

# County Subdivision Map Legend and County Location Index

## MAP SECTIONS



SYMBOLS	TYPE STYLES
-----	CANADA
-----	FLORIDA
-----	LEE
-----	Brent
-----	MIAMI
-----	STAPLETON
~~~~~	Lake Wingra
~~~~~	

## MAP LEGEND

GEOGRAPHIC AREAS
Foreign country
State
County
County subdivision
Incorporated place
Census designated place
Major water feature

Asterisk following place name indicates place is coextensive with a county subdivision. County subdivision name is shown only when it differs from place name.

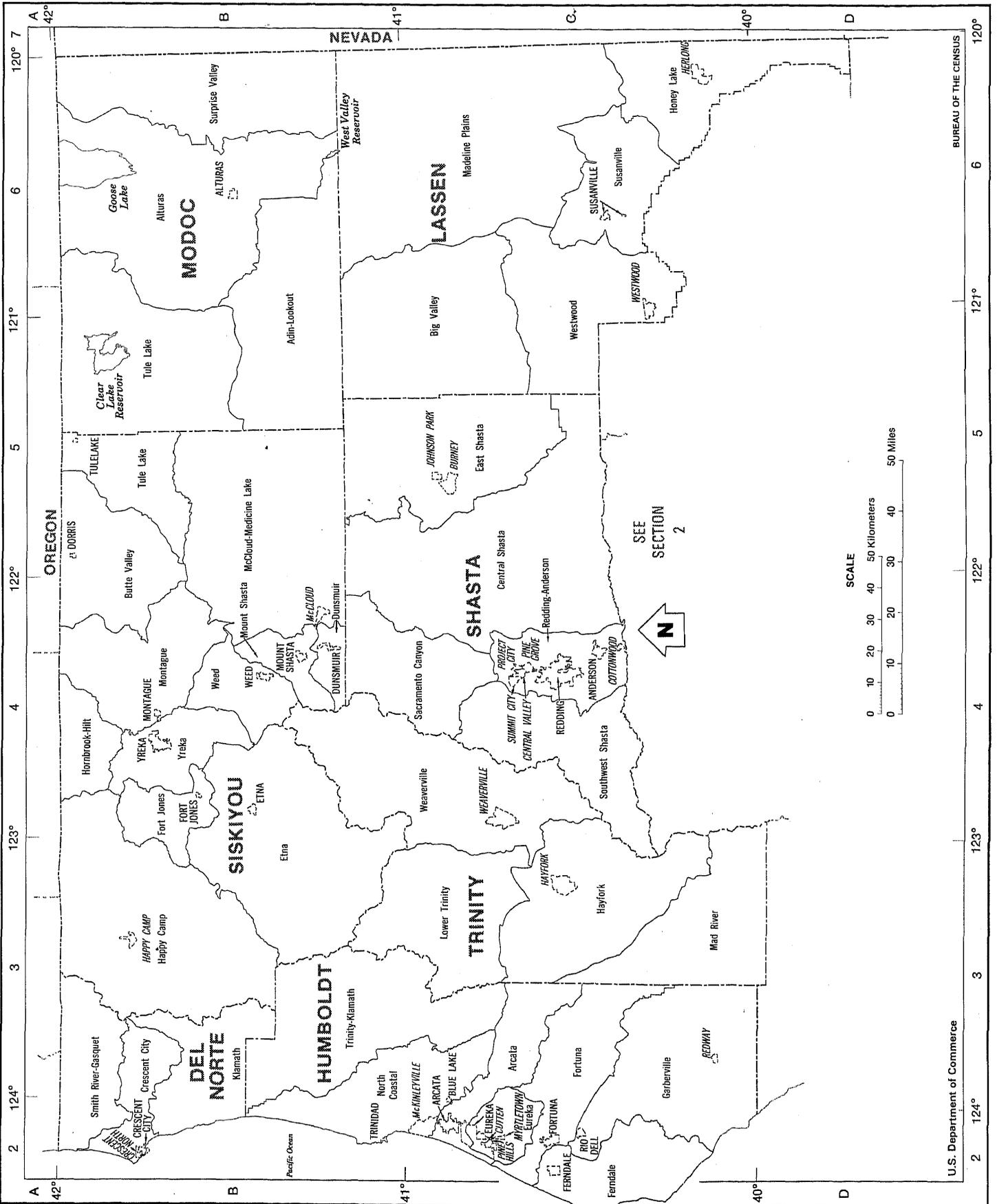
Note: All political boundaries are as of January 1, 1980. Boundaries of small areas may not be depicted exactly due to scale of map. Where boundaries coincide, boundary symbol of higher level geographic area is shown. Those places shown with county subdivision symbol, but identified with type styles for incorporated or census designated places, are treated as county subdivisions for census purposes.

## COUNTY LOCATION INDEX

This list presents the reference coordinates for each county on the map on page 3 and on the county subdivision map. Map section numbers refer to the county subdivision map only.

COUNTY	MAP SEC	MAP REF	COUNTY	MAP SEC	MAP REF	COUNTY	MAP SEC	MAP REF
Alameda	3	F-5	Napa	3	E-4	Tuolumne	4	F-7
Alpine	4	E-7	Nevada	2	D-6	Ventura	8	I-7
Amador	4	E-6	Orange	8	J-9	Yolo	3	E-4
Butte	2	D-5	Placer	2	D-6	Yuba	2	D-5
Calaveras	4	E-6	Plumas	2	D-6			
Colusa	2	D-4	Riverside	9	J-11			
Contra Costa	3	F-4	Sacramento	3	E-5			
Del Norte	1	B-3	San Benito	6	G-5			
El Dorado	4	E-6	San Bernardino	9	I-10			
Fresno	6	G-7	San Diego	10	K-10			
Glenn	2	D-4	San Francisco	3	F-4			
Humboldt	1	C-3	San Joaquin	3	E-5			
Imperial	10	J-11	San Luis Obispo	7	H-6			
Inyo	5	G-9	San Mateo	3	F-4			
Kern	7	H-8	Santa Barbara	8	I-6			
Kings	6	G-7	Santa Clara	3	F-5			
Lake	2	D-4	Santa Cruz	3	F-4			
Lassen	1	C-6	Shasta	1	C-4			
Los Angeles	8	I-8	Sierra	2	D-6			
Madera	6	F-7	Siskiyou	1	B-4			
Marin	3	E-4	Solano	3	E-5			
Mariposa	4	F-7	Sonoma	3	E-4			
Mendocino	2	D-3	Stanislaus	3	F-6			
Merced	3	F-6	Sutter	2	D-5			
Modoc	1	B-6	Tehama	2	C-4			
Mono	4	F-7	Trinity	1	C-3			
Monterey	6	G-5	Tulare	6	G-8			

