	0	
OCC_115	Numeric	9	0	
OCC_116	Numeric	9	0	
OCC_117	Numeric	9	0	
OCC_118	Numeric	9	0	
OCC_119	Numeric	9	0	
OCC_120	Numeric	9	0	
OCC_121	Numeric	9	0	
OCC_122	Numeric	9	0	
OCC_123	Numeric	9	0	
OCC_124	Numeric	9	0	
OCC_125	Numeric	9	0	
OCC_126	Numeric	9	0	
OCC_127	Numeric	9	0	
OCC_128	Numeric	9	0	
OCC_129	Numeric	9	0	
OCC_130	Numeric	9	0	
OCC_131	Numeric	9	0	
OCC_132	Numeric	9	0	
OCC_133	Numeric	9	0	
OCC_134	Numeric	9	0	

OCC_135	Numeric	9	0
OCC_136	Numeric	9	0
OCC_137	Numeric	9	0
OCC_138	Numeric	9	0
OCC_139	Numeric	9	0
OCC_140	Numeric	9	0
OCC_141	Numeric	9	0
OCC_142	Numeric	9	0
OCC_143	Numeric	9	0
OCC_144	Numeric	9	0
OCC_145	Numeric	9	0
OCC_146	Numeric	9	0
OCC_147	Numeric	9	0
OCC_148	Numeric	9	0
OCC_149	Numeric	9	0
OCC_150	Numeric	9	0
OCC_151	Numeric	9	0
OCC_152	Numeric	9	0
OCC_153	Numeric	9	0
OCC_154	Numeric	9	0
OCC_155	Numeric	9	0
OCC_156	Numeric	9	0
OCC_157	Numeric	9	0
OCC_158	Numeric	9	0
OCC_159	Numeric	9	0
OCC_160	Numeric	9	0
OCC_161	Numeric	9	0
OCC_162	Numeric	9	0
OCC_163	Numeric	9	0
OCC_164	Numeric	9	0
OCC_165	Numeric	9	0
OCC_166	Numeric	9	0
OCC_167	Numeric	9	0
OCC_168	Numeric	9	0
OCC_169	Numeric	9	0
OCC_170	Numeric	9	0
OCC_171	Numeric	9	0
OCC_172	Numeric	9	0
OCC_173	Numeric	9	0
OCC_174	Numeric	9	0
OCC_175	Numeric	9	0
OCC_176	Numeric	9	0
OCC_177	Numeric	9	0
OCC_178	Numeric	9	0
OCC_179	Numeric	9	0
OCC_180	Numeric	9	0

OCC_181	Numeric	9	0
OCC_182	Numeric	9	0
OCC_183	Numeric	9	0
OCC_184	Numeric	9	0
OCC_185	Numeric	9	0
OCC_186	Numeric	9	0
OCC_187	Numeric	9	0
OCC_188	Numeric	9	0
OCC_189	Numeric	9	0
OCC_190	Numeric	9	0
OCC_191	Numeric	9	0
OCC_192	Numeric	9	0
OCC_193	Numeric	9	0
OCC_194	Numeric	9	0
OCC_195	Numeric	9	0
OCC_196	Numeric	9	0
OCC_197	Numeric	9	0
OCC_198	Numeric	9	0
OCC_199	Numeric	9	0
OCC_200	Numeric	9	0
GROUPNUMB	Character	2	0
Total Size		910	0



OCCUPPT3.SUM Alias: OCCUPPT3

Structure for database: OCCUPPT3.SUM

Number of data records: 0

Date of last update : 11/21/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
OCC_201	Numeric	9	0	
OCC_202	Numeric	9	0	
OCC_203	Numeric	9	0	
OCC_204	Numeric	9	0	
OCC_205	Numeric	9	0	
OCC_206	Numeric	9	0	
OCC_207	Numeric	9	0	
OCC_208	Numeric	9	0	
OCC_209	Numeric	9	0	
OCC_210	Numeric	9	0	
OCC_211	Numeric	9	0	
OCC_212	Numeric	9	0	
OCC_213	Numeric	9	0	
OCC_214	Numeric	9	0	
OCC_215	Numeric	9	0	
OCC_216	Numeric	9	0	
OCC_217	Numeric	9	0	
OCC_218	Numeric	9	0	
OCC_219	Numeric	9	0	
OCC_220	Numeric	9	0	
OCC_221	Numeric	9	0	
OCC_222	Numeric	9	0	
OCC_223	Numeric	9	0	
OCC_224	Numeric	9	0	
OCC_225	Numeric	9	0	
OCC_226	Numeric	9	0	
OCC_227	Numeric	9	0	
OCC_228	Numeric	9	0	
OCC_229	Numeric	9	0	
OCC_230	Numeric	9	0	
OCC_231	Numeric	9	0	
OCC_232	Numeric	9	0	

OCC_233	Numeric	9	0
OCC_234	Numeric	9	0
OCC_235	Numeric	9	0
OCC_236	Numeric	9	0
OCC_237	Numeric	9	0
OCC_238	Numeric	9	0
OCC_239	Numeric	9	0
OCC_240	Numeric	9	0
OCC_241	Numeric	9	0
OCC_242	Numeric	9	0
OCC_243	Numeric	9	0
OCC_244	Numeric	9	0
OCC_245	Numeric	9	0
OCC_246	Numeric	9	0
OCC_247	Numeric	9	0
OCC_248	Numeric	9	0
OCC_249	Numeric	9	0
OCC_250	Numeric	9	0
OCC_251	Numeric	9	0
OCC_252	Numeric	9	0
OCC_253	Numeric	9	0
OCC_254	Numeric	9	0
OCC_255	Numeric	9	0
OCC_256	Numeric	9	0
OCC_257	Numeric	9	0
OCC_258	Numeric	9	0
OCC_259	Numeric	9	0
OCC_260	Numeric	9	0
OCC_261	Numeric	9	0
OCC_262	Numeric	9	0
OCC_263	Numeric	9	0
OCC_264	Numeric	9	0
OCC_265	Numeric	9	0
OCC_266	Numeric	9	0
OCC_267	Numeric	9	0
OCC_268	Numeric	9	0
OCC_269	Numeric	9	0
OCC_270	Numeric	9	0
OCC_271	Numeric	9	0
OCC_272	Numeric	9	0
OCC_273	Numeric	9	0
OCC_274	Numeric	9	0
OCC_275	Numeric	9	0
OCC_276	Numeric	9	0
OCC_277	Numeric	9	0
OCC_278	Numeric	9	0

OCC_279	Numeric	9	0
OCC_280	Numeric	9	0
OCC_281	Numeric	9	0
OCC_282	Numeric	9	0
OCC_283	Numeric	9	0
OCC_284	Numeric	9	0
OCC_285	Numeric	9	0
OCC_286	Numeric	9	0
OCC_287	Numeric	9	0
OCC_288	Numeric	9	0
OCC_289	Numeric	9	0
OCC_290	Numeric	9	0
OCC_291	Numeric	9	0
OCC_292	Numeric	9	0
OCC_293	Numeric	9	0
OCC_294	Numeric	9	0
OCC_295	Numeric	9	0
OCC_296	Numeric	9	0
OCC_297	Numeric	9	0
OCC_298	Numeric	9	0
OCC_299	Numeric	9	0
OCC_300	Numeric	9	0
GROUPNUMB	Character	2	0
Total Size		910	0