**Counties, County Subdivisions (Census County Divisions), and Places—Section 1**



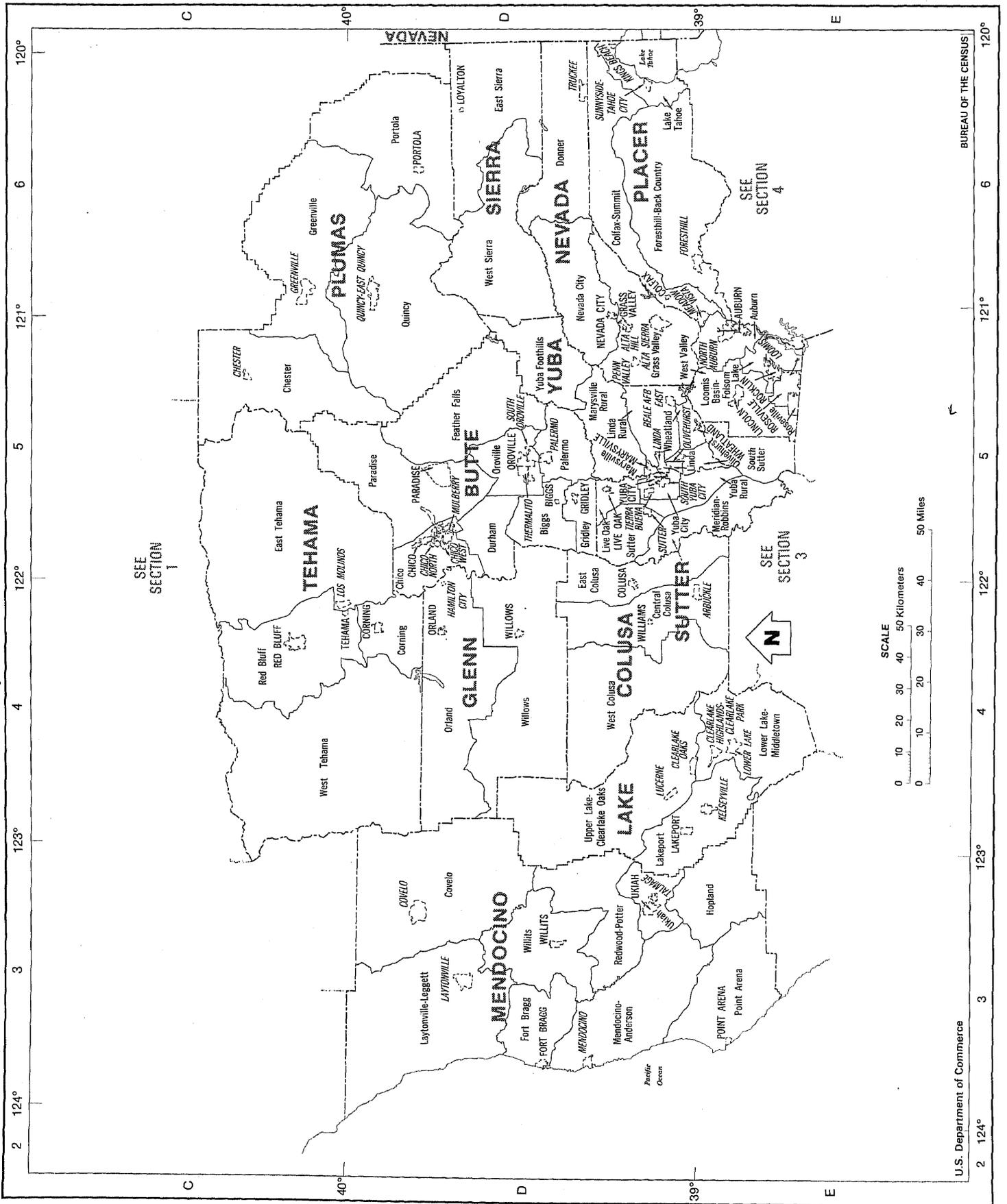
NUMBER OF INHABITANTS

CALIFORNIA 6-43

U.S. Department of Commerce

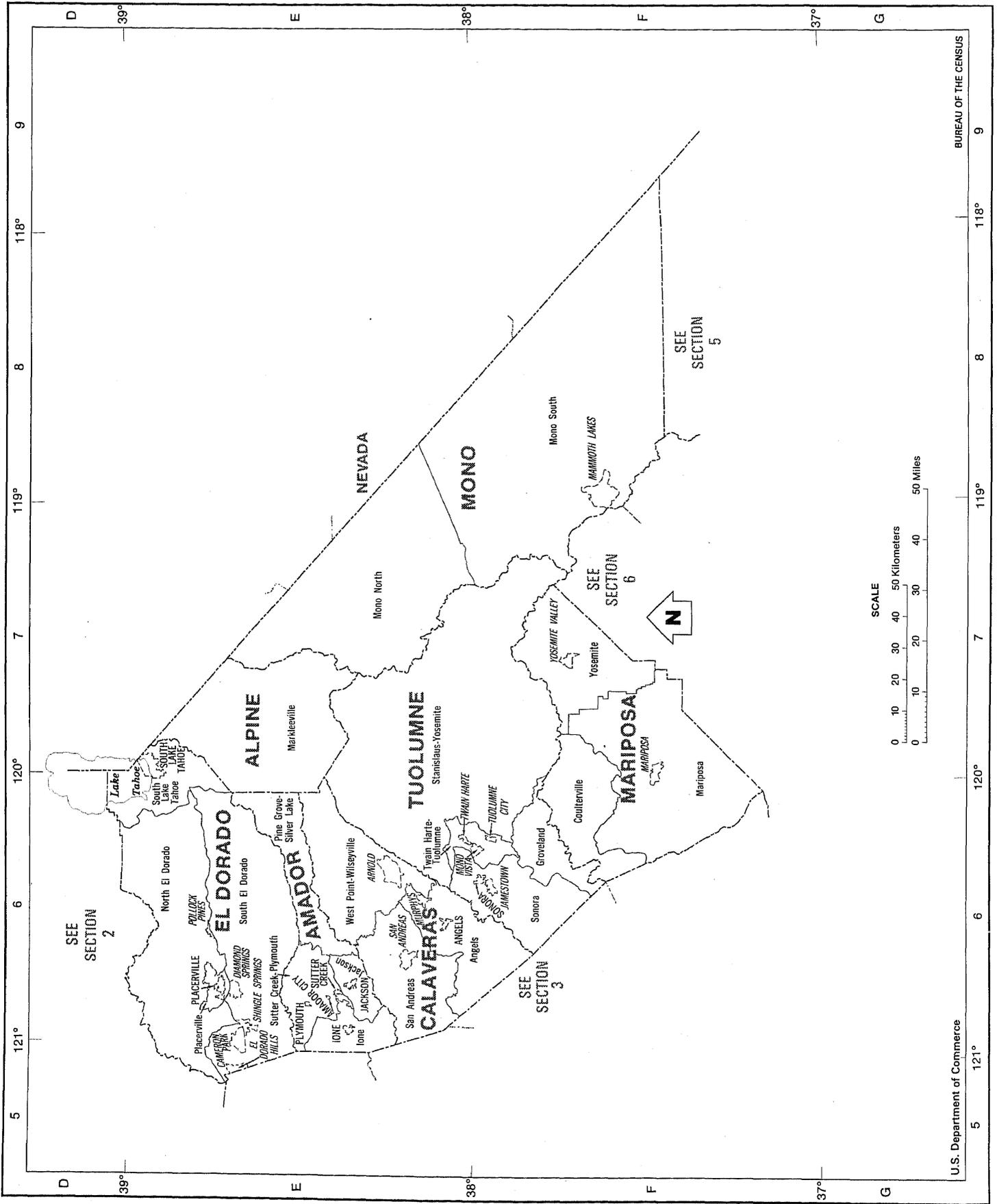
BUREAU OF THE CENSUS

# Counties, County Subdivisions (Census County Divisions), and Places—Section 2

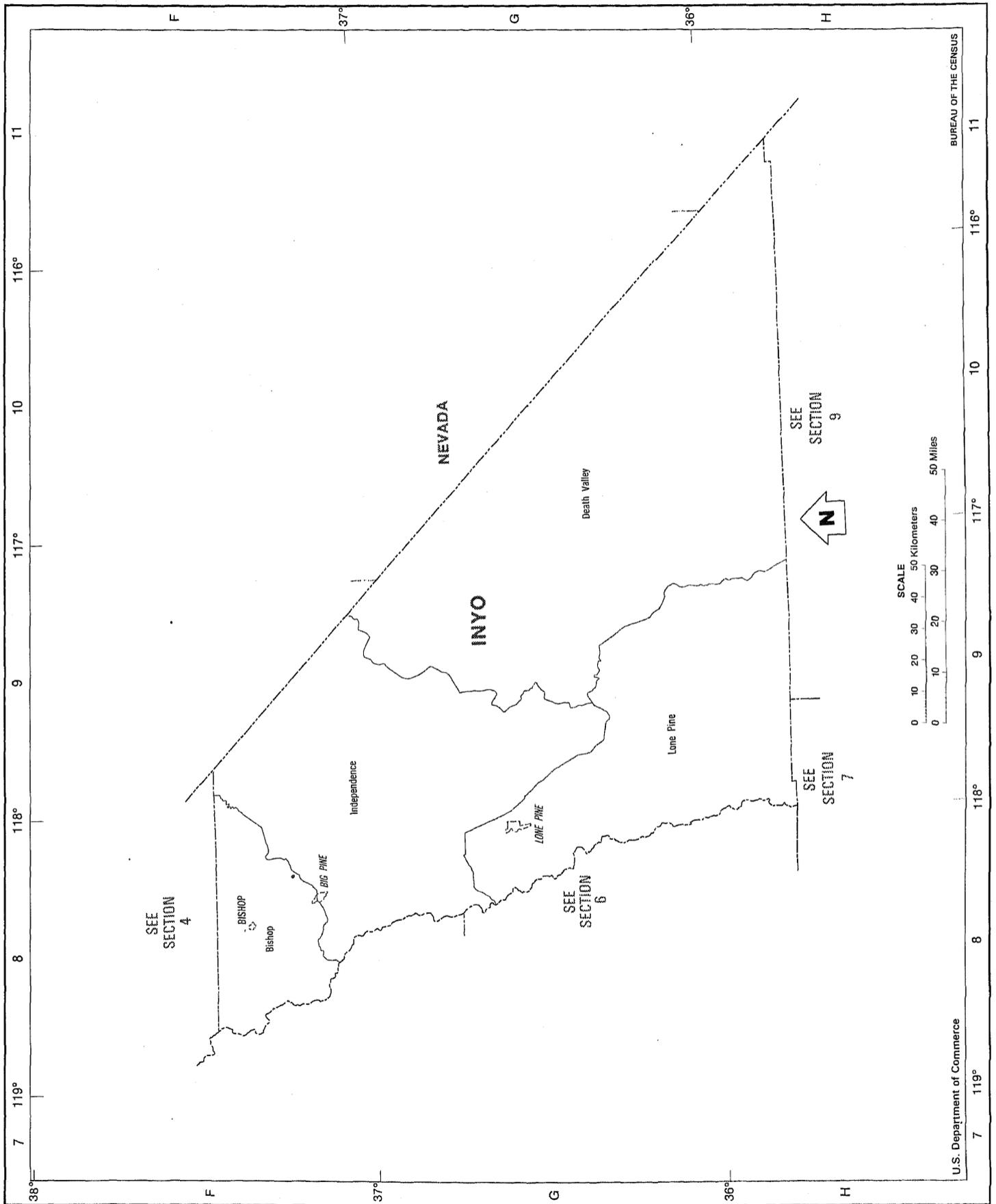




**Counties, County Subdivisions (Census County Divisions), and Places—Section 4**



**Counties, County Subdivisions (Census County Divisions), and Places—Section 5**



NUMBER OF INHABITANTS

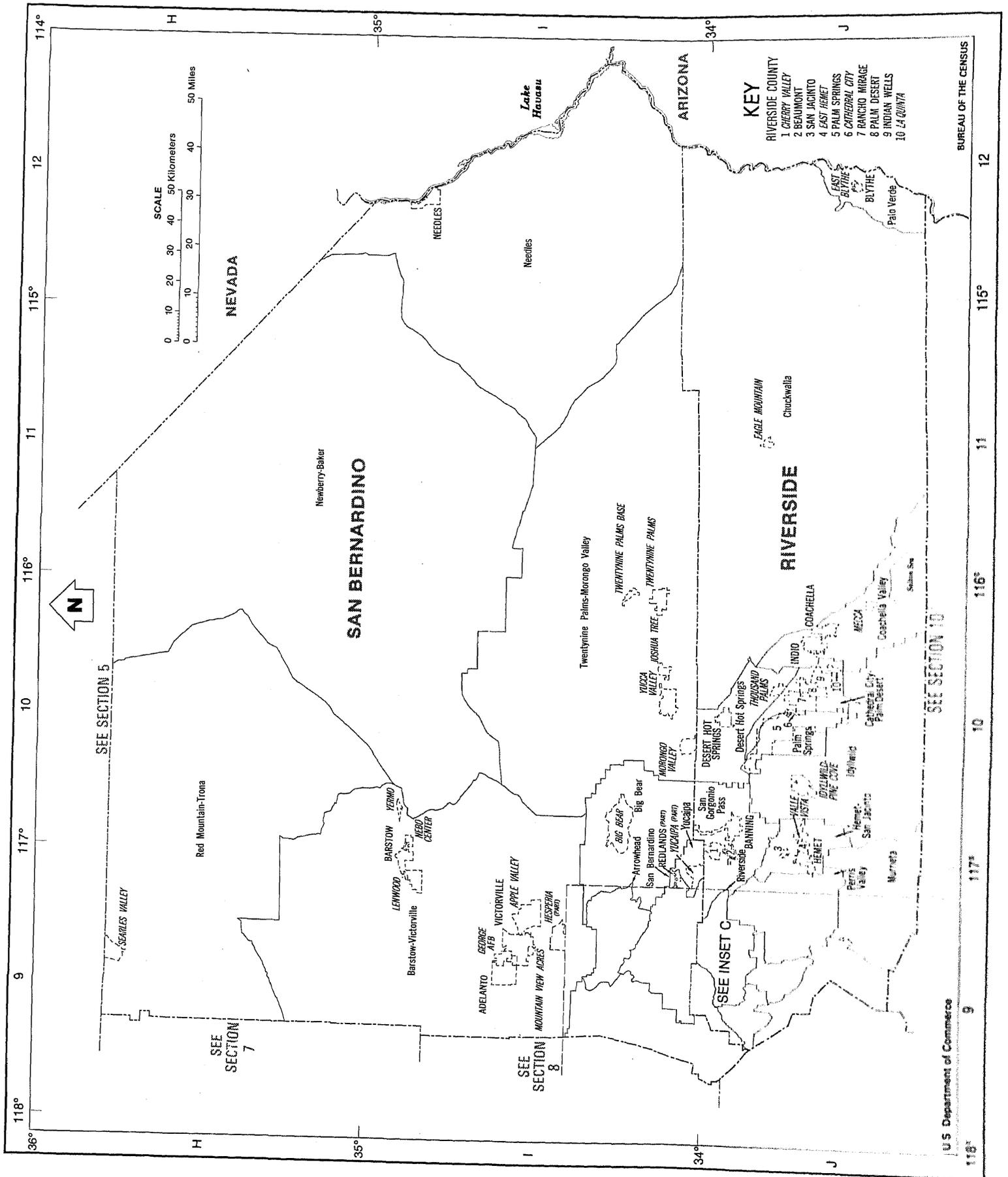
CALIFORNIA 6-47







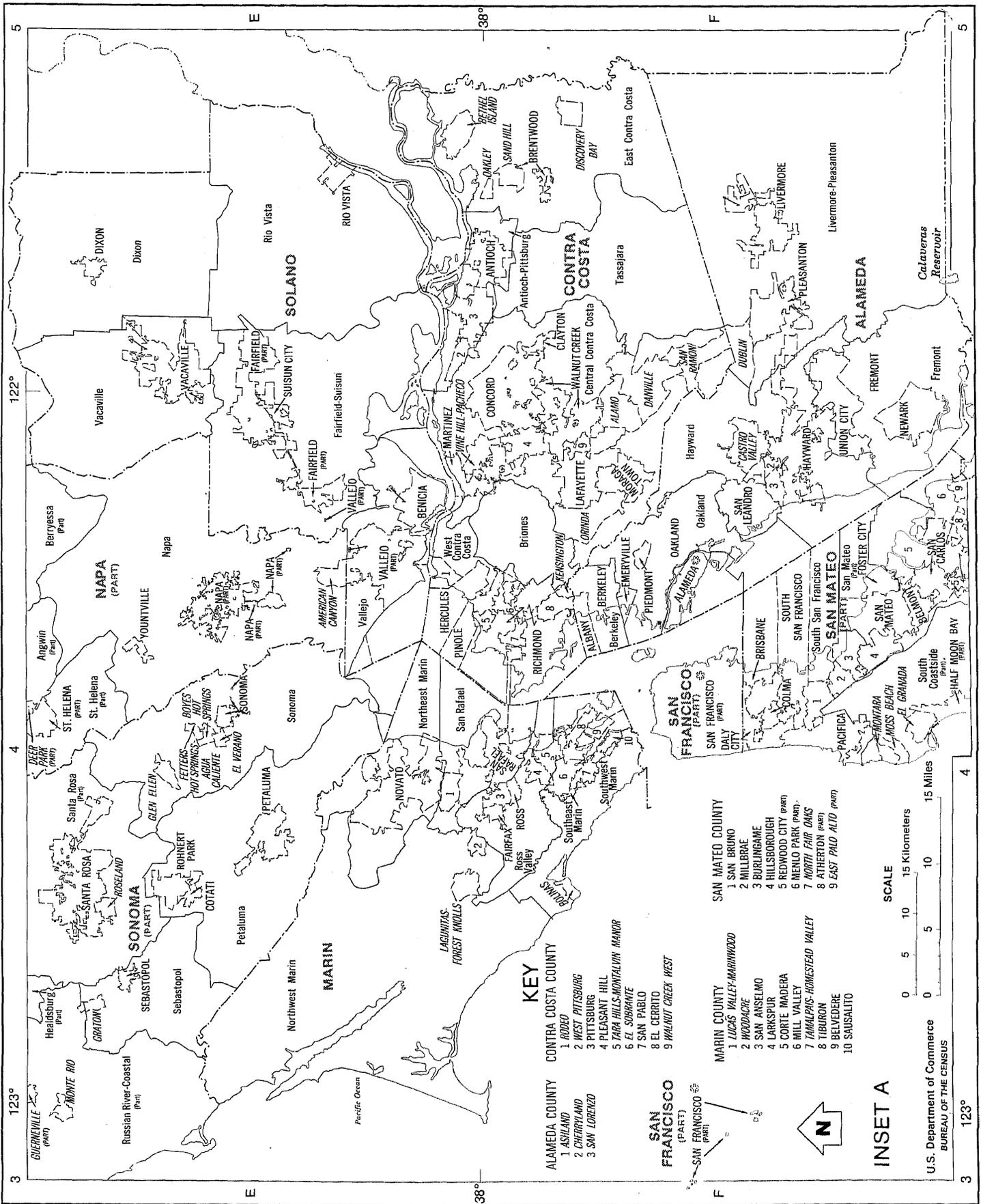
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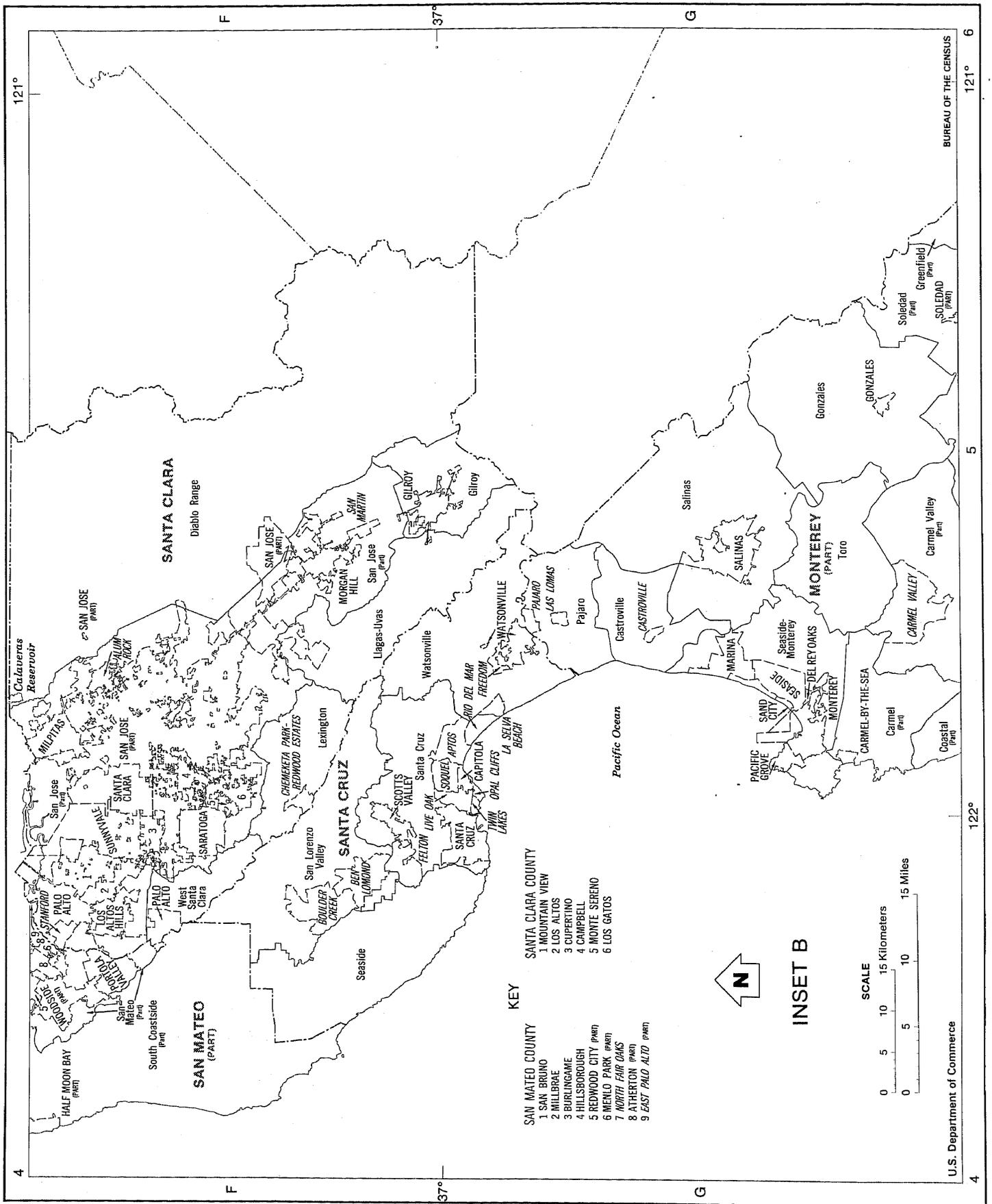
NUMBER OF INHABITANTS



Counties, County Subdivisions (Census County Divisions), and Places — Inset A

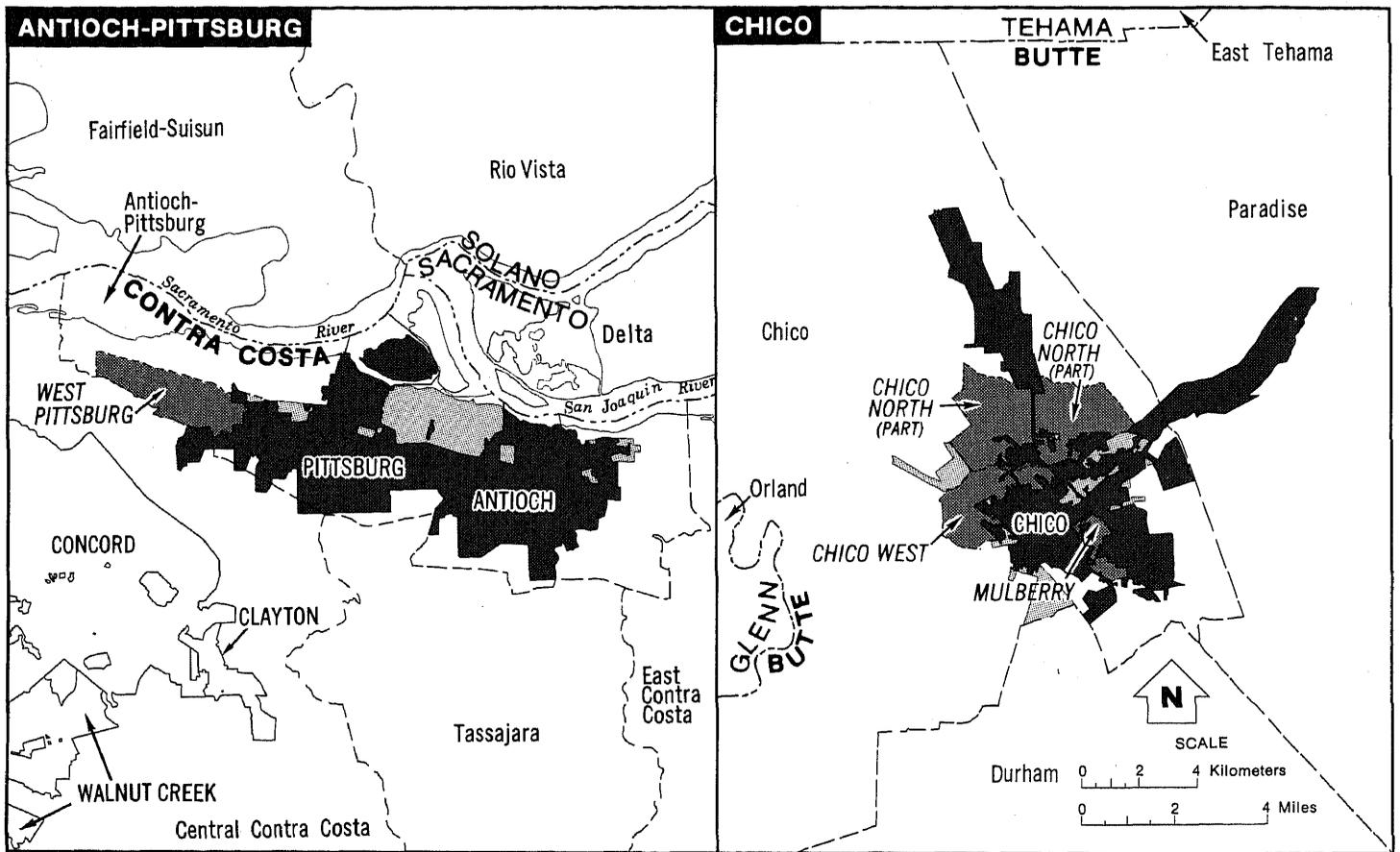


Counties, County Subdivisions (Census County Divisions), and Places—Inset B





# Urbanized Areas

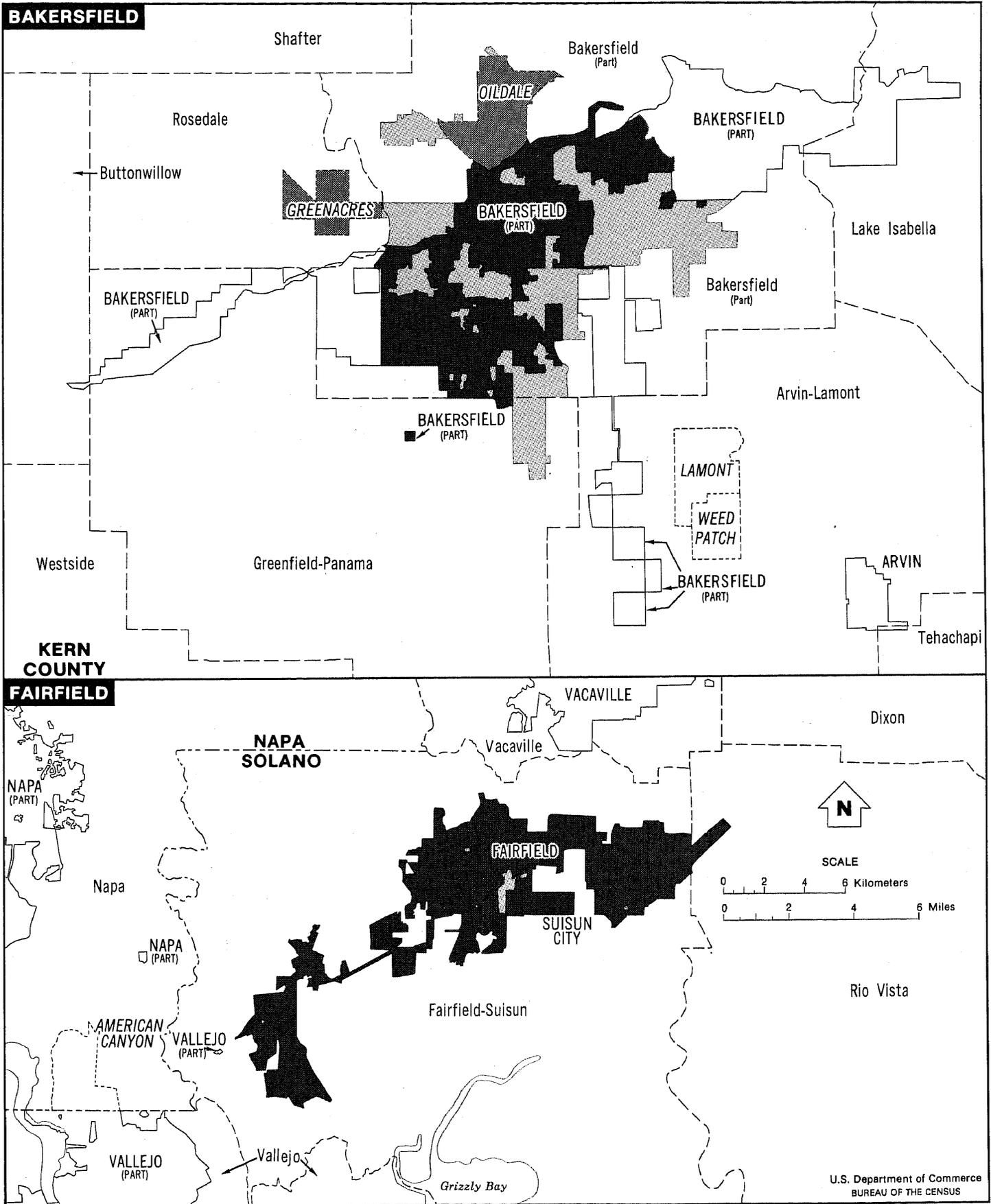


MAP LEGEND				
SYMBOLS	TYPE STYLES	GEOGRAPHIC AREAS	SYMBOLS	GEOGRAPHIC AREAS
-----	<b>MEXICO</b>	Foreign country	⊛	Open six-spoked asterisk following place name indicates the place is coextensive with a county subdivision. The county subdivision name is shown only when it differs from that of the place.
-----	<b>IOWA</b>	State	⊛	Solid eight-spoked asterisk following an incorporated place name indicates the place is treated as a county subdivision for census purposes.
-----	<b>DANE</b>	Subject SMSA county	■	<b>COMPONENTS OF URBANIZED LAND AREA</b>
-----	<b>POWER</b>	County not part of subject SMSA	■	Incorporated place
-----	Locust	County subdivision	■	Census designated place
-----	SILAS	Incorporated place	■	Other area
-----	<i>PERDIDO</i>	Census designated place		
-----	<i>Pyramit</i>	American Indian reservation		
=====	<i>Lake Wingra</i>	Major water feature		
		Note: All political boundaries are as of January 1, 1980. Boundaries of small areas may not be depicted exactly due to scale of map. Where boundaries coincide, boundary symbol of higher level geographic area is shown.		