OCCUPPT4.SUM Alias: OCCUPPT4

Structure for database: OCCUPPT4.SUM

Number of data records: 0

Date of last update : 11/21/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
OCC_301	Numeric	9	0	
OCC_302	Numeric	9	0	
OCC_303	Numeric	9	0	
OCC_304	Numeric	9	0	
OCC_305	Numeric	9	0	
OCC_306	Numeric	9	0	
OCC_307	Numeric	9	0	
OCC_308	Numeric	9	0	
OCC_309	Numeric	9	0	
OCC_310	Numeric	9	0	
OCC_311	Numeric	9	0	
OCC_312	Numeric	9	0	
OCC_313	Numeric	9	0	
OCC_314	Numeric	9	0	
OCC_315	Numeric	9	0	
OCC_316	Numeric	9	0	
OCC_317	Numeric	9	0	
OCC_318	Numeric	9	0	
OCC_319	Numeric	9	0	
OCC_320	Numeric	9	0	
OCC_321	Numeric	9	0	
OCC_322	Numeric	9	0	
OCC_323	Numeric	9	0	
OCC_324	Numeric	9	0	
OCC_325	Numeric	9	0	
OCC_326	Numeric	9	0	
OCC_327	Numeric	9	0	
OCC_328	Numeric	9	0	
OCC_329	Numeric	9	0	
OCC_330	Numeric	9	0	
OCC_331	Numeric	9	0	
OCC_332	Numeric	9	0	

OCC_333	Numeric	9	0
OCC_334	Numeric	9	0
OCC_335	Numeric	9	0
OCC_336	Numeric	9	0
OCC_337	Numeric	9	0
OCC_338	Numeric	9	0
OCC_339	Numeric	9	0
OCC_340	Numeric	9	0
OCC_341	Numeric	9	0
OCC_342	Numeric	9	0
OCC_343	Numeric	9	0
OCC_344	Numeric	9	0
OCC_345	Numeric	9	0
OCC_346	Numeric	9	0
OCC_347	Numeric	9	0
OCC_348	Numeric	9	0
OCC_349	Numeric	9	0
OCC_350	Numeric	9	0
OCC_351	Numeric	9	0
OCC_352	Numeric	9	0
OCC_353	Numeric	9	0
OCC_354	Numeric	9	0
OCC_355	Numeric	9	0
OCC_356	Numeric	9	0
OCC_357	Numeric	9	0
OCC_358	Numeric	9	0
OCC_359	Numeric	9	0
OCC_360	Numeric	9	0
OCC_361	Numeric	9	0
OCC_362	Numeric	9	0
OCC_363	Numeric	9	0
OCC_364	Numeric	9	0
OCC_365	Numeric	9	0
OCC_366	Numeric	9	0
OCC_367	Numeric	9	0
OCC_368	Numeric	9	0
OCC_369	Numeric	9	0
OCC_370	Numeric	9	0
OCC_371	Numeric	9	0
OCC_372	Numeric	9	0
OCC_373	Numeric	9	0
OCC_374	Numeric	9	0
OCC_375	Numeric	9	0
OCC_376	Numeric	9	0
OCC_377	Numeric	9	0
OCC_378	Numeric	9	0

OCC_379	Numeric	9	0
OCC_380	Numeric	9	0
OCC_381	Numeric	9	0
OCC_382	Numeric	9	0
OCC_383	Numeric	9	0
OCC_384	Numeric	9	0
OCC_385	Numeric	9	0
OCC_386	Numeric	9	0
OCC_387	Numeric	9	0
OCC_388	Numeric	9	0
OCC_389	Numeric	9	0
OCC_390	Numeric	9	0
OCC_391	Numeric	9	0
OCC_392	Numeric	9	0
OCC_393	Numeric	9	0
OCC_394	Numeric	9	0
OCC_395	Numeric	9	0
OCC_396	Numeric	9	0
OCC_397	Numeric	9	0
OCC_398	Numeric	9	0
OCC_399	Numeric	9	0
OCC_400	Numeric	9	0
GROUPNUMB	Character	2	0
Total Size		910	0

OCCUPPT5.SUM Alias: OCCUPPT5

Structure for database: OCCUPPT5.SUM

Number of data records: 0

Date of last update : 11/21/94

Field Name	Field Type	Field Size	Decimal	Description
STUSAB	Character	2	0	
SUMLEV	Character	3	0	
STATEFP	Character	2	0	
OCC_401	Numeric	9	0	
OCC_402	Numeric	9	0	
OCC_403	Numeric	9	0	
OCC_404	Numeric	9	0	
OCC_405	Numeric	9	0	
OCC_406	Numeric	9	0	
OCC_407	Numeric	9	0	
OCC_408	Numeric	9	0	
OCC_409	Numeric	9	0	
OCC_410	Numeric	9	0	
OCC_411	Numeric	9	0	
OCC_412	Numeric	9	0	
OCC_413	Numeric	9	0	
OCC_414	Numeric	9	0	
OCC_415	Numeric	9	0	
OCC_416	Numeric	9	0	
OCC_417	Numeric	9	0	
OCC_418	Numeric	9	0	
OCC_419	Numeric	9	0	
OCC_420	Numeric	9	0	
OCC_421	Numeric	9	0	
OCC_422	Numeric	9	0	
OCC_423	Numeric	9	0	
OCC_424	Numeric	9	0	
OCC_425	Numeric	9	0	
OCC_426	Numeric	9	0	
OCC_427	Numeric	9	0	
OCC_428	Numeric	9	0	
OCC_429	Numeric	9	0	
OCC_430	Numeric	9	0	
OCC_431	Numeric	9	0	
OCC_432	Numeric	9	0	

OCC_433	Numeric	9	0
OCC_434	Numeric	9	0
OCC_435	Numeric	9	0
OCC_436	Numeric	9	0
OCC_437	Numeric	9	0
OCC_438	Numeric	9	0
OCC_439	Numeric	9	0
OCC_440	Numeric	9	0
OCC_441	Numeric	9	0
OCC_442	Numeric	9	0
OCC_443	Numeric	9	0
OCC_444	Numeric	9	0
OCC_445	Numeric	9	0
OCC_446	Numeric	9	0
OCC_447	Numeric	9	0
OCC_448	Numeric	9	0
OCC_449	Numeric	9	0
OCC_450	Numeric	9	0
OCC_451	Numeric	9	0
OCC_452	Numeric	9	0
OCC_453	Numeric	9	0
OCC_454	Numeric	9	0
OCC_455	Numeric	9	0
OCC_456	Numeric	9	0
OCC_457	Numeric	9	0
OCC_458	Numeric	9	0
OCC_459	Numeric	9	0
OCC_460	Numeric	9	0
OCC_461	Numeric	9	0
OCC_462	Numeric	9	0
OCC_463	Numeric	9	0
OCC_464	Numeric	9	0
OCC_465	Numeric	9	0
OCC_466	Numeric	9	0
OCC_467	Numeric	9	0
OCC_468	Numeric	9	0
OCC_469	Numeric	9	0
OCC_470	Numeric	9	0
OCC_471	Numeric	9	0
OCC_472	Numeric	9	0
OCC_473	Numeric	9	0
OCC_474	Numeric	9	0
OCC_475	Numeric	9	0
OCC_476	Numeric	9	0
OCC_477	Numeric	9	0
OCC_478	Numeric	9	0



OCC_479	Numeric	9	0
OCC_480	Numeric	9	0
OCC_481	Numeric	9	0
OCC_482	Numeric	9	0
OCC_483	Numeric	9	0
OCC_484	Numeric	9	0
OCC_485	Numeric	9	0
OCC_486	Numeric	9	0
OCC_487	Numeric	9	0
OCC_488	Numeric	9	0
OCC_489	Numeric	9	0
OCC_490	Numeric	9	0
OCC_491	Numeric	9	0
OCC_492	Numeric	9	0
OCC_493	Numeric	9	0
OCC_494	Numeric	9	0
OCC_495	Numeric	9	0
OCC_496	Numeric	9	0
OCC_497	Numeric	9	0
OCC_498	Numeric	9	0
OCC_499	Numeric	9	0
OCC_500	Numeric	9	0
OCC_501	Numeric	9	0
GROUPNUMB	Character	2	0
Total Size		919	0

The following file contains a list of industries, industry groups and associated codes.