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BUREAU OF THE CENSUS

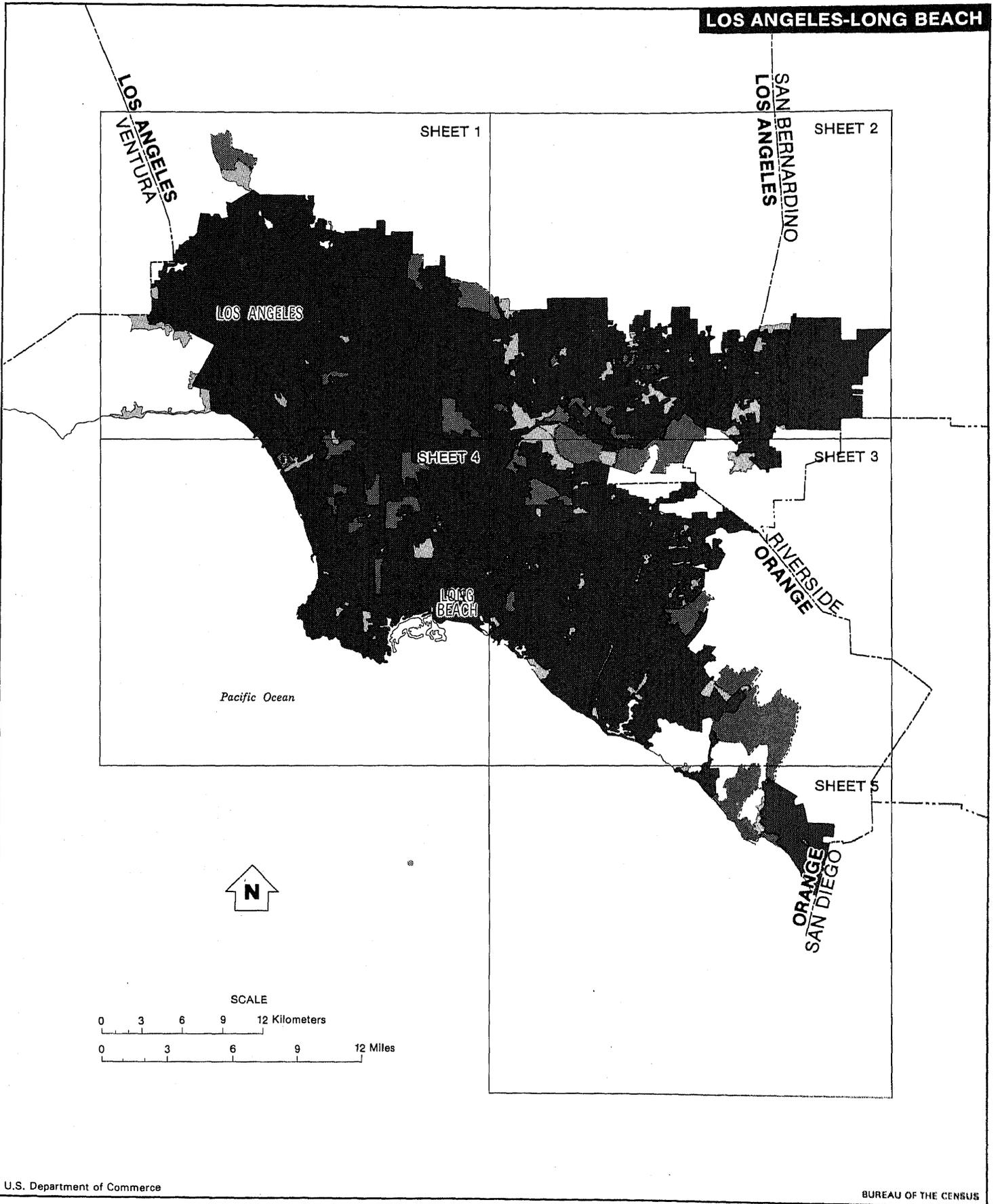
**Urbanized Areas**



NUMBER OF INHABITANTS

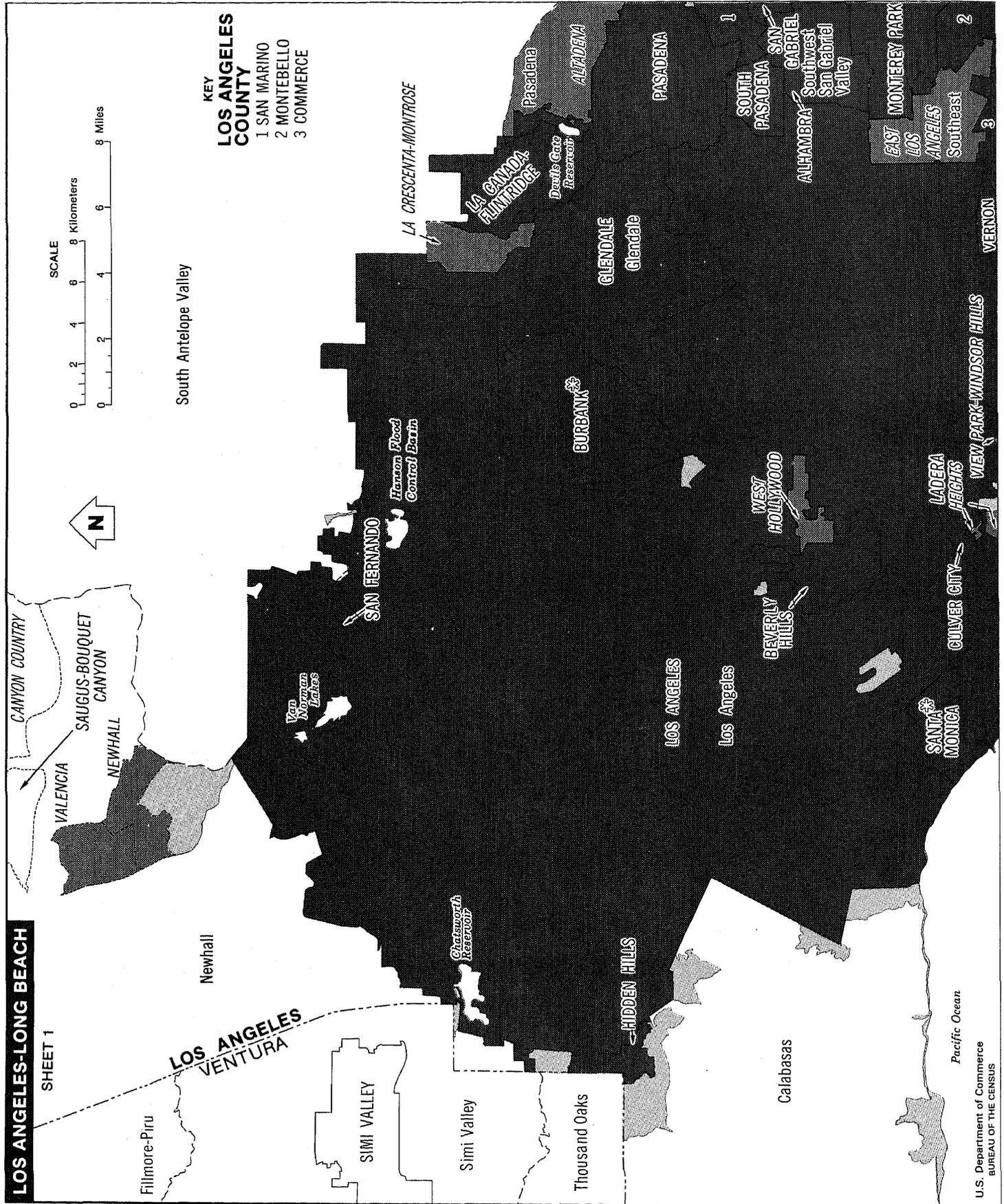


# Urbanized Areas



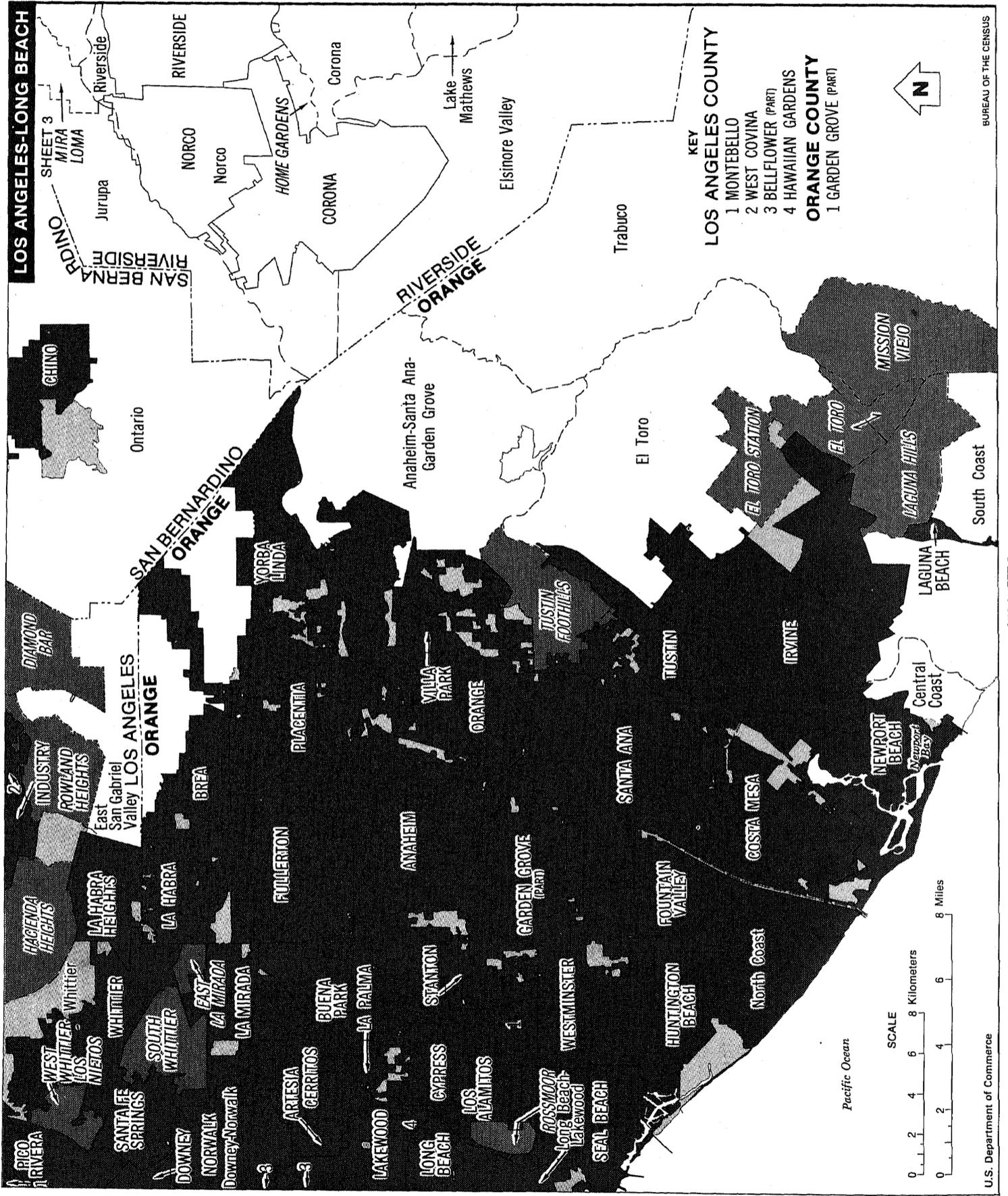
# Urbanized Areas

SEE SHEET 2





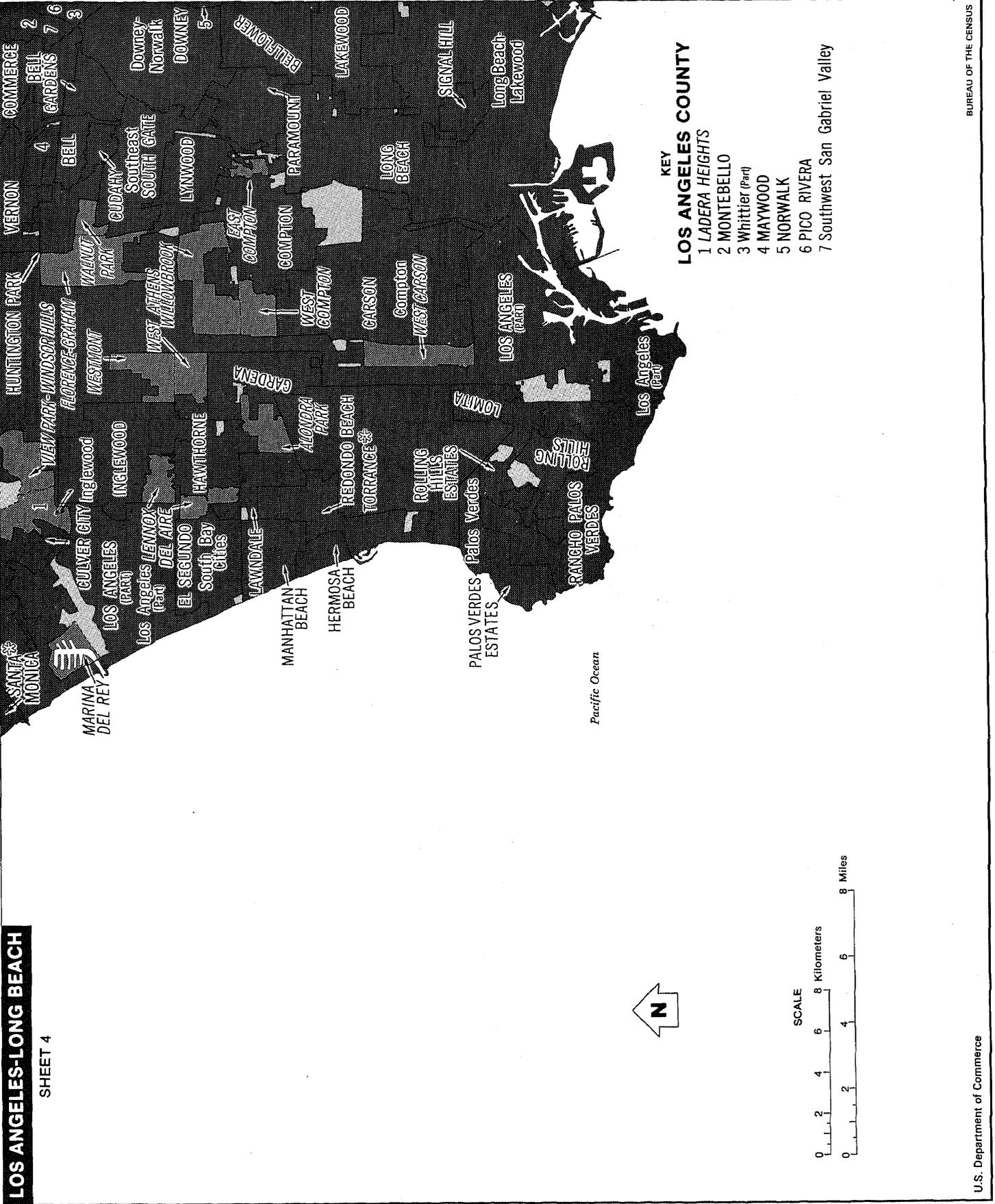
Urbanized Areas



# Urbanized Areas

SEE SHEET 3

SEE SHEET 1



**LOS ANGELES-LONG BEACH**  
SHEET 4

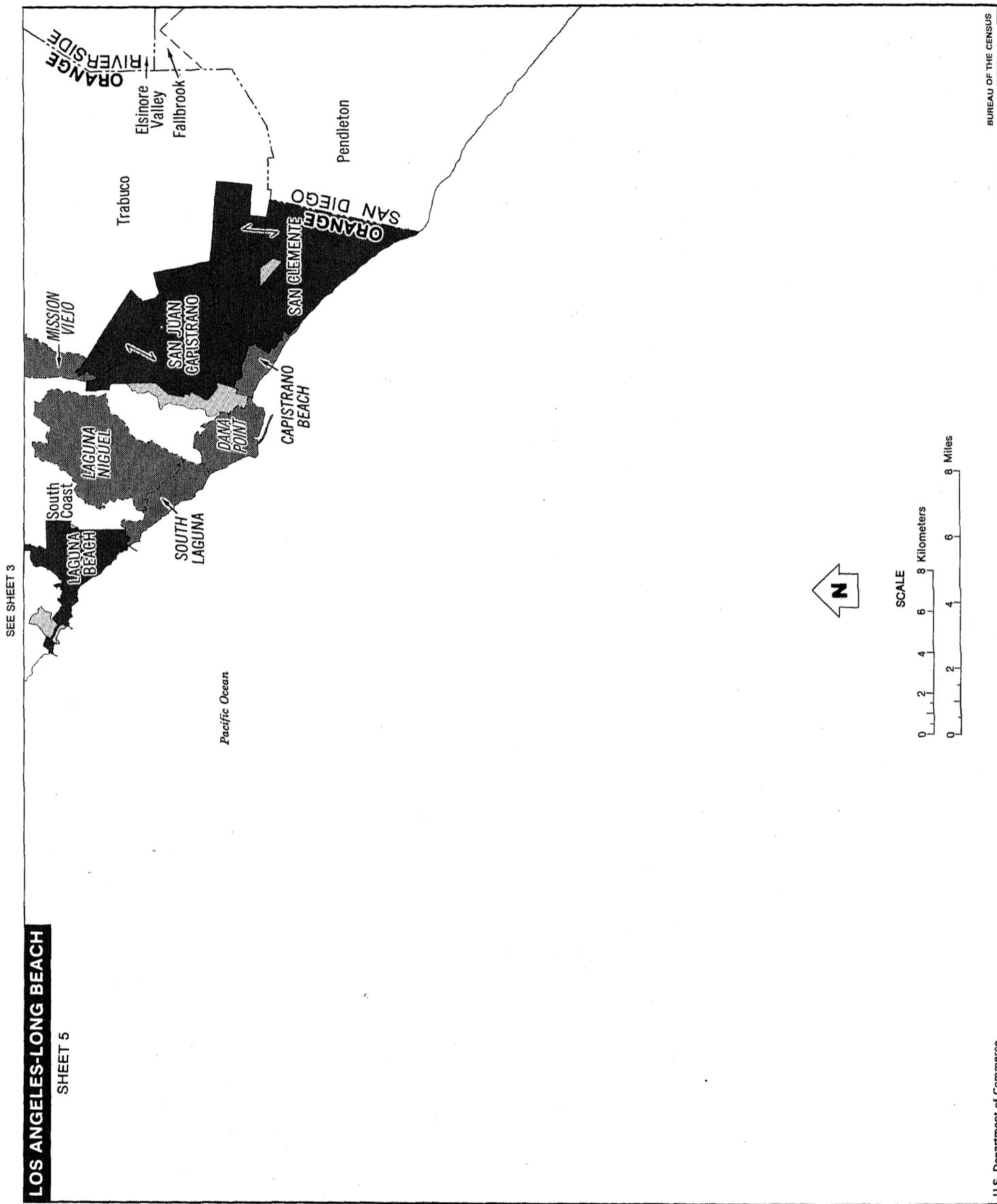
## LOS ANGELES COUNTY

- KEY**
- 1 LADERA HEIGHTS
  - 2 MONTEBELLO
  - 3 Whittier (Part)
  - 4 MAYWOOD
  - 5 NORWALK
  - 6 PICO RIVERA
  - 7 Southwest San Gabriel Valley

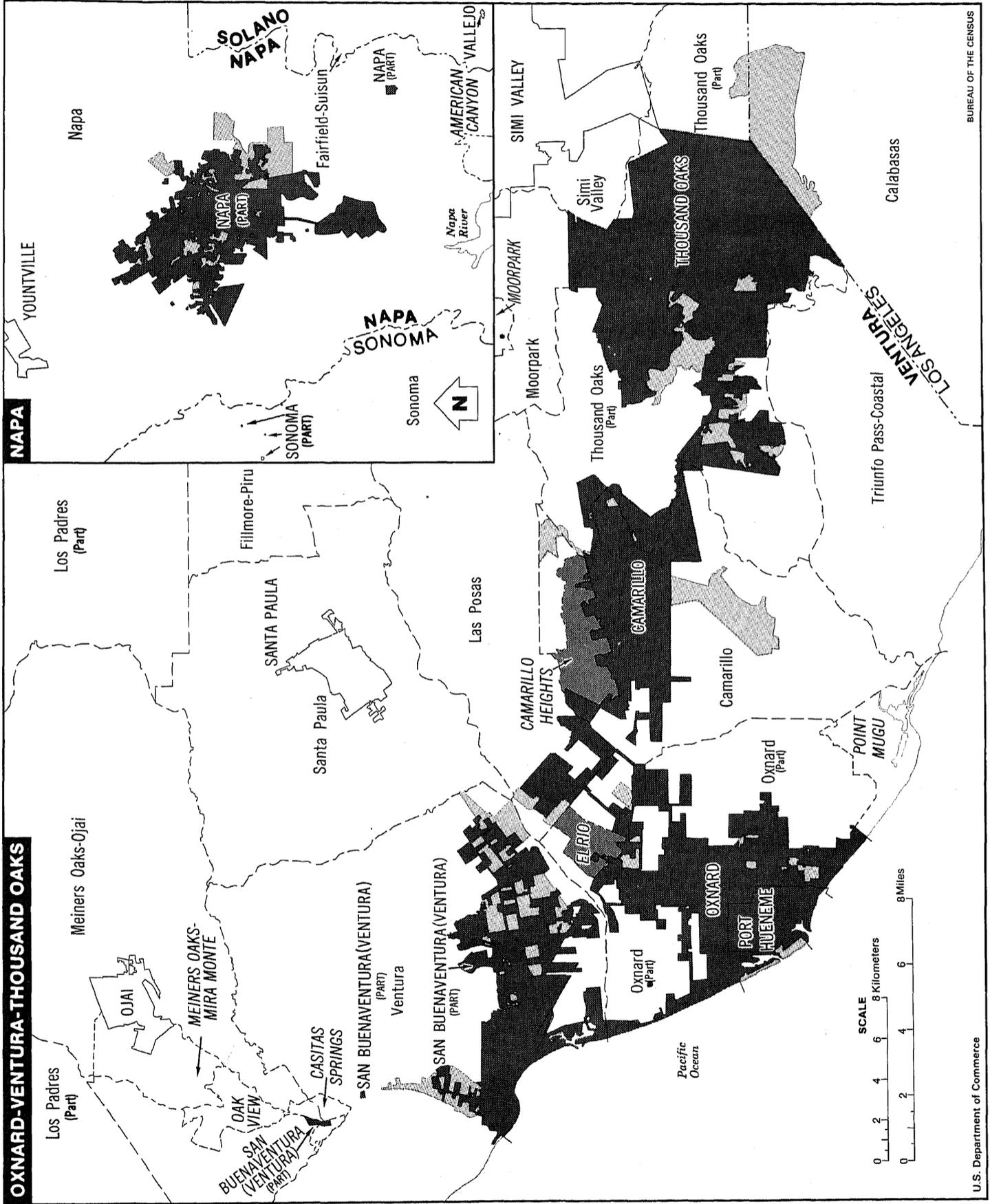
BUREAU OF THE CENSUS

U.S. Department of Commerce

Urbanized Areas



# Urbanized Areas

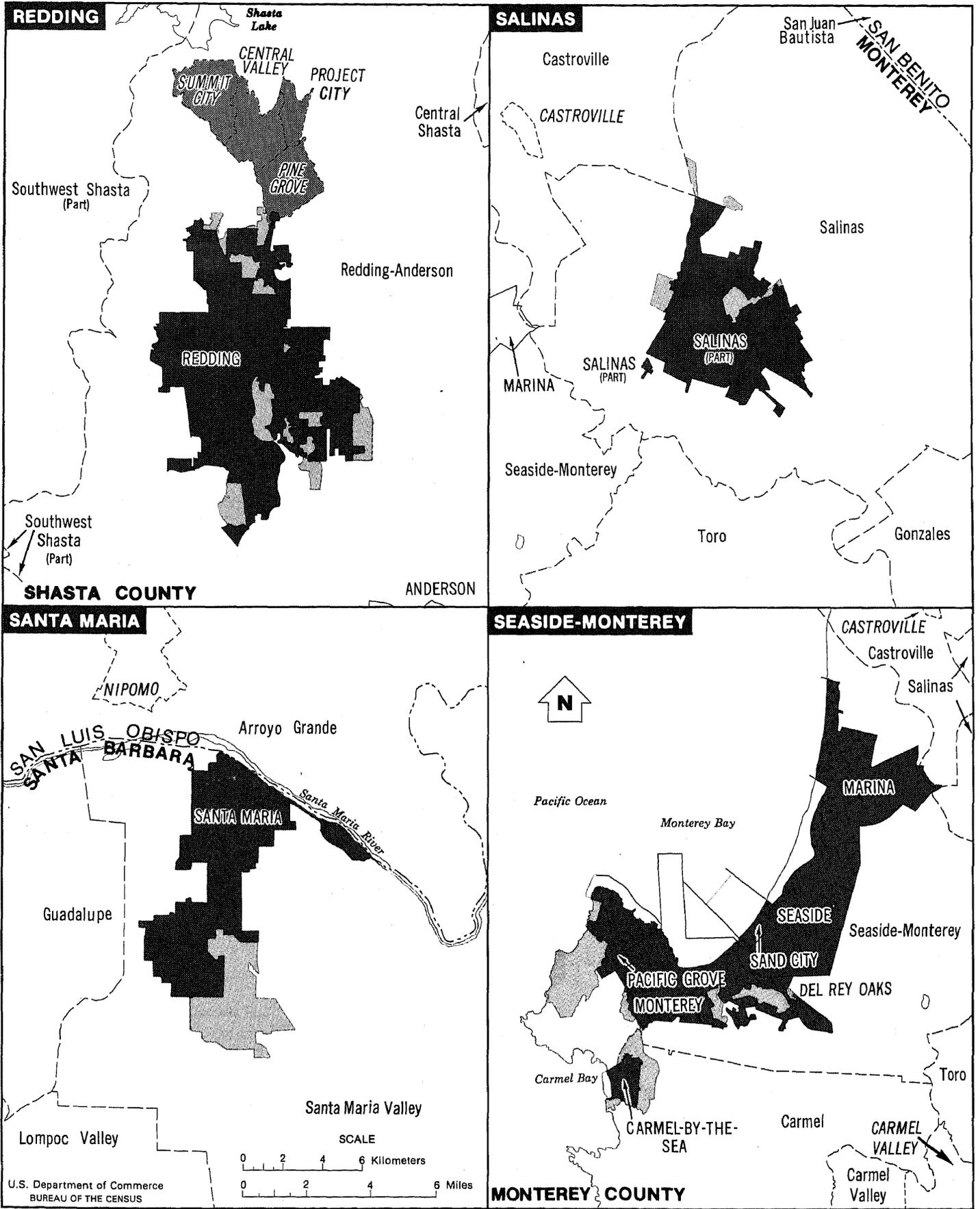


NUMBER OF INHABITANTS

CALIFORNIA 6-65



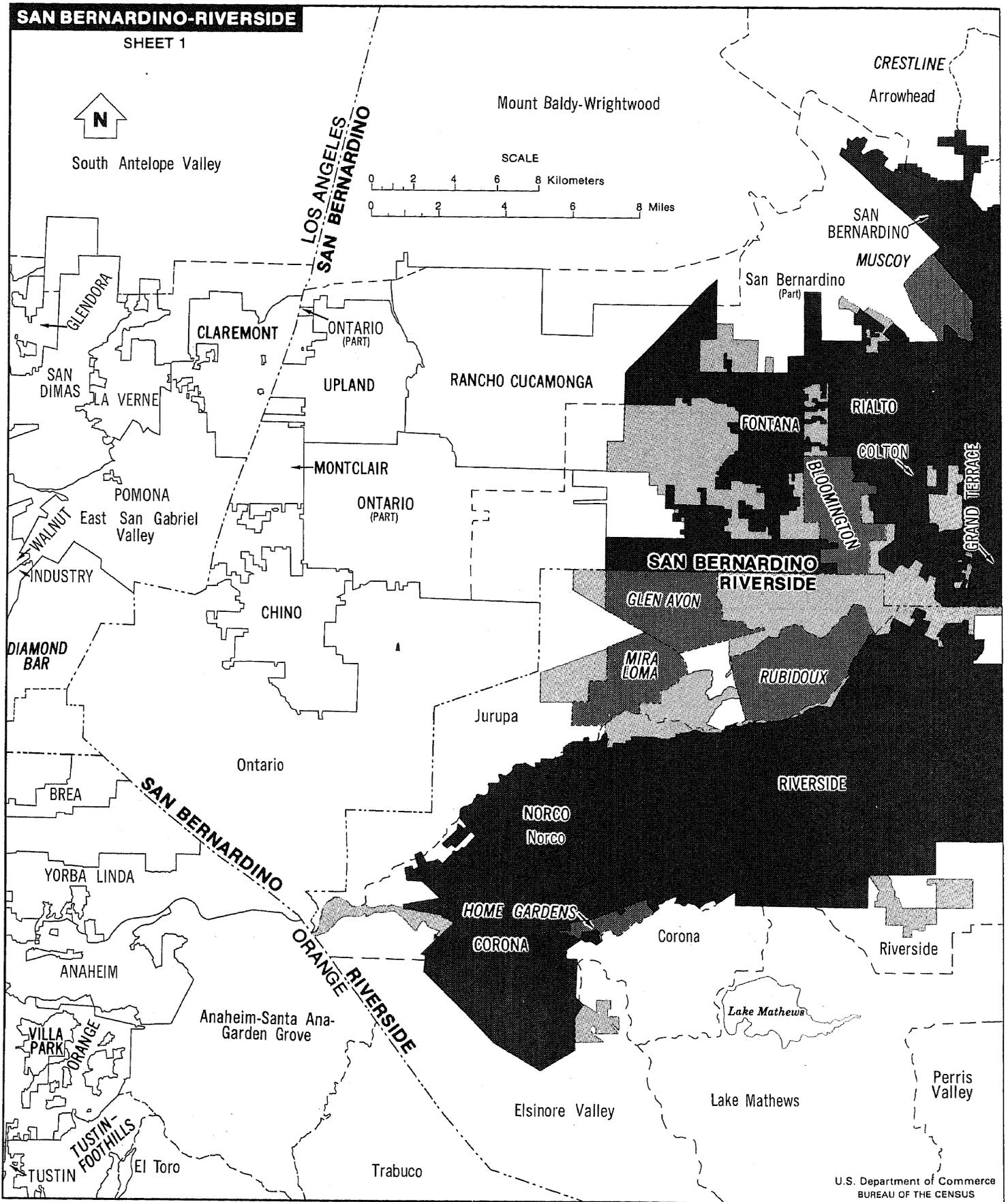
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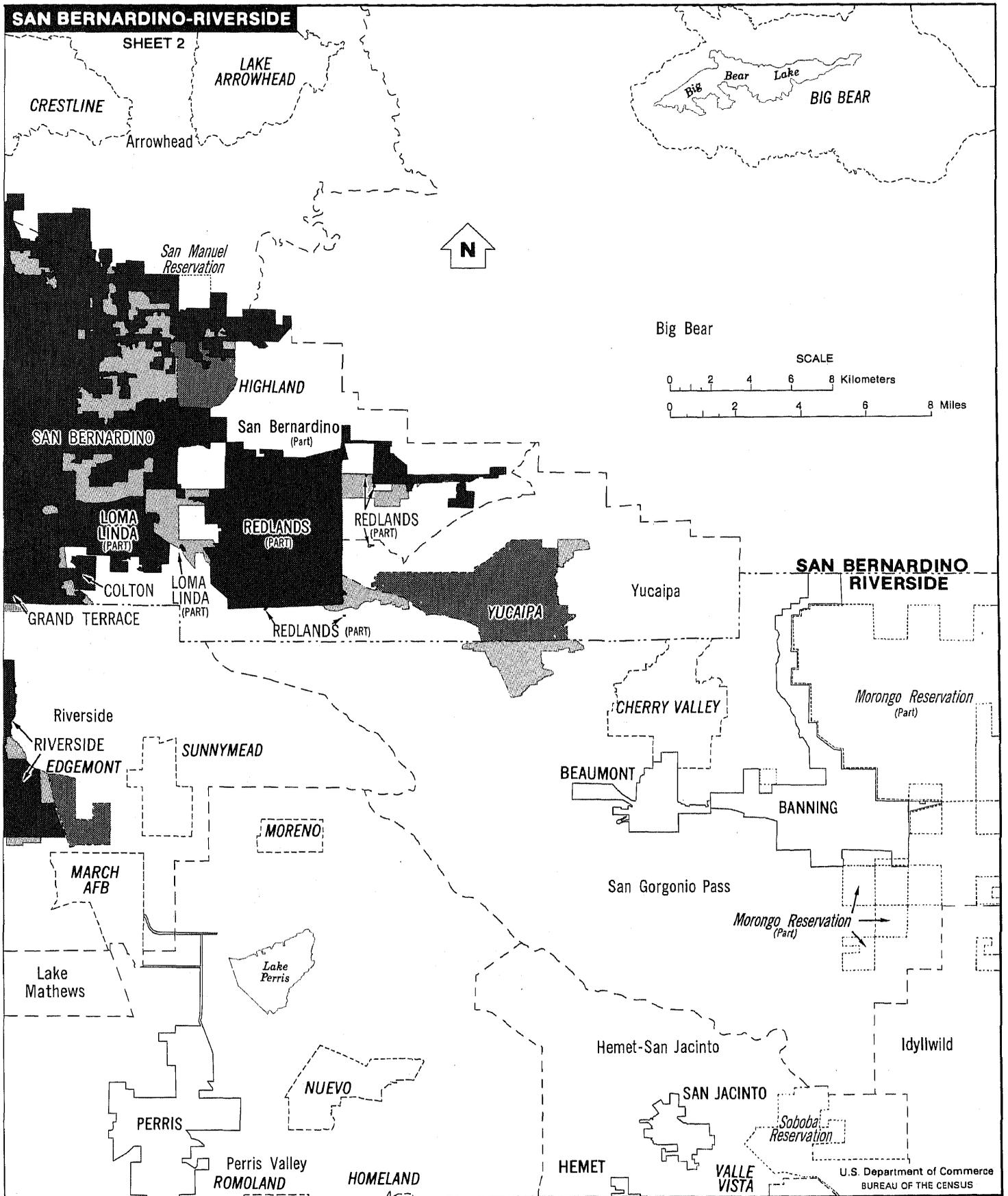
NUMBER OF INHABITANTS