INDUSTRY.DBF Alias: INDUSTRY

Structure for database: INDUSTRY.DBF

Number of data records: 269

Date of last update : 11/21/94

Field Name	Field Type	Field Size	Decimal	Description
NAME	Character	62	0	
CEN_CODE	Character	3	0	
DATAITEM	Logical	1	0	
INDUCODE	Character	3	0	
INDU_CODE	Character	3	0	
START_CODE	Character	3	0	
END_CODE	Character	3	0	
CEN_START	Character	3	0	
CEN_END	Character	3	0	
GROUPNUMB	Character	2	0	
Total Size		87	0	

The following file contains a list of occupations, occupation groups and associated codes

OCCUPATN.DBF Alias: OCCUPATN

Structure for database: OCCUPATN.DBF

Number of data records: 518

Date of last update : 09/20/94

Field Name	Field Type	Field Size	Decimal	Description
TEXT	Character	110	0	
DATAITEM	Logical	1	0	
OCC_CODE	Character	3	0	
START_CODE	Character	3	0	
END_CODE	Character	3	0	
CEN_CODE	Character	3	0	
CEN_START	Character	3	0	
CEN_END	Character	3	0	
GROUP	Logical	1	0	
GROUPNUMB	Character	2	0	
Total Size		142	0	

The following file is used for menu of states that appears in GO SOFTWARE

STATES.DBF Alias: STATES

Structure for database: STATES.DBF

Number of data records: 56

Date of last update : 09/06/94

Field Name	Field Type	Field Size	Decimal	Description
NAME	Character	24	0	
F_STATE	Character	2	0	
Total Size		27	0	

## APPENDIX A.

### Area Classifications

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These definitions are for many geographic entities and concepts that the Census Bureau will include in its 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.

## 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.

## 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 presentation 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"

## 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.

#### 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.

## 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.

## 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.

On computer-readable files, area measurements are shown to six decimal places; the decimal point is implied.

APPENDIX B.  
Definitions of Subject Characteristics

CONTENTS

SUBJECT CHARACTERISTICS

Actual Hours Worked Last Week (See Employment Status)  
Age  
Civilian Labor Force (See Employment Status)  
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Employment Status  
Industry, Occupation, and Class of Worker  
Occupation (See Industry, Occupation, and Class of Worker)  
Reference Week  
School Enrollment and Labor Force Status  
Sex  
Worker (See Employment Status, see Industry, Occupation, and Class of Worker)

SUBJECT 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.)

## 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 9<sup>th</sup> 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.

## 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 236 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 501 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 501 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.

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.

## 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.

## 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.

## 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 householder 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 has been asked of the total population in every census.

## APPENDIX C. Accuracy of the Data

### CONTENTS

Confidentiality of the Data  
Editing of Unacceptable Data  
Errors in the Data  
Estimation Procedure  
Sample Design

### INTRODUCTION

The data contained in this data product are based on the 1990 census sample. The data are estimates of the actual figures that would have been obtained from a complete count. Estimates derived from a 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, and is introduced as a result of errors that may occur during the collection and processing phases of the census. Provided below is a detailed discussion of both types of errors and a description of the estimation procedures.

### SAMPLE DESIGN

Every person and housing unit in the United States was asked certain basic demographic and housing questions (for example, race, age, marital status, 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 list 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 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 census tracts and block numbering areas (BNA's) 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 (governmental units with a population less than 2,500). Housing units within census tracts and BNA's 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 an assigned 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.

## 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 is 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.

## ERRORS IN THE DATA

Since statistics in this data product 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, etc. 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 possible samples. Described below is the method of calculating standard errors and confidence intervals for the data in this product.

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 appendix.

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.

### Calculation of Standard Errors

Totals and Percentages--Tables A through C in this appendix contain the information necessary to calculate the standard errors of sample estimates in this data product. To calculate the standard error, it is necessary to know the basic standard error for the characteristic (given in table A or B) that would result under a simple random sample design (of persons, households, or housing units) and estimation technique; the design factor for the particular characteristic estimated (given in table C); and the number of persons or housing units in the tabulation area and the percent of these in the sample. For

machine-readable products, the percent-in-sample is included in a data matrix on the file for each tabulation area. In printed reports, the percent-in-sample is provided in data tables at the end of the statistical tables that compose the report. The design factors reflect the effects of the actual sample design and complex ratio estimation procedure used for the 1990 census. Tape purchasers will receive table C, the table of design factors, as a supplement to the technical documentation. Table C is included in this appendix for printed reports.

The steps given below should be used to calculate the standard error of an estimate of a total or a percentage contained in this product. A percentage is defined here as a ratio of a numerator to a denominator where the numerator is a subset of the denominator. For example, the proportion of Black teachers is the ratio of Black teachers to all teachers.

1. Obtain the standard error from table A or B (or use the formula given below the table) for the estimated total or percentage, respectively.
2. Find the geographic area to which the estimate applies in the appropriate percent-in-sample table or appropriate matrix, and obtain the person or housing unit "percent-in-sample" figure for this area. Use the person "percent-in-sample" figure for person and family characteristics. Use the housing unit "percent-in-sample" figure for housing unit characteristics.
3. Use table C to obtain the design factor for the characteristic (for example, employment status, school enrollment) and the range that contains the percent-in-sample with which you are working. Multiply the basic standard error by this factor.

The unadjusted standard errors of zero estimates or of very small estimated totals or percentages will approach zero. This is also the case for very large percentages or estimated totals that are close to the size of the tabulation areas to which they correspond. Nevertheless, these estimated totals and percentages still are subject to sampling and nonsampling variability, and an estimated standard error of zero (or a very small standard error) is not appropriate. For estimated percentages that are less than 2 or greater than 98, use the basic standard errors in table B that appear in the "2 or 98" row. For an estimated total that is less than 50 or within 50 of the total size of the tabulation area, use a basic standard error of 16.

An illustration of the use of the tables is given in the section entitled "Use of Tables to Compute Standard Errors."

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:

1. 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.
2. 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:

(See printed text for formulas.)

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.

(See printed text for formulas.)

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, cumulate 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

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 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 appendix 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 the 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.

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

#### Use of Tables to Compute Standard Errors

The following is a hypothetical example of how to compute a standard error of a total and a percentage. Suppose a particular data table shows that for City A 9,948 persons out of all 15,888 persons age 16 years and over were in the civilian labor force. The percent-in-sample table lists City A with a percent-in-sample of 16.0 percent (Persons column). The column in table C which includes 16.0 percent-in-sample shows the design factor to be 1.1 for "Employment status."

The basic standard error for the estimated total 9,948 may be obtained from table A or from the formula given below table A. In order to avoid interpolation, the use of the formula will be demonstrated here. Suppose that the total population of City A was 21,220. The formula for the basic standard error, SE, is

(See printed text for formulas.)

The standard error of the estimated 9,948 persons 16 years and over who were in the civilian labor force is found by multiplying the basic standard error 163 by the design factor, 1.1 from table C. This yields an estimated standard error of 179 for the total number of persons 16 years and over in City A who were in the civilian labor force.

The estimated percent of persons 16 years and over who were in the civilian labor force in City A is 62.6. From table B, the unadjusted standard error is found to be approximately 0.85 percentage points. The standard error for the estimated 62.6 percent of persons 16 years and over who were in the civilian labor force is  $0.85 \times 1.1 = 0.94$  percentage points.

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 when the estimated standard error is one percentage point (i.e., 1.00) or more.