CALIFORNIA 6-67

# Urbanized Areas



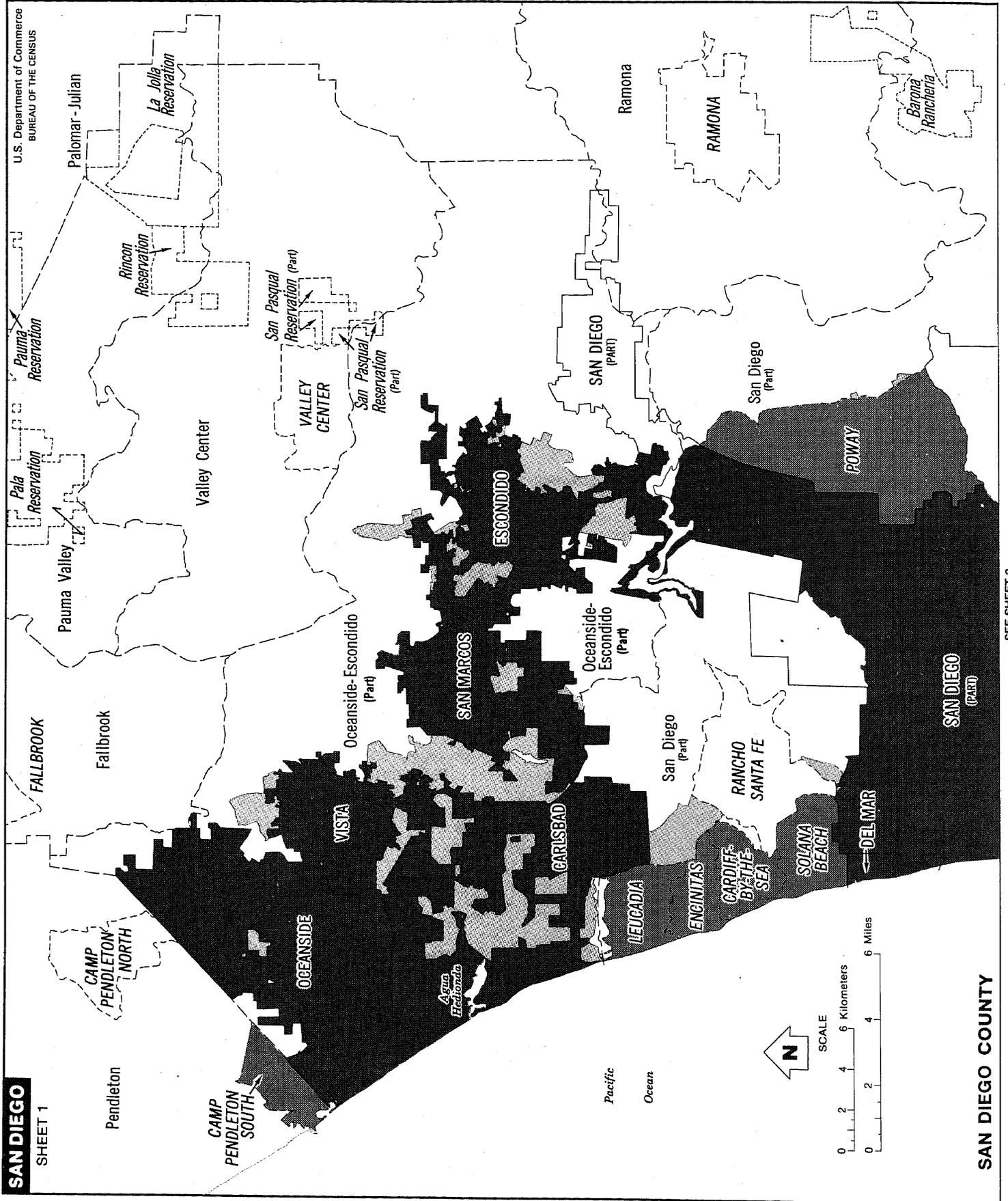
# Urbanized Areas



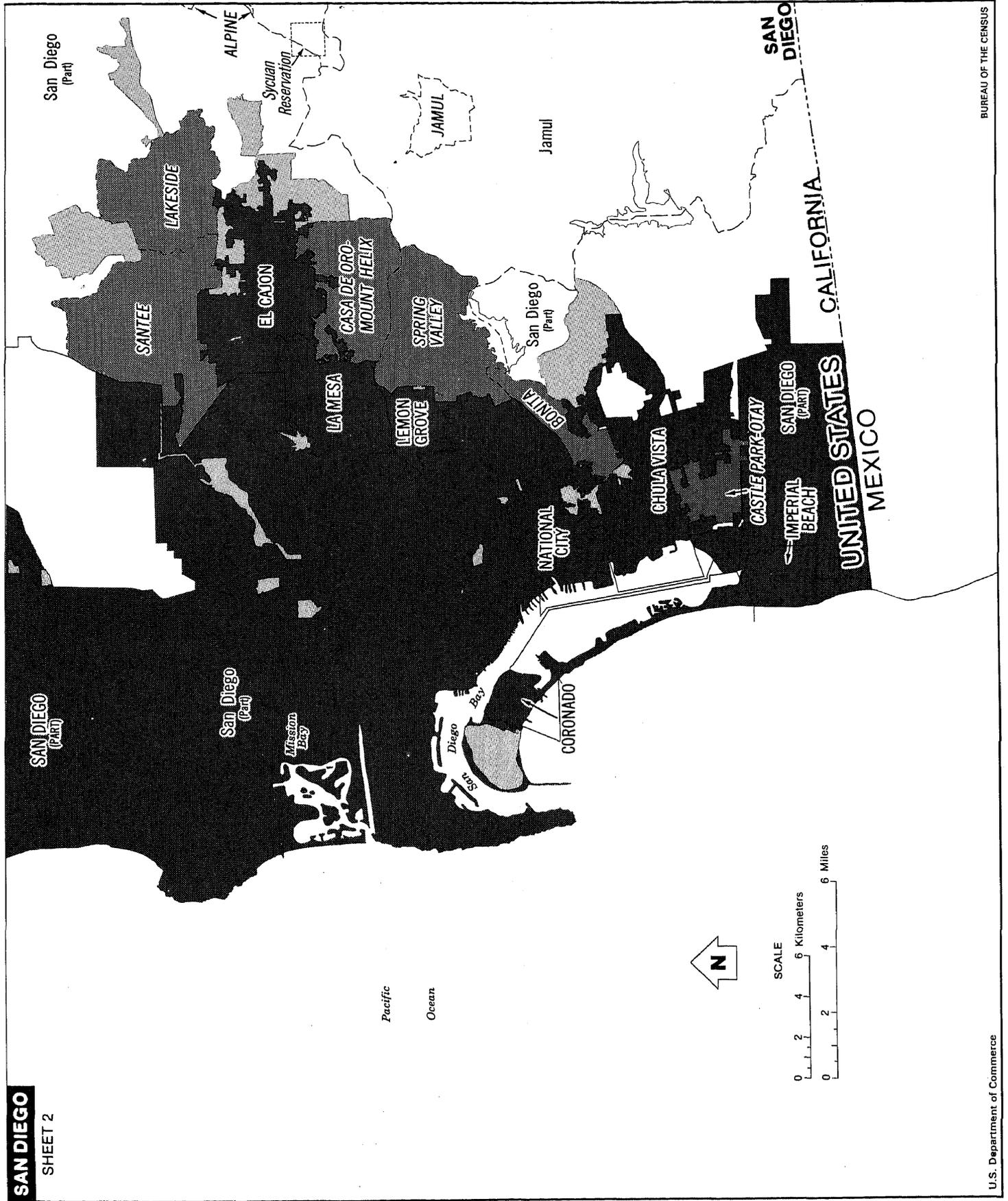
NUMBER OF INHABITANTS

CALIFORNIA 6-69

# Urbanized Areas



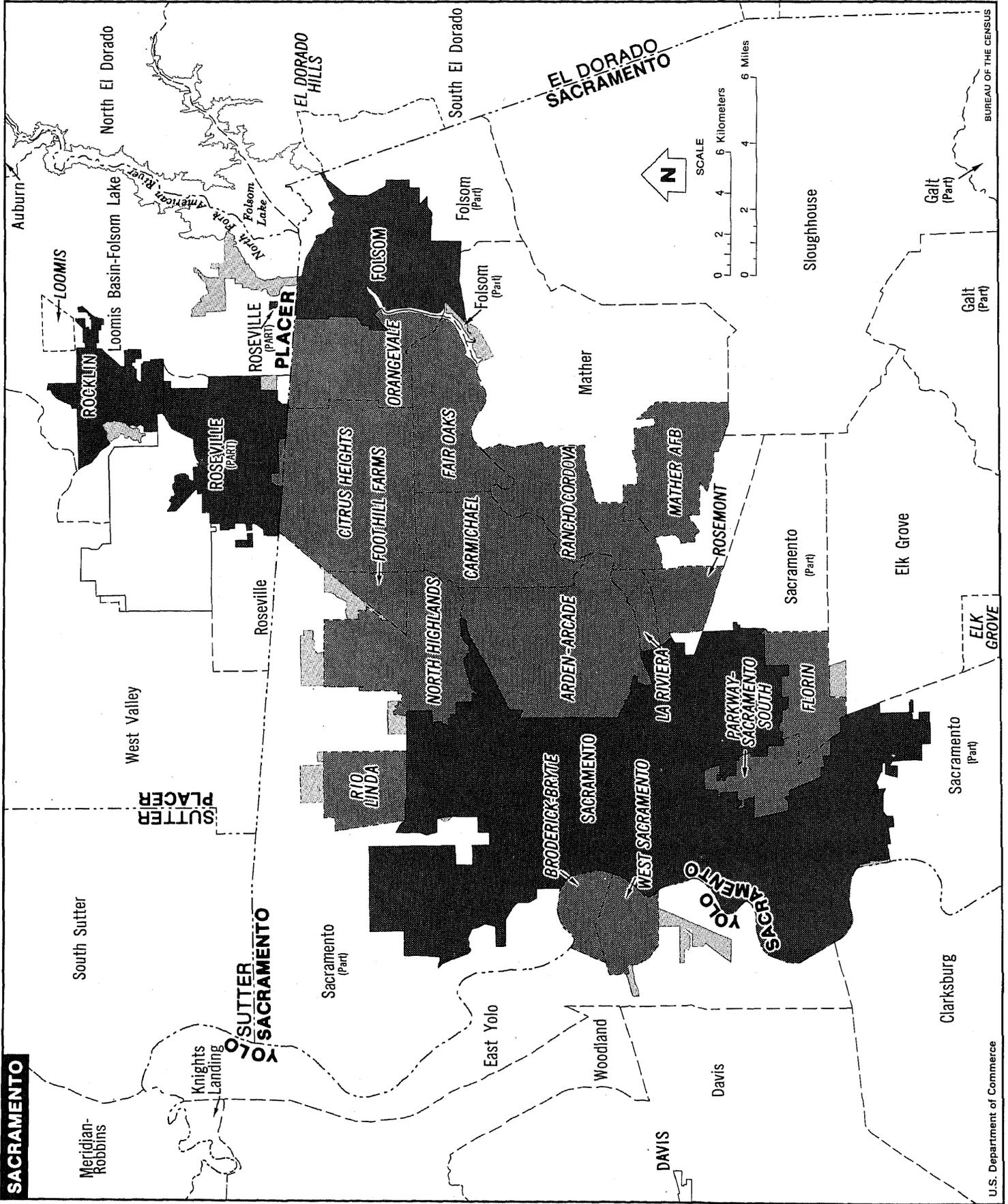
**Urbanized Areas**



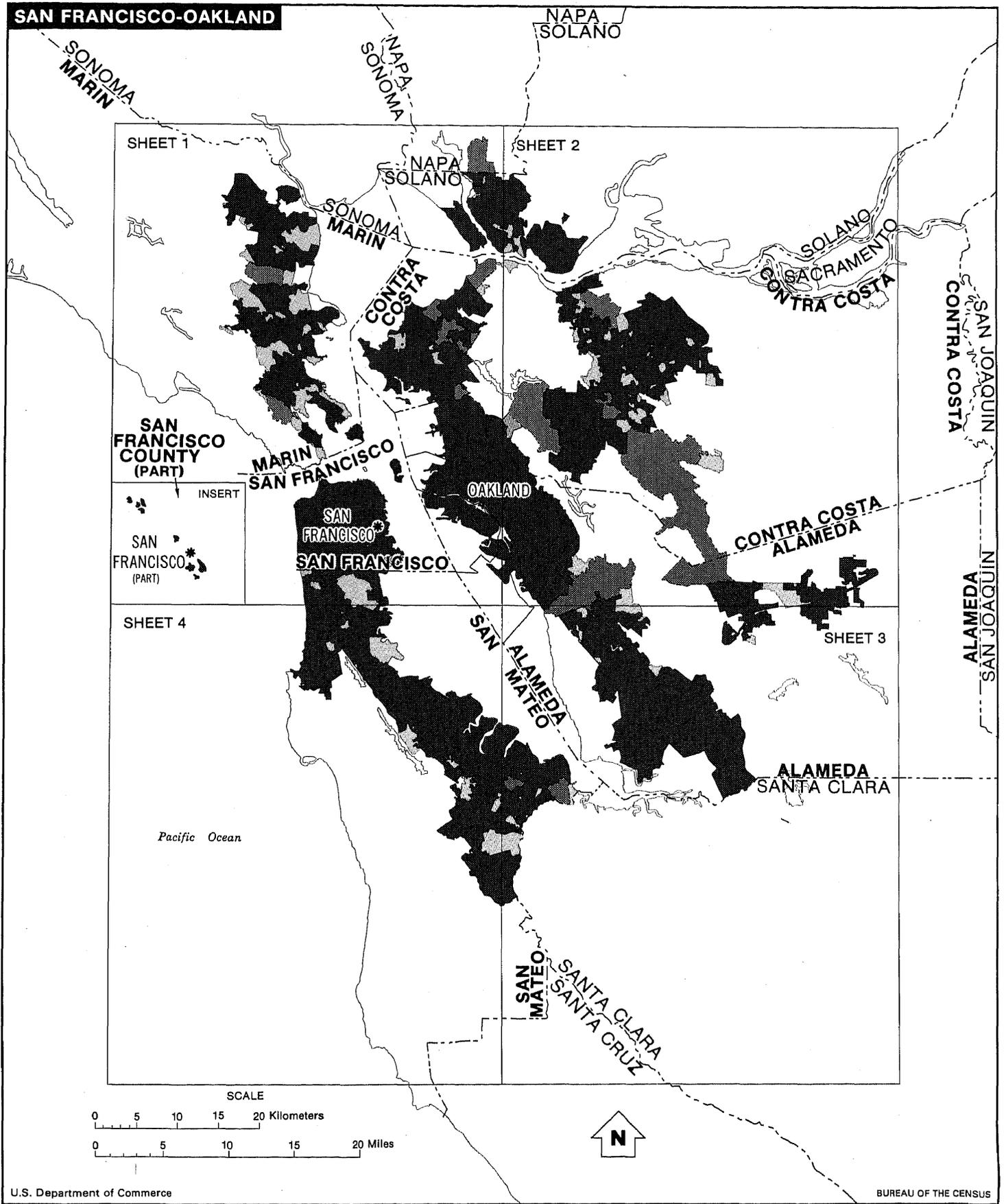
NUMBER OF INHABITANTS

CALIFORNIA 6-71

# Urbanized Areas

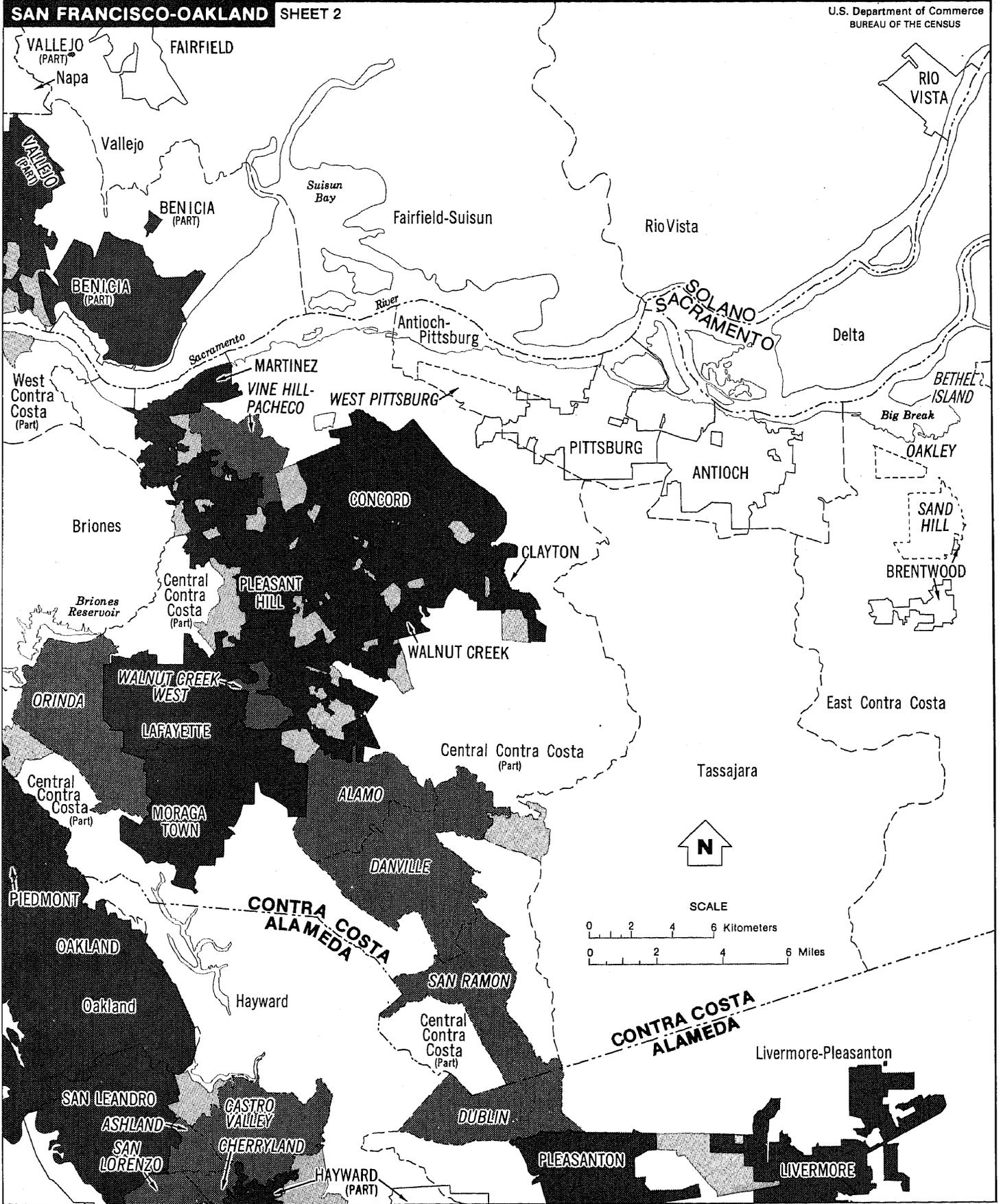


**Urbanized Areas**





# Urbanized Areas

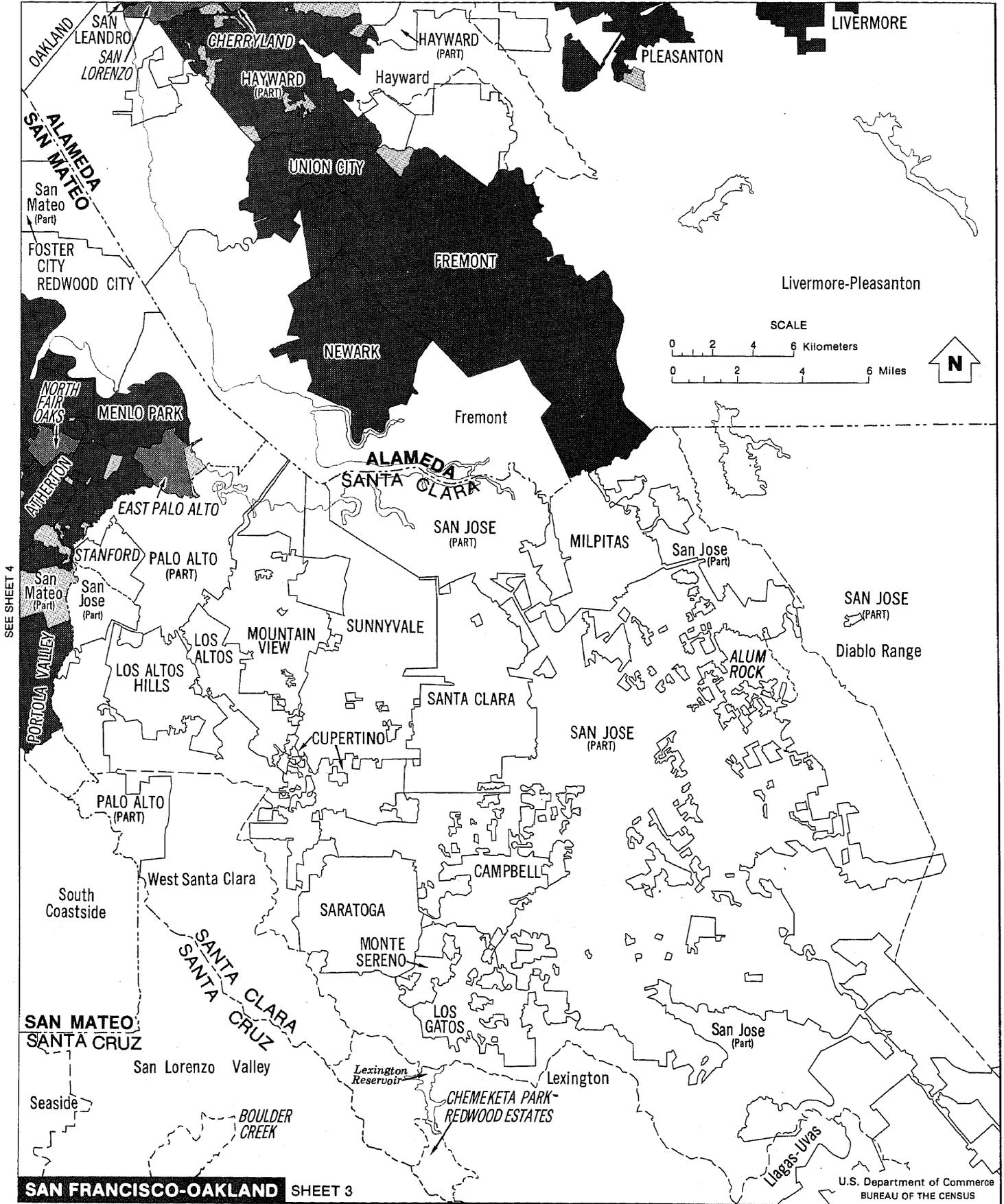


NUMBER OF INHABITANTS

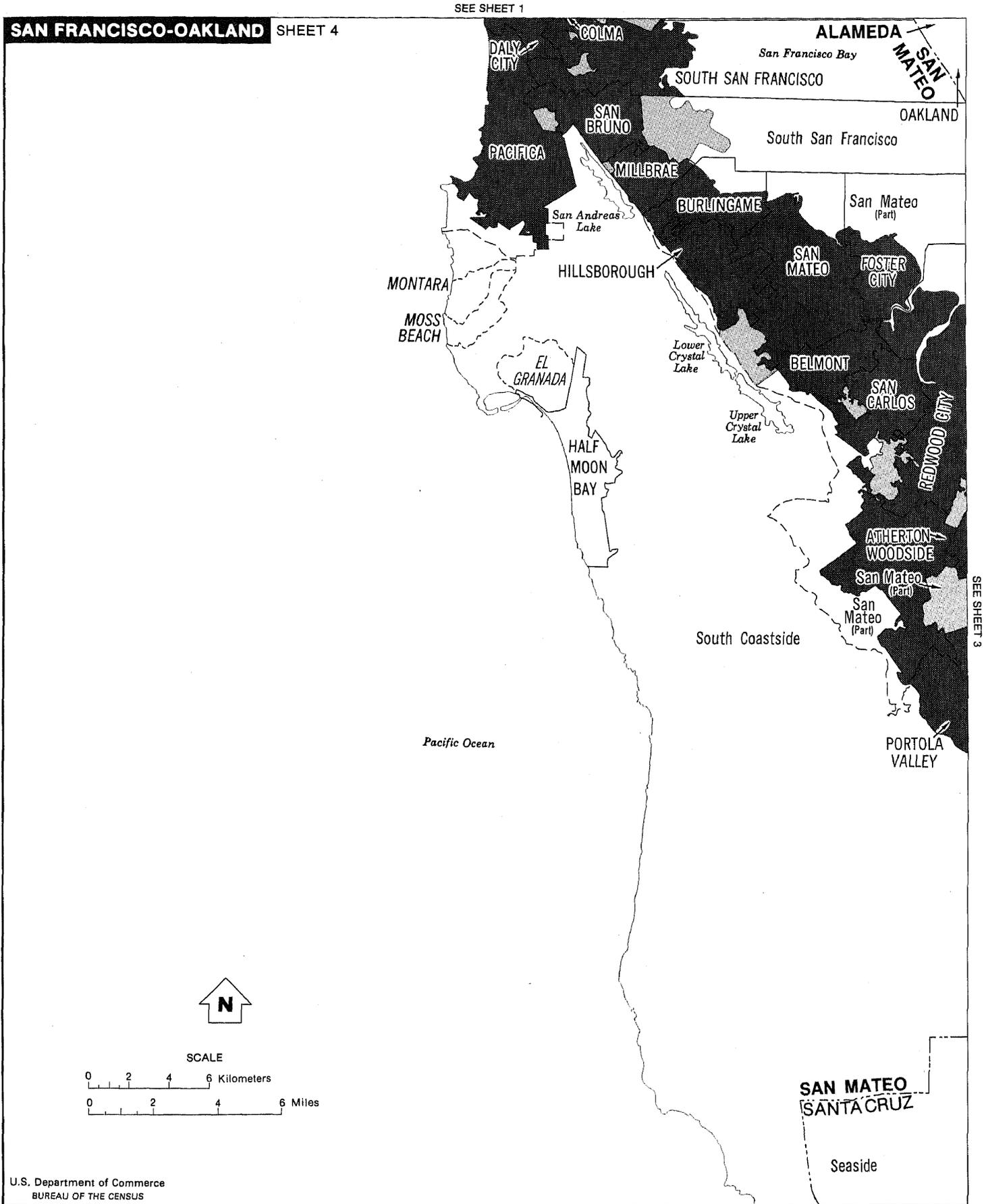
CALIFORNIA 6-75

# Urbanized Areas

SEE SHEET 2



# Urbanized Areas

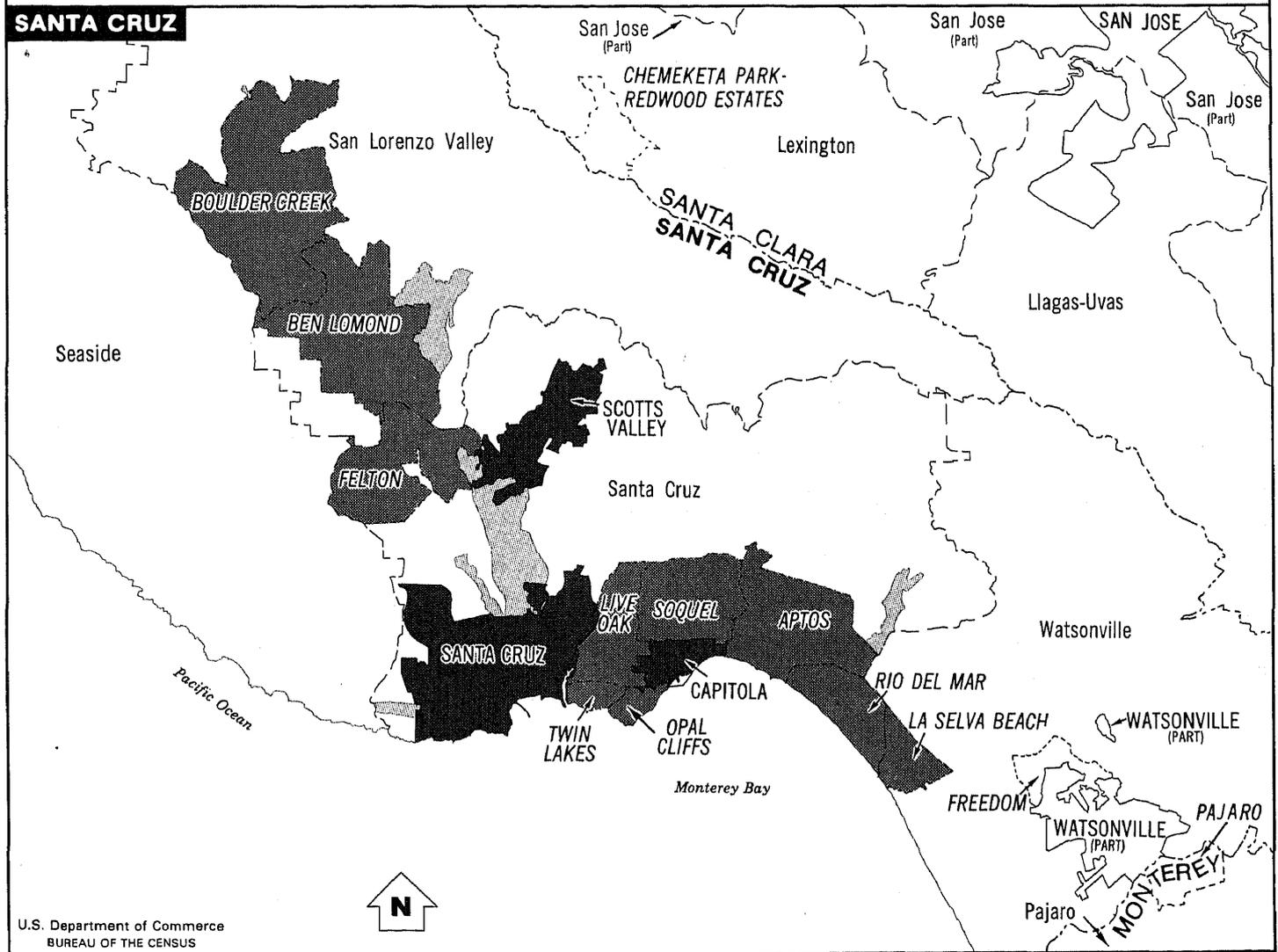
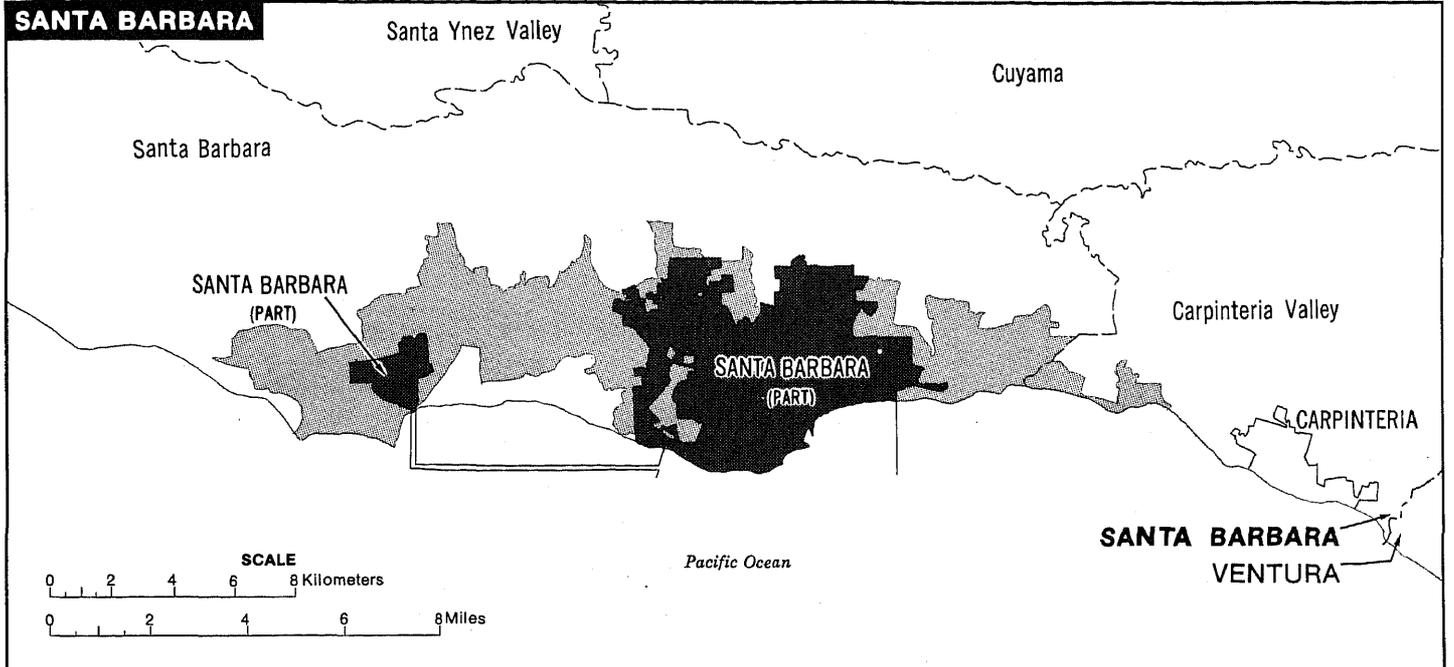


NUMBER OF INHABITANTS

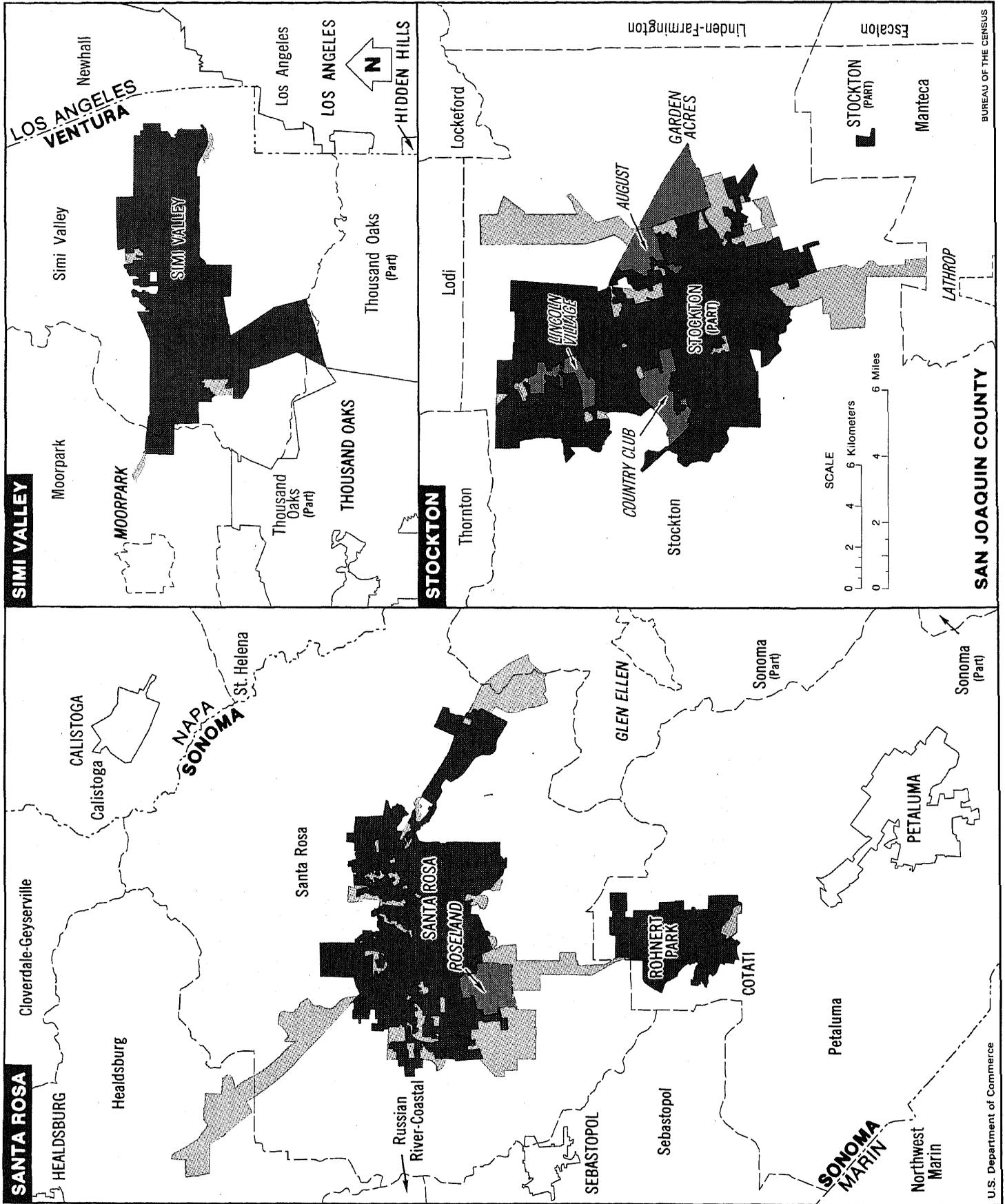
CALIFORNIA 6-77



# Urbanized Areas



# Urbanized Areas





## Appendix A.—Area Classifications

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### STATES

The 50 States and the District of Columbia are the constituent units of the United States.

### COUNTIES

In most States, the primary divisions are termed counties. In Louisiana, these divisions are known as parishes. In Alaska, which has no counties, the county equivalents are the organized boroughs together with the "census areas" which were developed for general 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 which are independent of any county organization and thus constitute primary divisions of their States. 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 census purposes.

### COUNTY SUBDIVISIONS

Statistics for subdivisions of counties or equivalent areas are presented as follows:

1. Minor civil divisions (MCD's) in 29 States: Arkansas, Connecticut, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, Virginia, West Virginia, and Wisconsin. (In 1970, the county subdivisions recognized for North Dakota were census county divisions.)

MCD's are primary divisions of counties established under State law. These MCD's are variously designated as townships, towns, precincts, districts, wards, plantations, Indian reservations, grants, purchases, gores, locations, or areas. In some States, all incorporated places are also MCD's in their own right. In other States, incorporated places are subordinate to or part of the MCD(s) in which they are located, or the pattern is mixed—some incorporated places are independent MCD's and others are subordinate to one or more MCD's.

For 11 States (Connecticut, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Pennsyl-

vania, Rhode Island, Vermont, and Wisconsin), table 5a presents counts for towns and townships.

In 8 States (Arkansas, Iowa, Kansas, Maine, Minnesota, North Carolina, North Dakota, and South Dakota), certain counties contain territory 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 subdivisions and given a name by the Bureau; the name is followed by the designation "(unorg.)."

2. Census county divisions (CCD's) in 20 States: Alabama, Arizona, California, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Kentucky, Montana, New Mexico, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Washington, and Wyoming.

CCD's are geographic areas which have been defined by the Census Bureau in cooperation with State and county officials for the purpose of presenting statistical data. CCD's have been defined in States where there are no legally established MCD's, where the boundaries of MCD's change frequently, and/or where the MCD's are not generally known to the public. Using published guidelines, the CCD's have usually been designed to represent community areas focused on trading centers, or to represent major land use areas, and to have visible, permanent, and easily described boundaries.

3. Census subareas in Alaska. For the 1980 census, census subareas have been delineated cooperatively by the Census Bureau and the State of Alaska for statistical purposes. These areas replace the subdivisions used for the 1970 census.

4. Quadrants in the District of Columbia.

**Appendix A.—Area Classifications**

**PLACES**

Two types of places are recognized in the census reports—incorporated places and census designated places—as defined below.

**Incorporated Places**

Incorporated places recognized in the reports of the census are those which are incorporated under the laws of their respective States as cities, boroughs, towns, and villages, with the following exceptions: boroughs in Alaska and New York, and towns in the six New England States, New York, and Wisconsin. The towns in the New England States, New York, and Wisconsin, and the boroughs in New York are recognized as MCD's for census purposes; the boroughs in Alaska are county equivalents.

Some incorporated places include narrow strips of land (frequently only the rights-of-way of streets) which typically have no population or housing units. These areas, termed "corporate corridors," are generally not shown on the maps or in the tables of 1980 census reports. The existence of these areas is indicated in the footnotes to table 4.

In Connecticut, a unique situation exists in which one incorporated place (Woodmont borough) is subordinate to another (Milford city). The city of Milford is coextensive with the town of Milford. In the tables for the Connecticut report in this series and other series of 1980 census reports, data shown for Milford city exclude those for Woodmont borough, and the user must therefore refer to data for Milford town (which include those for the borough) for data for Milford city.

**Census Designated Places**

As in the 1950, 1960, and 1970 censuses, the Census Bureau has delineated boundaries for closely settled population centers without corporate limits. In 1980, the name of each such place is followed by "(CDP)," meaning "census designated place." In the 1970 and earlier censuses, these places were identified by "(U)," meaning "unincorporated place." To be recognized for the 1980 census, CDP's must have a minimum 1980 population as follows:

Area	Minimum CDP population
Alaska . . . . .	25
Hawaii . . . . .	300
All other States:	
Inside urbanized areas:	
With one or more cities of 50,000 or more . . . . .	5,000
With no city of 50,000 or more . . . . .	1,000
Outside urbanized areas . . . . .	1,000

Hawaii is the only State with no incorporated places recognized by the Bureau of the Census. All places shown for Hawaii in the 1980 census reports are CDP's. Honolulu CDP essentially represents the Honolulu Judicial District. The city of Honolulu, coextensive with the county of Honolulu, is not recognized for census purposes.

Census designated place boundaries change with changes in the settlement pattern; a place which has the same name as in previous censuses does not necessarily have the same boundaries. Boundary outlines for CDP's appear on the county subdivision map which follows the detailed tables. Detailed maps are available for purchase from the Census Bureau.

**URBAN AND RURAL RESIDENCE**

As defined for the 1980 census, the urban population comprises all persons living in urbanized areas and in places of 2,500 or more inhabitants outside urbanized areas. More specifically, the urban population consists of all persons living in (1) places of 2,500 or more inhabitants incorporated as cities, villages, boroughs (except in Alaska and New York), and towns (except in the New England States, New York, and Wisconsin), but excluding those persons living in the rural portions of extended cities; (2) census designated places of 2,500 or more inhabitants; and (3) other territory, incorporated or unincorporated, included in urbanized areas. The population not classified as urban constitutes the rural population.

In censuses prior to 1950, the urban population comprised all persons living in incorporated places of 2,500 or more inhabitants and areas (usually minor civil

divisions) classified as urban under special rules relating to population size and density. A definition of urban population restricted to incorporated places having 2,500 or more inhabitants excludes a number of large and densely settled areas merely because they are not incorporated. Prior to 1950, an effort was made to avoid some of the more obvious omissions by inclusion of selected areas which were classified as urban under special rules. Even with these rules, however, the inhabitants of many large and closely built-up areas were excluded from the urban population.

To improve its measure of the urban population, the Bureau of the Census in 1950 adopted the concept of the urbanized area and delineated boundaries for unincorporated places. For the 1950 census, the urban population was defined as all persons residing in urbanized areas and, outside these areas, in all places, incorporated or unincorporated, which had 2,500 or more inhabitants. With the following three exceptions, the 1950 definition of urban has continued substantially unchanged. First, in 1960 (but not in 1970 or 1980), certain towns in the New England States, townships in New Jersey and Pennsylvania, and Arlington County, Va., were designated as urban. However, most of the residents of these "special rule" areas would have been classified as urban in any event because they were residents of an urbanized area or an unincorporated place of 2,500 or more. Second, "extended cities" were identified in 1970 and 1980. Their recognition has, in general, had very little impact on the urban and rural population figures. Third, changes since 1970 in the criteria for defining central cities have permitted urbanized areas to be defined around smaller centers.

**Extended Cities**

Since 1960 there has been an increasing trend toward the extension of city boundaries to include territory essentially rural in character. The classification of all the inhabitants of such cities as urban would include in the urban population persons whose environment is primarily rural in character. For the 1970 and 1980 censuses, in order to separate these people from those residing in the closely settled portions of such cities, the Bureau of the Census classified as rural a portion

## Appendix A.—Area Classifications

or portions of each such city that was located in an urbanized area. To be treated as an extended city, a city must contain one or more areas that are each at least 5 square miles in extent and have a population density of less than 100 persons per square mile. The area or areas must constitute at least 25 percent of the land area of the legal city or include at least 25 square miles. These areas are excluded from the urbanized area.

Those cities designated as extended cities thus consist of an urban part and a rural part. In table 5, the population figure for the urban part is shown separately under the total population for the entire city. Only the urban part is considered to be the central city of an urbanized area. However, the term "central city" as used for SMSA's refers to the entire population within the legal boundaries of the city.

### "Current" and "Previous" Urban and Rural Definitions

In the tables showing historical data by urban and rural residence, the "current" figures refer to the urban definition used in 1950, 1960, 1970, and 1980 (inside urbanized areas and, outside urbanized areas, in places of 2,500 or more inhabitants). The "previous" figures presented in this report have been adjusted to constitute a substantially consistent series based on incorporated places of 2,500 or more inhabitants with additional areas defined as urban under special rules in censuses prior to 1950.

## URBANIZED AREAS

### Definition

The major objective of the Census Bureau in delineating urbanized areas is to provide a better separation of urban and rural population in the vicinity of large cities. An urbanized area consists of a central city or cities, and surrounding closely settled territory ("urban fringe").

The following criteria are used in determining the eligibility and definition of the 1980 urbanized areas:<sup>1</sup>

An urbanized area comprises an

incorporated place<sup>2</sup> and adjacent densely settled surrounding area that together have a minimum population of 50,000.<sup>3</sup> The densely settled surrounding area consists of:

1. Contiguous incorporated or census designated places having:
  - a. A population of 2,500 or more; or,
  - b. A population of fewer than 2,500 but having a population density of 1,000 persons per square mile, a closely settled area containing a minimum of 50 percent of the population, or a cluster of at least 100 housing units.
2. Contiguous unincorporated area which is connected by road and has a population density of at least 1,000 persons per square mile.<sup>4</sup>
3. Other contiguous unincorporated area with a density of less than 1,000 persons per square mile, provided that it:
  - a. Eliminates an enclave of less than 5 square miles which is surrounded by built-up area.
  - b. Closes an indentation in the boundary of the densely settled area that is no more than 1 mile across the open end and encompasses no more than 5 square miles.
  - c. Links an outlying area of qualifying density, provided that the outlying area is:
    - (1) Connected by road to, and is not more than 1½ miles from, the main body of the urbanized area.
    - (2) Separated from the main body of the urbanized area by water or other undevelopable area, is connected by road to the main body of the urbanized area, and is not more than 5 miles

<sup>2</sup>In Hawaii, incorporated places do not exist in the sense of functioning local governmental units. Instead, census designated places are used in defining a central city and for applying urbanized area criteria.

<sup>3</sup>The rural portions of extended cities, as defined in the Census Bureau's extended city criteria, are excluded from the urbanized area. In addition, for an urbanized area to be recognized, it must include a population of at least 25,000 that does not reside on a military base.

<sup>4</sup>Any area of extensive nonresidential urban land use, such as railroad yards, airports, factories, parks, golf courses, and cemeteries, is excluded in computing the population density.

from the main body of the urbanized area.

4. Large concentrations of nonresidential urban area (such as industrial parks, office areas, and major airports), which have at least one-quarter of their boundary contiguous to an urbanized area.