In the previous example, the standard error of the 9,948 persons 16 years and over in City A who were in the civilian labor force was found to be 179. Thus, a 90 percent confidence interval for this estimated total is found to be:

$$[9,948 - 1.645(179)] \text{ to } [9,948 + 1.645(179)]$$

or

$$9,654 \text{ to } 10,242$$

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 City B age 16 years and over who were in the civilian labor force was 9,314 and the total number of persons 16 years and over was 16,666. Further suppose the population of City B was 25,225. Thus, the estimated percentage of persons 16 years and over who were in the civilian labor force is 55.9 percent. The unadjusted standard error determined using the formula provided at the bottom of table B is 0.86 percentage points. We find that City B had a percent-in-sample of 15.7. The range which includes 15.7 percent-in-sample in table C shows the design factor to be 1.1 for "Employment Status." Thus, the approximate standard error of the percentage (55.9 percent) is  $0.86 \times 1.1 = 0.95$  percentage points.

Now suppose that one wished to obtain the standard error of the difference between City A and City B of the percentages 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:

$$62.6 - 55.9 = 6.7 \text{ percent.}$$

Using the results of the previous example:

(See printed text for formulas.)

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

(See printed text for formulas.)

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.

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 City A to the estimate of persons who were 16 years and over and who were in the civilian labor force in City B. The ratio of the two estimates of interest is:

$$9948 / 9314 = 1.07$$

(See printed text for formulas.)

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

(See printed text for formulas.)

## ESTIMATION PROCEDURE

The estimates which appear in this publication 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 family member 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 weights was performed in geographically defined "weighting areas." Weighting areas generally were formed of contiguous geographic units which agreed closely with census tabulation areas within counties. Weighting areas were required to have a minimum sample of 400 persons. Weighting areas never crossed State or county boundaries. In small counties with a sample count 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; sampling rate less than 1-in-2. The third stage used the dichotomy householders/nonhouseholders. The fourth stage applied 180 aggregate age-sex-race-Hispanic origin categories. The stages were as follows:



PERSONS

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 persons 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/RACE/HISPANIC ORIGIN

Group White  
Persons of Hispanic Origin  
Male

- 1 0 to 4 years
- 2 5 to 14 years
- 3 15 to 19 years
- 4 20 to 24 years
- 5 25 to 34 years
- 6 35 to 54 years
- 7 55 to 64 years

|  |   |
|--|---|
| 8  | 65 to 74 years  |
| 9  | 75 years and over   |
| Female   |   |
| 10-18  | Same age categories as groups 1 through 9.                      |
| Persons Not of Hispanic Origin                     |   |
| 19-36  | Same sex and age 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 complete count 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 complete census count 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.



## STAGE II: SAMPLING RATE CATEGORY

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

## STAGE III: UNITS IN STRUCTURE

- 1 Single unit structure
- 2 Multi-unit structure consisting of fewer than 10 individual units
- 3 Multi-unit structure consisting of 10 or more individual units

## STAGE IV: TENURE/RACE AND HISPANIC ORIGIN OF HOUSEHOLDER/VALUE OR RENT

| Group | Owner  |
|-------|--|
|       | White Householder  |
|       | Householder of Hispanic Origin                               |
|       | Value  |
| 1     | Less than \$20,000   |
| 2     | \$20,000 to \$39,999   |
| 3     | \$40,000 to \$59,999   |
| 4     | \$60,000 to \$79,999   |
| 5     | \$80,000 to \$99,999   |
| 6     | \$100,000 to \$149,999                                       |
| 7     | \$150,000 to \$249,999                                       |
| 8     | \$250,000 to \$299,999                                       |
| 9     | \$300,000 or more  |
| 10    | Other(1)   |
|       | Householder Not of Hispanic Origin                           |
| 11-20 | Same value categories as groups 1 through 10                 |
|       | Black Householder  |
| 21-40 | Same Hispanic origin/value categories as groups 1 through 20 |
|       | Asian or Pacific Islander Householder                        |
| 41-60 | Same Hispanic origin/value categories as groups 1 through 20 |
|       | American Indian, Eskimo, or Aleut Householder                |
| 61-80 | Same Hispanic origin/value categories as groups 1 through 20 |

81-100      Householder of Other Race  
              Same Hispanic origin/value categories as  
              groups 1 through 20

Renter

White Householder

Householder of Hispanic origin

Rent

101          Less than \$100  
102          \$100 to \$199  
103          \$200 to \$299  
104          \$300 to \$399  
105          \$400 to \$499  
106          \$500 to \$599  
107          \$600 to \$749  
108          \$750 to \$999  
109          \$1,000 or more  
110          No cash rent

Householder Not of Hispanic Origin

111-120      Same rent categories as groups 101 through 110

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 categories as  
              groups 101 through 120

American Indian, Eskimo, or Aleut Householder

161-180      Same Hispanic origin/rent categories as  
              groups 101 through 120

Householder of Other Race

181-200      Same Hispanic origin/rent categories as  
              groups 101 through 120

Vacant Housing Units

1          Vacant for rent  
2          Vacant for sale  
3          Other vacant

(1) Value 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.

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 groups before sampling, and if 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 characteristics 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 complete count figures for the population and housing unit groups used in the estimation procedure.

### 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 completely eliminate 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. In the fall of 1989, local officials were given the opportunity to examine block counts of address listings (local review) and identify possible errors. Prior to mailout, 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 improved further 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 person 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 questionnaires 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.

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 Table A. Unadjusted Standard Error for Estimated Totals

[Based on a 1-in-6 simple random sample]

| Estimated<br>Total(1) | Size of publication area(2) |       |       |       |        |        |        |         |
|-----------------------|-----------------------------|-------|-------|-------|--------|--------|--------|---------|
|                       | 500                         | 1,000 | 2,500 | 5,000 | 10,000 | 25,000 | 50,000 | 100,000 |
| 50                    | 16                          | 16    | 16    | 16    | 16     | 16     | 16     | 16      |
| 100                   | 20                          | 21    | 22    | 22    | 22     | 22     | 22     | 22      |
| 250                   | 25                          | 30    | 35    | 35    | 35     | 35     | 35     | 35      |
| 500                   | -                           | 35    | 45    | 45    | 50     | 50     | 50     | 50      |
| 1,000                 | -                           | -     | 55    | 65    | 65     | 70     | 70     | 70      |
| 2,500                 | -                           | -     | -     | 80    | 95     | 110    | 110    | 110     |
| 5,000                 | -                           | -     | -     | -     | 110    | 140    | 150    | 150     |
| 10,000                | -                           | -     | -     | -     | -      | 170    | 200    | 210     |
| 15,000                | -                           | -     | -     | -     | -      | 170    | 230    | 250     |
| 25,000                | -                           | -     | -     | -     | -      | -      | 250    | 310     |
| 75,000                | -                           | -     | -     | -     | -      | -      | -      | 310     |
| 100,000               | -                           | -     | -     | -     | -      | -      | -      | -       |
| 250,000               | -                           | -     | -     | -     | -      | -      | -      | -       |
| 500,000               | -                           | -     | -     | -     | -      | -      | -      | -       |
| 1,000,000             | -                           | -     | -     | -     | -      | -      | -      | -       |
| 5,000,000             | -                           | -     | -     | -     | -      | -      | -      | -       |
| 10,000,000            | -                           | -     | -     | -     | -      | -      | -      | -       |

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| Estimated<br>Total(1) | Size of publication area(2) |         |           |           |            |            |
|-----------------------|-----------------------------|---------|-----------|-----------|------------|------------|
|                       | 250,000                     | 500,000 | 1,000,000 | 5,000,000 | 10,000,000 | 25,000,000 |
| 50                    | 16                          | 16      | 16        | 16        | 16         | 16         |
| 100                   | 22                          | 22      | 22        | 22        | 22         | 22         |
| 250                   | 35                          | 35      | 35        | 35        | 35         | 35         |
| 500                   | 50                          | 50      | 50        | 50        | 50         | 50         |
| 1,000                 | 70                          | 70      | 70        | 70        | 70         | 70         |
| 2,500                 | 110                         | 110     | 110       | 110       | 110        | 110        |

|            |     |     |       |       |       |       |
|------------|-----|-----|-------|-------|-------|-------|
| 5,000      | 160 | 160 | 160   | 160   | 160   | 160   |
| 10,000     | 220 | 220 | 220   | 220   | 220   | 220   |
| 15,000     | 270 | 270 | 270   | 270   | 270   | 270   |
| 25,000     | 340 | 350 | 350   | 350   | 350   | 350   |
| 75,000     | 510 | 570 | 590   | 610   | 610   | 610   |
| 100,000    | 550 | 630 | 670   | 700   | 700   | 710   |
| 250,000    | -   | 790 | 970   | 1 090 | 1 100 | 1 100 |
| 500,000    | -   | -   | 1 120 | 1 500 | 1 540 | 1 570 |
| 1,000,000  | -   | -   | -     | 2 000 | 2 120 | 2 190 |
| 5,000,000  | -   | -   | -     | -     | 3 540 | 4 470 |
| 10,000,000 | -   | -   | -     | -     | -     | 5 480 |

(1) For 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.

(See printed text for formulas.)

(2) The total count of persons in the area if the estimated total is a person characteristic, or the total count of housing units in the area if the estimated total is a housing unit characteristic.

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Table B. Unadjusted Standard Error in Percentage Points for Estimated Percentage

[Based on a 1-in-6 simple random sample]

Base of percentage(1)

Estimated Percentage

|          | 500 | 750 | 1,000 | 1,500 | 2,500 | 5,000 | 7,500 | 10,000 |
|----------|-----|-----|-------|-------|-------|-------|-------|--------|
| 2 or 98  | 1.4 | 1.1 | 1.0   | 0.8   | 0.6   | 0.4   | 0.4   | 0.3    |
| 5 or 95  | 2.2 | 1.8 | 1.5   | 1.3   | 1.0   | 0.7   | 0.6   | 0.5    |
| 10 or 90 | 3.0 | 2.4 | 2.1   | 1.7   | 1.3   | 0.9   | 0.8   | 0.7    |
| 15 or 85 | 3.6 | 2.9 | 2.5   | 2.1   | 1.6   | 1.1   | 0.9   | 0.8    |
| 20 or 80 | 4.0 | 3.3 | 2.8   | 2.3   | 1.8   | 1.3   | 1.0   | 0.9    |
| 25 or 75 | 4.3 | 3.5 | 3.1   | 2.5   | 1.9   | 1.4   | 1.1   | 1.0    |
| 30 or 70 | 4.6 | 3.7 | 3.2   | 2.6   | 2.0   | 1.4   | 1.2   | 1.0    |
| 35 or 65 | 4.8 | 3.9 | 3.4   | 2.8   | 2.1   | 1.5   | 1.2   | 1.1    |
| 50       | 5.0 | 4.1 | 3.5   | 2.9   | 2.2   | 1.6   | 1.3   | 1.1    |

-----

| Estimated<br>Percentage | 25,000 | 50,000 | 100,000 | 250,000 | 500,000 |
|-------------------------|--------|--------|---------|---------|---------|
| 2 or 98                 | 0.2    | 0.1    | 0.1     | 0.1     | 0.1     |
| 5 or 95                 | 0.3    | 0.2    | 0.2     | 0.1     | 0.1     |
| 10 or 90                | 0.4    | 0.3    | 0.2     | 0.1     | 0.1     |
| 15 or 85                | 0.5    | 0.4    | 0.3     | 0.2     | 0.1     |
| 20 or 80                | 0.6    | 0.4    | 0.3     | 0.2     | 0.1     |
| 25 or 75                | 0.6    | 0.4    | 0.3     | 0.2     | 0.1     |
| 30 or 70                | 0.6    | 0.5    | 0.3     | 0.2     | 0.1     |
| 35 or 65                | 0.7    | 0.5    | 0.3     | 0.2     | 0.2     |
| 50                      | 0.7    | 0.5    | 0.4     | 0.2     | 0.2     |

(1) For a percentage and/or base of percentage not shown in the table, the formula given below may be used to calculate the standard error. This table should only be used for proportions, that is, where the numerator is a subset of the denominator.

(See printed text for formulas.)

APPENDIX D.  
Collection and Processing Procedures

CONTENTS

Data Collection Procedures  
Enumeration and Residence Rules  
    Processing Procedures

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

## APPENDIX F.

### Data Products and User Assistance

#### CONTENTS

Data Products  
Geographic Products  
Other Census Bureau Resources  
Reference Materials  
Sources of Assistance

The 1990 census data products, being released during 1991-94, 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(TM). 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. 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), 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 (TM). 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 standard 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.)

There also is a special 3-percent "elderly" file with the same geography as the 5-percent sample. Included are households with at least one person age 60 or more and all members of those households.



Other Special Computer Tape Files--Other files include the Census/Equal Employment Opportunity (EEO) File and the County-to-County Migration File. (See figure 4.) The Census Bureau may prepare additional special files.

### Microfiche

All printed reports are offered on microfiche from Customer Services soon after they are published. Plans to prepare microfiche versions of selected other products were canceled, so that more products could be produced on CD-ROM.

### 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. The Census Bureau also offers on CD-ROM: PUMS Files, SSTF's, Census EEO File, and County-to- County Migration File.

Also, other files available on tape can be transferred to CD-ROM by special arrangement with Customer Services (301-457-4100). The cost for such CD's is the same as the cost for the tape files, and, like the tapes, they do not include software. (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 (TM), its online information service, in 1984. CENDATA (TM) 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 (TM) 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. CENDATA also offers the entire Census EEO File.

### Special Tabulations

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. 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.

The cost of preparing special tabulations must be paid by the users who request them. 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 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. The Superintendent of Documents sells printed copies.

**Urbanized Area Outline/Boundary Maps**--Maps in this urbanized area-based series depict the boundaries of the urbanized area and the features underlying the boundaries. They also show the boundaries for American Indian and Alaska Native areas (AIANA's), States, counties, county subdivisions (MCD's/CCD's), places (incorporated and census designated), the map series subject area, and selected base features and their names at a small scale. Electrostatic-plotter copies are available for purchase from Customer Services. Also, they appear on multiple page-size sheets in the State reports of the 1990 CPH-2 series and the Supplementary Report, 1990 CPH-S-1-2, Urbanized Areas of the United States and Puerto Rico: 1990.

**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 will not be printed. Persons interested in this report are encouraged to use the TIGER/GICS(TM) tape file (which also will be available on CD-ROM) described below. Listings similar to the tables that would have been included in the report may be offered. Contact Customer Services, Data User Services Division, Bureau of the Census, Washington, DC 20233, telephone 301-457-4100.

The Congressional District Atlas, 103rd Congress of the United States is a two-volume, 1,200-page atlas depicting the boundaries and number of the districts for the 103rd Congress as defined following the 1990 decennial census. This is the first Congress defined following the 1990 decennial census and, therefore, illustrates the most significant changes of the decade, including the reapportionment of the U.S. House of Representatives. Congressional district boundaries following governmental unit boundaries such as an incorporated place of a minor civil division, are illustrated using symbology identified in the map legend. Wherever possible, features used as congressional district boundaries are identified by their feature name or their feature type. The Census Bureau may produce subsequent atlases if court ordered or State mandated redistricting creates new congressional district boundaries. The Atlas is sold by the Superintendent of Documents (stock no. 003-024-08683-2; \$42).