### Urbanized Area Titles

1. The titles of urbanized areas existing prior to the 1980 Census of Population and Housing are retained unchanged except for mergers and for those areas meeting items 4 and/or 5 of the titling criteria.
2. The titles of new urbanized areas qualifying as the result of the 1980 census are determined as follows:
  - a. The name of the incorporated place with the largest population in the urbanized area is always listed.
  - b. The names of up to two additional incorporated places may be listed, with eligibility determined as follows:
    - (1) Those with a population of at least 250,000.
    - (2) Those with a population of 15,000 to 250,000, provided that they are at least one-third the population of the largest place in the urbanized area.
3. Area titles that include the names of more than one incorporated place start with the name of the largest and list the others in descending order of their population.
4. In addition to incorporated place names, the titles contain the name of each State into which the urbanized area extends.
5. Regional titles may be used to identify urbanized areas with populations over 1 million, in which case only the largest city of the urbanized area is included in the title.

### Urbanized Area Central Cities

The central cities of urbanized areas are those named in the titles except where regional titles are used. In such cases, the central cities are those that have qualified under items 1 or 2 of the titling criteria.

<sup>1</sup>All references to population counts and densities relate to data from the 1980 census.

## Appendix A.—Area Classifications

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Counts and data for central cities of urbanized areas refer to the urban portion of these cities, thus excluding the rural portions of extended cities, as discussed above.

### STANDARD METROPOLITAN STATISTICAL AREAS

#### Definition

The general concept of a metropolitan area is one of a large population nucleus, together with adjacent communities which have a high degree of economic and social integration with that nucleus. The standard metropolitan statistical area (SMSA) classification is a statistical standard, developed for use by Federal agencies in the production, analysis, and publication of data on metropolitan areas. The SMSA's are designated and defined by the Office of Management and Budget, following a set of official published standards developed by the interagency Federal Committee on Standard Metropolitan Statistical Areas.

Each SMSA has one or more central counties containing the area's main population concentration: an urbanized area with at least 50,000 inhabitants. An SMSA may also include outlying counties which have close economic and social relationships with the central counties. The outlying counties must have a specified level of commuting to the central counties and must also meet certain standards regarding metropolitan character, such as population density, urban population, and population growth. In New England, SMSA's are composed of cities and towns rather than whole counties.

The population living in SMSA's may also be referred to as the metropolitan population. The population is subdivided into "inside central city (or cities)" and "outside central city (or cities)." The population living outside SMSA's constitutes the nonmetropolitan population.

#### SMSA Titles

Most SMSA's have at least one central city. The titles of SMSA's include up to three city names, as well as the name of each State into which the SMSA extends. For the 1980 census, central cities of

SMSA's are those named in the titles of the SMSA's, with the exception of Nassau-Suffolk, N.Y., which has no central city, and Northeast Pennsylvania, the central cities of which are Scranton, Wilkes-Barre, and Hazleton. Data on central cities of SMSA's include the entire population within the legal city boundaries. In Hawaii, where there are no incorporated places recognized by the Bureau of the Census, census designated places are recognized as central cities.

#### New SMSA Standards

New standards for designating and defining metropolitan statistical areas were published in the *Federal Register* on January 3, 1980. The SMSA's recognized for the 1980 census comprise (1) all areas as defined on January 1, 1980, except for one area which was defined provisionally during the 1970's on the basis of population estimates but whose qualification was not confirmed by 1980 census counts; and (2) a group of 36 new areas defined on the basis of 1980 census counts and the new standards that were published on January 3, 1980.

The new standards will not be applied to the areas existing on January 1, 1980, until after data on commuting flows become available from 1980 census tabulations. At that time, the boundaries, definitions, and titles for all SMSA's will be reviewed.

To aid users who want to become familiar with the SMSA standards and how they are applied, documents are available from the Office of Management and Budget, Washington, D.C. 20503.

### STANDARD CONSOLIDATED STATISTICAL AREAS

In some parts of the country, metropolitan development has progressed to the point that adjoining SMSA's are themselves socially and economically interrelated. These areas are designated standard consolidated statistical areas (SCSA's) by the Office of Management and Budget, and are defined using standards included as part of the new SMSA standards described above.

### RELATIONSHIP BETWEEN URBANIZED AREAS AND METROPOLITAN AREAS

Although the urbanized area and the metropolitan area are closely related in concept, there are important differences. The urbanized area has a more limited territorial extent. The urbanized area consists of the physically continuously built-up territory around each larger city and thus corresponds generally to the core of high and medium population density at the heart of the metropolitan area. In concept, a metropolitan area is always larger than its core urbanized area, even if the metropolitan area is defined in terms of small building blocks, because it includes discontinuous urban and suburban development beyond the periphery of the continuously built-up area. The metropolitan area may also include some rural territory whose residents commute to work in the city or its immediate environs, while the urbanized area does not include such territory. In practice, because the SMSA definitions use counties as building blocks, considerable amounts of rural territory with few commuters are often included. However, even in New England, where cities and towns are used as building blocks, SMSA's are generally much larger in extent than their core urbanized areas.

It sometimes occurs, because of boundary anomalies, that a portion of the urbanized area extends across the SMSA boundary into a nonmetropolitan county or another SMSA. However, such portions are usually quite small in area and population.

The new standards provide that each SMSA be associated with an urbanized area. However, the reverse is not true—there are some urbanized areas that are not in any SMSA. This situation occurs when an urbanized area does not qualify as an SMSA of at least 100,000 population (75,000 in new England), and the urbanized area has no city with at least 50,000 population.

In addition, some SMSA's contain more than one urbanized area. This occurs when—

1. Two or more urban concentrations not far apart and of generally similar size have separate urbanized areas but qualify as a single SMSA (for example, Greensboro, High Point, and Winston-Salem, North Carolina). Often the

## Appendix A.—Area Classifications

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SMSA title includes the name of the largest city of each of the component urbanized areas.

2. A very large SMSA includes one or more smaller separate urbanized areas within its boundaries. Examples are the separate urbanized areas around Joliet, Aurora, and Elgin within the Chicago SMSA.

### BOUNDARY CHANGES

The boundaries of some of the areas shown in this report have changed between an earlier census for which counts are shown and January 1, 1980. The historic counts shown here for counties, county subdivisions, places, and urbanized areas have not been adjusted for such changes and thus reflect the population in the areas as defined at each census. The historic counts for SMSA's and SCSA's have been adjusted to reflect the areas defined as of the 1980 census. Information on boundary changes for counties, county subdivisions, and incorporated places is presented in table 4. For information on boundary changes prior to 1970, see the *Number of Inhabitants* report for each census.

### AREA MEASUREMENTS

Area measurement figures for counties and county equivalent areas in the 1980 census were prepared using a process called digitizing. This process involved first verifying and highlighting the county boundaries recognized for the 1980 census on copies of the topographic quadrangle maps produced by the U.S. Geological Survey and relocating those boundaries where necessary. An electronically assisted digitizing device was

then used to trace over each county line and to calculate the latitude/longitude values associated with each line. From the latitude/longitude information associated with each county, the total area of the county in square miles was computed. The total area figure derived for each county was subsequently reviewed against similar information from the 1960 and 1970 censuses and other sources, with significant variations in area being rechecked and adjudicated.

Following this review, the total area of the county was apportioned between land and water. No direct measurements were made to determine these values separately; instead, information from which the final figures were compiled was gathered from several other Federal and State agencies. The boundary between inland and other water was part of the original digitizing process and was treated as though it were a county boundary line. After all operations, a mathematical conversion was performed to convert all values from square miles to square kilometers.

Differences between 1980 area figures and those reported in previous censuses are attributable to changes in base map scale and detail, methodology for measurement, and occasionally to county boundary change or relocation.

### HISTORIC COUNTS

As in past censuses, the general rule for presenting historic figures for States, counties, county subdivisions, and places is to present counts only for single, continually existing entities. Stated another way, if an area existed at both the current and previous censuses, a count is shown for the previous census. Included in this category are areas which are of the same type (county, county

subdivision, or place) which have retained the same name or have changed their name. Also included are places which have merged and retained the name of one of the merged areas.

In cases where entities have been formed since the earlier censuses, such as a newly incorporated place or a newly organized township, the symbol three dots "... " is shown for the earlier census. The three-dot symbol is also shown for those parts of a place which have extended into a new county or county subdivision through annexation or other expansion of boundaries.

In a few cases, changes in the boundaries of county subdivisions have been made so as to split a place into two or more parts. Historic counts for the parts of the place as currently split may not always be available. In these cases, "(NA)" is shown for the place by county subdivision; however, the total population of the place is shown in tables showing the place by State or county.

For most places incorporated since 1970, or for census county divisions with altered boundaries, 1970 population counts for the 1980 territory are stated in the footnotes to table 4.

In a number of tables in this report, 1970 counts are shown for aggregations of individual areas such as the number and population of places by size groups or urban and rural distributions. In some instances, population counts for individual areas have been revised since publication of the 1970 census reports (indicated by the prefix "r" as described in the section "Symbols and Geographic Abbreviations" in the Introduction). These revisions have not been carried through to the various aggregations; therefore, it may not be possible to determine the individual areas in a given aggregation using the 1970 population counts shown here.

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### USUAL PLACE OF RESIDENCE

In accordance with census practice dating back to the first U.S. census in 1790, each person enumerated in the 1980 census was counted as an inhabitant of his or her "usual place of residence," which is generally construed to mean the place where the person lives and sleeps most of the time. This place is not necessarily the same as the person's legal residence or voting residence. In the vast majority of cases, however, the use of these different bases of classification would produce substantially the same statistics, although there might be appreciable differences for a few areas.

The implementation of this practice has resulted in the establishment of residence 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). Persons without a usual place of residence, however, were counted where they happened to be staying.

#### Armed Forces

Members of the Armed Forces living on a military installation were counted,

as in every previous census, as residents of the area in which the installation was located; members of the Armed Forces not living on a military installation were counted as residents of the area in which they were living. Persons in families with Armed Forces personnel were counted where they were living on Census Day (i.e., the military installation or "off base," as the case might be).

Each Navy ship was attributed to the municipality that the Department of the Navy designated as its homeport, except for those ships which were deployed to the 6th or 7th Fleet on Census Day. As was done in the 1970 census, naval personnel aboard deployed ships were defined in the 1980 census as part of the overseas population, because deployment to the 6th or 7th Fleet implies a long-term overseas assignment. In homeports with fewer than 1,000 naval personnel assigned to ships, the crews were counted aboard the ship. In homeports with 1,000 or more naval personnel assigned to ships, the naval personnel who indicated that they had a usual residence within 50 miles of the homeport of their ship were attributed to that residence. When a homeport designated by the Navy was contained in more than one municipality, ships homeported and berthed there on Census Day were assigned by the Bureau to the municipality in which the land immediately adjacent to the dock or pier was actually located. Other ships attributed by the Navy to that homeport, but which were not physically present and not deployed to the 6th or 7th Fleet on Census Day, were allocated to the municipality named on the Navy's homeport list.

#### Crews of Merchant Vessels

Shipboard Census Reports were mailed to crews of merchant vessels through the

ships' respective owner-operators based on lists of U.S. flag merchant vessels obtained from the Maritime Administration, U.S. Department of Commerce.

If the ship was berthed in a U.S. port on Census Day, the crew was enumerated as of that port. If the ship was not berthed in a U.S. port but was inside the territorial waters of the United States, the crew was enumerated as of (a) the port of destination if that port was inside the United States or (b) the homeport of the ship if its port of destination was outside the United States. Crews of U.S. flag vessels which were outside U.S. territorial waters on Census Day and crews of vessels flying a foreign flag were not enumerated in the 1980 census.

#### 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 1950. However, children in boarding schools below the college level were counted at their parental home.

#### Persons in Institutions

Inmates of institutions, who ordinarily live there for considerable periods of time, were counted as residents of the area where the institution was located. Patients in short-term wards of general hospitals were counted at their usual place of residence; if they had no usual place of residence, they were counted at the hospital.

#### Persons Away From Their Residence on Census Day

Persons in hotels, motels, etc., on the night of March 31, 1980, were requested to fill out a census form for assignment of their census information back to their

## Appendix B.—General Enumeration and Processing Procedures

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homes if they indicated that no one was at home to report them in the census. A similar approach was used for persons visiting in private residences, as well as for Americans who left the United States during March 1980 via major intercontinental air or ship carriers for temporary travel abroad. In addition, information on persons away from their usual place of residence was obtained from other members of their families, resident managers, neighbors, etc. If an entire household was expected to be away during the whole period of the enumeration, information on that household was obtained from neighbors. A matching process was used to eliminate duplicate reports for persons who reported for themselves while away from their usual residence and who were also reported at this usual residence by someone else.

A special enumeration was conducted in such facilities as missions, flophouses, jails, detention centers, etc., on the night of April 6, 1980, and persons enumerated therein were counted as residents of the area in which the establishment was located.

### Americans Abroad

Americans who were overseas for an extended period (in the Armed Forces, working at civilian jobs, studying in foreign universities, etc.) were not included in the population of any State or the District of Columbia. On the other hand, Americans who were temporarily abroad on vacations, business trips, and the like were counted at their usual residence in the United States.

### Citizens of Foreign Countries

Citizens of foreign countries having their usual residence (legally or illegally) in the United States on Census Day, including those working here (but not living at an embassy, ministry, legation, chancellery, or consulate) and those attending school (but not living at an embassy, etc.), were included in the enumeration, as were members of their families living with them. However, citizens of foreign countries temporarily visiting or traveling in the United States or living on the premises of an embassy,

etc., were not enumerated in the 1980 census.

### DATA COLLECTION PROCEDURES

The 1980 census was conducted primarily through self-enumeration. A census questionnaire was delivered by postal carriers to every household several days before Census Day, April 1, 1980. This questionnaire included explanatory information and was accompanied by an instruction guide. Spanish-language versions of the questionnaire and instruction guide were available on request. The questionnaire was also available in narrative translation in 32 languages.

In most areas of the United States, altogether containing about 95 percent of the population, the householder was requested to fill out and mail back the questionnaire on Census Day. Approximately 83 percent of these households returned their forms by mail. Households that did not mail back a form were visited by an enumerator. Households that returned a form with incomplete or inconsistent information that exceeded a specified tolerance were contacted by telephone or, if necessary, by a personal visit, to obtain the information.

In the remaining (mostly sparsely settled) areas of the country, which contained about 5 percent of the population, the household received a questionnaire in the mail. The householder was requested to fill out the questionnaire and give it to the enumerator when he or she visited the household; incomplete and unfilled forms were completed by interview during the enumerator's visit.

Each household in the country received one of two versions of the census questionnaire: a short-form questionnaire containing a limited number of basic population and housing questions or a long-form questionnaire containing these basic questions as well as a number of additional questions. A sampling procedure was used to determine those households which were to receive the long-form questionnaire. Two sampling rates were employed. For most of the country, one in every six households (about 17 percent) received the long form or sample questionnaire; in areas

estimated to have fewer than 2,500 inhabitants, every other household (50 percent) received the sample questionnaire to enhance the reliability of sample data in small areas.

Special questionnaires were used for the enumeration of persons in group quarters such as colleges and universities, hospitals, prisons, military installations, and ships. These forms contained the same population questions that appeared on either the short form or the long form but did not include any housing questions. In addition to the regular census questionnaires, the Supplementary Questionnaire for American Indians was used in conjunction with the short form on Federal and State reservations and in the historic areas of Oklahoma (excluding urbanized areas) for households that had at least one American Indian, Eskimo, or Aleut household member.

### PROCESSING PROCEDURES

The 1980 census questionnaires were processed in a manner similar to that for the 1970 and 1960 censuses. They were designed to be processed electronically by the Film Optical Sensing Device for Input to Computer (FOSDIC). For most items on the questionnaire, the information supplied by the respondent or obtained by the enumerator was indicated by marking the answers in predesignated positions that would be "read" by FOSDIC from a microfilm copy of the questionnaire and transferred onto computer tape with no intervening manual processing. The computer tape excluded information on individual names and addresses.

The tape containing the information from the questionnaires was processed on the Census Bureau's computers through a number of editing and tabulation steps. Among the products of this operation were computer tapes from which the tables in this report (and most others in the 1980 census publications) were prepared on phototypesetting equipment at the Government Printing Office.

A more detailed description of the data collection and processing procedures can be obtained from the *1980 Census of Population and Housing, Users' Guide*, PHC80-R1.

## Appendix C.—Accuracy of the Data

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Since 1980 population counts shown in this report were tabulated from the entries for persons on all questionnaires, these counts are not subject to sampling error. In any large-scale statistical operation such as a decennial census, human and mechanical errors occur. These errors are commonly referred to as nonsampling errors. Such errors include failure to enumerate every household or person in the population, not obtaining all required information from respondents, obtaining incorrect or inconsistent information, and recording information incorrectly. Errors can also occur during the field review of the enumerators' work, the clerical handling of the census questionnaires, or the electronic proc-

essing of the questionnaires.

In an attempt to reduce various types of nonsampling error in the 1980 census, a number of techniques were introduced on the basis of experience in previous censuses and in tests conducted prior to the census. These quality control and review measures were utilized throughout the data collection and processing phases of the census to minimize undercoverage of the population and housing units and to keep the errors at a minimum. As was done after the 1950, 1960, and 1970 censuses, there were programs after the 1980 census to measure various aspects of the quality achieved in the 1980 census. Reports on many aspects of the 1980 census evaluation program will be

published as soon as the appropriate data are accumulated and analyzed.

A major component of the evaluation work is to ascertain, insofar as possible, the degree of completeness of the count of persons and housing units. The Census Bureau has estimated that the 1970 census did not count 2.5 percent of the population. For 1980, the Census Bureau's extensive evaluation program will encompass a number of different approaches to the task of estimating the coverage of the census. Although these studies have not been completed at the time of publication of this report, preliminary estimates indicate that the rate of undercoverage in the 1980 census was reduced from 1970 census levels.