### 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(TM) files. TIGER/Line(TM) files (released on tape and CD-ROM) 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(TM) files also furnish address ranges and associated ZIP Codes for each side of street segments that have city-style (house number/street name) addresses; provide the names of landmarks, such as lakes and golf courses; and include other information. The 1992 version also includes school district codes, 1990 census urbanized area codes, codes for districts of the 103rd Congress, and address range coverage expanded to include all areas that have city-style addresses.

TIGER/GICS(TM) file is another extract. This file contains a total of 12 files, organized on a national or State-by-State basis, for a variety of geographic entities, such as metropolitan areas and their components as of the 1990 census, 1990 census urbanized areas and their components, American Indian and Alaska Native areas and their related states and counties, as well as more familiar entities including counties with their county subdivisions and places). This file contains high-level geographic names, codes, and relationship information. It can be used to link geographic entity names to the codes in the TIGER/Line(TM), TIGER/SDTS(TM) and other TIGER extract files. It also contains 1990 census population and housing counts, population density (CD-ROM version only, but can be calculated using the tape version), and area measurement information (including land area, total water area and separate measurements for each of the four components of water--Inland, Great Lakes, Coastal, and Territorial), as well as the latitude and longitude for an internal point within each geography entity. The TIGER/GICS(TM) also includes corrections to names for selected entities and corrections to the FIPS 55 codes for county subdivisions and places. The first 300 characters of each record in this file are the same as those in the Data Dictionary for the Summary Tape Files; and additional 100 characters provide the above mentioned corrections and components of water. Listings of the files in the TIGER/GICS(TM) may be offered. Call Customer Services at 301-457-4100.

Other TIGER System extracts, such as TIGER/Census Tract Comparability(TM) file and TIGER/UA Limit file, 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. (Part A, Text: stock no. 003-024-08574-7, \$11. Part B, Glossary: stock no. 003-024-08679-4, \$5.50.)

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.

Maps and More. A free, tabloid-size booklet that describes the geographic entities for which the Census Bureau tabulates data. The booklet provides information on the types of geographic entities, how their boundaries are established, and how they relate to each other. It also covers how these entities differ among the censuses and surveys and describes the geographic products available from the Census Bureau. 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 (TM), 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 301-457-4100 (FAX number, 301-457-4714).

For special tabulation information: Population--Rosemarie Cowan, Population Division, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-457-2408; Housing--Housing and Household Economic Statistics, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-8553. Microdata--Carmen Campbell, Data User Services Division, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-457-1139.

### Regional Office Contacts--

|               |              |
|---------------|--------------|
| Atlanta, GA   | 404-730-3833 |
| Boston, MA    | 617-424-0510 |
| Charlotte, NC | 704-344-6144 |

|                  |              |
|------------------|--------------|
| Chicago, IL      | 708-562-1740 |
| Dallas, TX       | 214-767-7105 |
| Denver, CO       | 303-969-7750 |
| Detroit, MI      | 313-259-1875 |
| Kansas City, KS  | 913-551-6711 |
| 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.

**Census Information Center (CIC)**--The CIC program 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 the project, five nonprofit groups now offer their clientele reports, computer tape printouts, and other information from the Census Bureau. To learn more about the program, write to the Data User Services Division, Bureau of the Census, Washington, DC 20233, or call 301-457-1242.

**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 1992 Economic Censuses include the censuses of retail trade; wholesale trade; service industries; transportation, communications, and utilities; manufactures; mineral industries; construction industries; and financial, insurance, and real estate 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.

#### 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. territories.

#### 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             | Housing  |
| Household relationship | Number of units in structure                   |
| Sex                    | Number of rooms in unit                        |
| Race                   | Tenure--owned or rented                        |
| Age                    | Value of home or monthly rent                  |
| Marital status         | Congregate housing (meals included<br>in rent) |
| Hispanic origin        | Vacancy characteristics                        |

### SAMPLE COMPONENT

|  |   |
|--|---|
| Population   | Housing                                       |
| Social characteristics:                                  | Year moved into residence                     |
| Education--enrollment and attainment                     | Number of bedrooms                            |
| Place of birth, citizenship, and year of entry into U.S. | Plumbing and kitchen facilities               |
| Ancestry   | Telephone in unit                             |
| Language spoken at home                                  | Vehicles available                            |
| Migration (residence in 1985)                            | Heating fuel                                  |
| Disability   | Source of water and method of sewage disposal |
| Fertility  | Year structure built                          |
| Veteran status   | Condominium status                            |
|  | Farm residence                                |
| Economic characteristics:                                | Shelter costs, including utilities            |
| 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   |   |

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

1990 CENSUS OF POPULATION AND HOUSING (1990 CPH) 100-Percent Data

Series: 1990 CPH-1  
Title: Summary Population and Housing Characteristics  
Report(s) issued for: U.S., States, DC, Puerto Rico, and U.S. Virgin Islands

Description: 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

Geographic areas: Local governmental units (i.e., counties, places, and towns and townships), other county subdivisions, and American Indian and Alaska Native areas

Series: 1990 CPH-2  
Title: Population and Housing Unit Counts  
Report(s) issued for: U.S., States, DC, Puerto Rico, and U.S. Virgin Islands

Description: Total population and housing unit counts for 1990 and previous censuses

Geographic areas: 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)

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100-Percent and Sample Data

Series: 1990 CPH-3  
Title: Population and Housing Characteristics for Census Tracts and Block Numbering Areas  
Report(s) issued for: MA's, and the nonmetropolitan balance of each State, Puerto Rico, and U.S. Virgin Islands

Description: Statistics on 100-percent and sample population and housing subjects

Geographic areas: 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

Series: 1990 CPH-4  
Title: Population and Housing Characteristics for Congressional Districts of the 103rd Congress

Report(s) issued for: States and DC

Description: Statistics on 100-percent and sample population and housing subjects

Geographic areas: 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

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#### Sample Data

Series: 1990 CPH-5  
Title: Summary Social, Economic, and Housing Characteristics  
Report(s) issued for: U.S., States, DC, Puerto Rico, and U.S. Virgin Islands

Description: Statistics generally on sample population and housing subjects

Geographic areas: Local governmental units (i.e., counties, places, and towns and townships), other county subdivisions, and American Indian and Alaska Native areas

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1990 CENSUS OF POPULATION (1990 CP)  
100-Percent Data

Series: 1990 CP-1  
Title: General Population Characteristics  
Report(s)  
issued for: U.S., States, DC, Puerto Rico, and U.S. Virgin Islands

Description: Detailed statistics on age, sex, race, Hispanic origin, marital status, and household relationship characteristics

Geographic areas: 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

Series: 1990 CP-1-1A  
Title: General Population Characteristics for American Indian and Alaska Native Areas

Report(s)  
issued for: U.S.

Description: Detailed statistics on age, sex, race, Hispanic origin, marital status, and household relationship characteristics

Geographic areas: 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

Series: 1990 CP-1-1B  
Title: General Population Characteristics for Metropolitan Areas

Report(s)  
issued for: U.S.

Description: Detailed statistics on age, sex, race, Hispanic origin, marital status, and household relationship characteristics

Geographic areas: Individual MA's. For MA's split by State boundaries, summaries are provided both for the parts and for the

whole MA

Series: 1990 CP-1-1C  
Title: General Population Characteristics for Urbanized Areas  
Report(s)  
issued for: U.S.

Description: Detailed statistics on age, sex, race, Hispanic origin,  
marital status, and household relationship  
characteristics

Geographic areas: Individual UA's. For UA's split by State boundaries,  
summaries are provided both for the parts and for the  
whole UA

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#### Sample Data

Series: 1990 CP-2  
Title: Social and Economic Characteristics  
Report(s)  
issued for: U.S., States, DC, Puerto Rico, and U.S. Virgin Islands

Description: Statistics generally on sample population subjects

Geographic areas: 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

Series: 1990 CP-2-1A  
Title: Social and Economic Characteristics for  
American Indian and Alaska Native Areas  
Report(s)  
issued for: U.S.

Description: Statistics generally on sample population subjects

Geographic areas: American Indian and Alaska Native areas, as for CP-1-1A

Series: 1990 CP-2-1B

Title: Social and Economic Characteristics for Metropolitan Areas

Report(s)  
issued for: U.S.

Description: Statistics generally on sample population subjects

Geographic areas: Individual MA's, as for CP-1-1B

Series: 1990 CP-2-1C

Title: Social and Economic Characteristics for Urbanized Areas

Report(s)  
issued for: U.S.

Description: Statistics generally on sample population subjects

Geographic areas: Individual UA's, as for CP-1-1C

Series: 1990 CP-3

Title: Population Subject Reports

Report(s)  
issued for: Selected subjects

Description: Reports on selected population census subjects

Geographic areas: 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

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1990 CENSUS OF HOUSING (1990 CH) 100-Percent Data

Series: 1990 CH-1

Title: General Housing Characteristics

Report(s)  
issued for: U.S., States, DC, Puerto Rico, and U.S. Virgin Islands



Description: Detailed statistics on units in structure, value and rent, number of rooms, tenure, and vacancy characteristics

Geographic areas: 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

Series: 1990 CH-1-1A  
Title: General Housing Characteristics for American Indian and Alaska Native Areas

Report(s)  
Issued for: U.S.

Description: Detailed statistics on units in structure, value and rent, number of rooms, tenure, and vacancy characteristics

Geographic areas: 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

Series: 1990 CH-1-1B  
Title: General Housing Characteristics for Metropolitan Areas  
Report(s)  
issued for: U.S.

Description: Detailed statistics on units in structure, value and rent, number of rooms, tenure, and vacancy characteristics

Geographic areas: Individual MA's. For MA's split by State boundaries, summaries are provided both for the parts and for the whole MA

Series: 1990 CH-1-1C  
Title: General Housing Characteristics for Urbanized Areas  
Report(s)

issued for: U.S.

Description: Detailed statistics on units in structure, value and rent, number of rooms, tenure, and vacancy characteristics

Geographic areas: Individual UA's. For UA's split by State boundaries, summaries are provided both for the parts and for the whole UA

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### Sample Data

Series: 1990 CH-2

Title: Detailed Housing Characteristics

Report(s)

issued for: U.S., States, DC, Puerto Rico, and U.S. Virgin Islands

Description: Statistics generally on sample housing subjects

Geographic areas: 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

Series: 1990 CH-2-1A

Title: Detailed Housing Characteristics for American Indian and Alaska Native Areas

Report(s)

issued for: U.S.

Description: Statistics generally on sample housing subjects

Geographic areas: American Indian and Alaska Native areas, as in 1990 CH-1-1A

Series: 1990 CH-2-1B

Title: Detailed Housing Characteristics for Metropolitan Areas

Report(s)

issued for: U.S.

Description: Statistics generally on sample housing subjects

Geographic areas: Individual MA's, as in 1990 CH-1-1B

Series: 1990 CH-2-1C  
Title: Detailed Housing Characteristics for Urbanized Areas  
Report(s)  
issued for: U.S.

Description: Statistics generally on sample housing subjects

Geographic areas: Individual UA's, as in 1990 CH-1-1C

Series: 1990 CH-3  
Title: Housing Subject Reports  
Report(s)  
issued for: Selected subjects

Description: Reports on selected housing census subjects

Geographic areas: Generally limited to U.S., regions, and divisions; for some reports, other highly populated areas such as States, MA's, counties, and large places

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### 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

A(2) 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) States, counties, county subdivisions, places, census tracts/BNA's, BG's, blocks. Also Alaska Native areas and State parts of American Indian areas

STF 1 C(2) U.S., regions, divisions, States (100 percent) (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

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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 2 B States (including summaries (100 percent) such as urban and rural),

Over 2,100 cells/  
items of 100-percent

counties, places of 1,000 or more inhabitants, county subdivisions, State parts of American Indian areas, and Alaska Native areas

population and housing counts and characteristics for each geographic area. Each of the STF 2 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 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

A(2) States, counties, county subdivisions, places, census tracts/BNA's, BG's. Also Alaska Native areas and State parts of American Indian areas

B(2) Five-digit ZIP Codes within each State

STF 3 C(2) U.S., regions, divisions, States, Over 3,300 cells/  
(Sample) counties, places of 10,000 or more items of sample  
inhabitants, county subdivisions population and hous-  
of 10,000 or more inhabitants in ing characteristics  
selected States, American Indian for each geographic  
and Alaska Native areas, MA's, UA's 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

-----  
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 B State (including summaries Over 8,500 cells/  
(Sample) such as urban and rural), items of sample  
counties, places of 2,500 or population and hous-  
more inhabitants, county sub- ing characteristics  
divisions of 2,500 or more for each geographic  
inhabitants in selected States, area. Each of the  
all county subdivisions in New STF 4 files will  
England MA's, State parts of include a set of  
American Indian areas, and Alaska tabulations for the  
Native areas total population and  
separate present-

C U.S., regions, divisions, States ations of tabu-  
(including urban and rural and lations by race 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 Hispanic origin.

Note: STF 420 Place of Work 20 Destinations File. This is a new file for 1990. Comparable data were included as part of STF 4 in 1980, but for 1990 this is a separate file and must be ordered and purchased separately from STF 4. The file contains 20 place of work destinations for each county or county equivalent, minor civil division, place of 10,000 or more persons, and census tract or block numbering area. Data are also provided for each major race and for workers of Hispanic origin cross-classified by race. The geographic level of the destinations varies. A destination may be a place, county, balance of county, metropolitan area, or balance of metropolitan area.

- (1) Similar STF's will be prepared for Puerto Rico and the U.S. Virgin Islands.
- (2) Also available on laser disc (CD-ROM). STF 1B CD-ROM presents only part of the data for blocks and other areas in the tape file

-----

#### Figure 4. Other 1990 Census Data Products

Title: Subject Summary  
Tape Files

Description: Various computer tape files used to produce the subject reports (1990 CP-3 and 1990 CH-3 series).

Geographic areas: U.S., regions, divisions, States, metropolitan areas (MA's), and large counties and places

-----

Title: Public Law 94-171  
Data File (redistricting data)

Description: 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 diskettes

Geographic areas: 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

-----

Title: Census/Equal Employment Opportunity (EEO) File

Description: Sample tabulations showing detailed occupations and educational attainment data by age; cross tabulated by sex, Hispanic origin, and race Also supplemental files with additional tabulations are available

Geographic areas: Counties, MA's, places of 50,000 or more inhabitants

-----

Title: County-to-County Migration File

Description: Summary statistics for all intra-state county-to-county migration streams and significant interstate 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

Geographic areas: States, counties

-----

Title: Public Use Microdata Sample (PUMS) Files

Description: Machine-readable files containing a sample of individual

long-form census records showing most population and housing characteristics but with identifying information

removed

Title: 5 Percent--County Based

Geographic areas: County groups, counties, county subdivisions, and places  
with 100,000 or more inhabitants

Title: 1 Percent--Metropolitan Areas (1990)

Geographic areas: MA's and other large areas with 100,000 or more inhabitants

Title: 3 Percent--Elderly

Description: As above, but includes only households with at least one person age 60 or more

Geographic areas: Same as for 5-percent sample

-----

Title: Special Tabulations

Description: User-defined tabulations for specified geographic areas provided on printouts, tapes, or other products

Geographic areas: User-defined areas or standard areas



APPENDIX G.  
Code Lists

CONTENTS

Industry  
Occupation

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)                          |
|     | 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)                            |
| 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)
- 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)  
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)
- 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)

#### 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



## APPENDIX H. CD-ROM Technical Information1

### CONTENTS

Converting to ASCII Files  
Equipment  
Software  
Technical Documentation

### EQUIPMENT

The two basic pieces of equipment needed to use CD-ROM's are a microcomputer and a CD-ROM drive. A printer is very useful but not essential. Your microcomputer should be equipped with at least 640K random access memory (RAM). While a hard disk is not required on your microcomputer, it is very useful.

### SOFTWARE

Software is needed for accessing the CD-ROM as well as for accessing the data.

MS-DOS 3.3 or higher is needed as your operating system if you have a CD-ROM reader. You will also need DOS file manager software such as Microsoft's CD-ROM Extensions. CD-ROM extensions are a collection of programs that enables the microcomputer to communicate with the attached CD-ROM drives. You must have version 2.0 or higher of the Microsoft Extensions.

If you already have a CD-ROM drive, you may not know whether it is equipped with file manager software like the CD-ROM extensions. To find out, try signing on to your CD-ROM drive just as though it is a magnetic disk drive, and perform simple file management tasks, like listing the directory. (For example, from the DOS prompt, type the command DIR and the letter used to designate the CD-ROM drive followed by a colon [e.g., C>DIR L:] and press enter.) If you get an error message, it may mean that you need to obtain and install CD-ROM extensions.

### CD-ROM Extensions

The CD-ROM is in the ISO 9660 format which requires the use of Microsoft CD-ROM Extensions Version 2.0 or higher. Although all versions of CD-ROM extensions work basically the same way, installation procedures may vary slightly from one supplier to another. Many versions contain a program that will automatically install the software for you, after you have answered a few questions about the type of equipment that you plan to use. Be sure to follow the instructions for installing CD-ROM Extensions that are provided with the software.

The first step, if you are installing extensions without the aid of an automatic set-up program, is usually installing the device driver program and MSCDEX.EXE on your bootable disk. For computers containing a hard drive, this usually means drive C. The name of the device driver program varies from one version of extensions to another; one common practice of software developers is to name it after the brand of CD-ROM drive that it supports, e.g., HITACHI.SYS. The device driver program and MSCDEX are frequently set up in separate subdirectories; however, this practice is not universal.

The next step is to add a line to the CONFIG.SYS file to identify the device driver program. This line typically looks something like this:

```
DEVICE=\path\driver name/D:\driver alias/N:#  
For example:device=\dev\HITACHI.SYS/D:MSCD001/N:1
```

The driver name (e.g., HITACHI.SYS) and the driver alias should be provided by the set-up program or in the instructions that accompany the floppy disk containing the extensions software. The symbol # at the end of the line should be replaced with the number of CD-ROM drives (up to 4) that will be hooked up to the microcomputer.

The third step is to add a line to the AUTOEXEC.BAT file for running MSCDEX.EXE and assigning a letter to your CD-ROM drive. Depending on your system configuration you may opt to set up one or more batch files to accomplish the same purpose. If you add a line to the AUTOEXEC.BAT file, it will probably look something like this:

```
\path\MSCDEX.EXE/D:driver alias/M:8/L:L For example:  
\BIN\MSCDEX.EXE/D:MSCD001/M:12/L:L
```

The driver alias, which is really the name that your system will use to identify the device driver, should be the same one that is named in your CONFIG.SYS file.

The number following M: is the number of memory buffers allocated (usually 8, but sometimes more). The last letter, following the L:, designates the letter assigned to the CD-ROM drive.

Though the final step is simple, it's also easy to overlook. You must re- boot the system in order to activate the changes that you've made to your CONFIG.SYS and AUTOEXEC.BAT.

Once properly installed, the device behaves much like a read-only floppy diskette drive, and simple MS-DOS commands such as DIR are possible. If the computer reports that the CD-ROM is "not High Sierra," you must first upgrade your Microsoft CD-ROM Extensions software to version 2.0 or later.

## Data Retrieval Software2

This CD-ROM contains data retrieval software. This software was developed and tested on a COMPAQ Deskpro 286 with 640K RAM operating under MS-DOS 3.31. The software was compiled with Clipper. There are no special display requirements. Please note that the retrieval software will only run on IBM-compatibles operating under MS-DOS.

The Census Bureau CD-ROM's containing 1990 census data (STF's 1 and 3) includes a simple "point and shoot" retrieval software. It has been nicknamed "GO." This menu-driven software is on the disc and requires no installation. The menus and tables are customized for the data on the disc.

The GO software is included on other Census products and is customized according to the data on the disc. The following is a description of the GO software. Features for each data product may vary.

Using GO, you first select a specific level (e.g., State, county, place, census tract). Available features are displayed on a command bar, and most data can be accessed using the Return, PgUp/PgDn, and Up and Down arrow keys. Features that may be available are described below.

Some discs contain a "general profile" feature that gives you the basic population and housing information for the geographic entities shown on the disc. This is helpful when you need just the basics.

Once you've identified the geographic entity you want, select specific data items. They generally are the same as the tables listed in the technical documentation.

Another helpful feature is the "Key-words" option. After choosing a specific geographic entity, you can specify key words (such as race or ancestry groups) by hitting the letter "K" on your computer's keyboard. This option gets you to specific tables more quickly.

GO also contains a "Glossary" option (hit the letter "G" on your keyboard). Note that this feature is available within data tables. Again, features are available when shown on the command bar. In the glossary, you will find definitions for geographic entities and other terms. Refer to appendix A and B (on the CD-ROM in the DOCUMENT directory), or the technical documentation for the complete text of definitions.

GO's "Print" command allows you to print the tables you need. The "Copy File" command lets you copy files from the CD-ROM onto your computer's harddrive in three formats: ASCII flat/System Data Format (SDF), ASCII comma-delimited, and dBASE. CD-ROM's with issue dates of October 1992 and later have updated software which also provides the option for direct output to files in the WK1 spreadsheet format. This updated software also requires less memory than previous versions.

The data on the CD-ROM are in dBase III+~ format. Data in dBase III+format are recognized by many software packages including dBase IV~, Foxbase~, Clipper~, Supercalc V~, Quattro Pro~, and VP-Planner~.

Users of other types of systems, such as the Apple Macintosh, have access to the files through support for ISO 9660 CD-ROM's.

## CONVERTING TO ASCII FILES

Users without database management software who wish to convert the files to ASCII can follow the code found in the README file on the CD-ROM.

## TECHNICAL DOCUMENTATION

The DOCUMENT directory on the CD-ROM contains sections of the STP 14 File technical documentation in a series of ASCII text files. These are as follows:

|              |   |
|--------------|---|
| ROSTER_P.ASC | Roster Page   |
| ABSTRACT.ASC | Abstract  |
| USERNOTE.ASC | User Notes Explanation  |
| IDEN_FTN.ASC | Identification Section of the Data Dictionary                           |
| DBASESTR.ASC | Database Structures Section of the Data Dictionary                      |
| DBASECOD.ASC | Database Generated Code Lists Section of the Data Dictionary            |
| APPEND_A.ASC | Appendix A Area Classifications   |
| APPEND_B.ASC | Appendix B Subject Characteristics                                      |
| APPEND_C.ASC | Appendix C Accuracy of the Data   |
| APPEND_D.ASC | Appendix D Procedures   |
| APPEND_E.ASC | Appendix E Facsimiles of Resondent Instructions and Questionnaire Pages |
| APPEND_F.ASC | Appendix F Data Products  |
| APPEND_G.ASC | Appendix G Code Lists   |
| APPEND_H.ASC | Appendix H CD-ROM Technical Information                                 |