

A Socioeconomic Atlas for



National Park Units in California

2010



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for
National Park Units
in California

by

Jean E. McKendry

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About this Atlas

This atlas for national park units in California is one of 18 similar atlases that have been prepared for the National Park Service (NPS). The purpose of these atlases is to supplement the scientific knowledge of park managers and local communities with information on socioeconomic conditions in the regions surrounding national park units. Each atlas presents information about population, economy and commerce, social and cultural characteristics, recreation and tourism, administration and government, and land use for counties that surround national park units.

The scope and geographic extent of this atlas of regional socioeconomic trends includes 25 NPS units and a region of interest comprising all 58 counties in California. This atlas provides important and timely information about the spatial character of human activities and changing land use across California. The data and maps can be linked to collaborative management planning and serve other planning needs of importance to national park units.

The atlas can also be used as a tool to orient NPS staff (and their management partners) about regional trends and for public participation activities with local communities. Data sets and presentation graphics are delivered on CD-ROM with the atlas. Data files can be used for further analysis. Graphics can be used directly in management, education, outreach, and planning efforts.

Regional socioeconomic atlases have been completed for the Appalachian National Scenic Trail, Blue Ridge Parkway, Big Thicket National Preserve, Canyon De Chelly National Monument, Chesapeake Bay Watershed (NPS Chesapeake Bay Program), Chickamauga and Chattanooga National Military Park, Flight 93 National Memorial, Harpers Ferry National Historical Park, John Day Fossil Beds National Monument, Joshua Tree National Park, King's Mountain National Military Park, Mount Rainier National Park, National Capital Parks, New River Gorge National River, Rosie the Riveter/World War II Home Front National Historical Park, Saguaro National Park, and Wilson's Creek National Battlefield. Digital

copies of these atlases can be downloaded from the following site: <http://www.nature.nps.gov/socialscience/archive.cfm#SocioAtlas>.

For more information about the socioeconomic atlases, please contact Dr. Jean McKendry, Principal Scientist, College of Natural Resources, University of Idaho, P.O. Box 441133, Moscow, ID 83844-1133, (jeanm@uidaho.edu). Dr. McKendry is assigned to work on this project under a cooperative agreement with the NPS, and serves as Principal Investigator/Project Manager for this atlas series.

Acknowledgments

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Introduction

The purpose of this atlas is to provide NPS managers, planners, community leaders, and others with a better understanding of changing human activities and socioeconomic conditions in the region of interest surrounding NPS units in California. Such changes can create complex management challenges. Information about regional trends and conditions is important to managing and conserving resources – both natural and cultural – more effectively. This atlas provides such information in a series of maps, complemented by tables, other graphics, and explanatory text.

Maps are effective ways of conveying information. A map can highlight geographical patterns in data by showing the relationship between what is happening and where it is happening. The maps in this atlas combine contextual information (such as boundary lines) with thematic information (such as demographic or economic statistics). This combination of contextual and thematic information helps the reader observe general trends inherent in the distribution of data. For example, a map that shows population density for each county in the region may reveal that density is highest in counties along the southern California coast and surrounding San Francisco Bay.

Each map, together with tabular data and other graphics, is designed to allow for easy comparison, so readers can see how conditions and trends in their own counties compare with those in other counties and relate to larger regional patterns. The consistent map design allows readers to make comparisons among two or more maps. For example, comparing maps of federal expenditures per person and poverty rates might reveal that federal expenditures tend to be higher in a region's poorer counties.

There are many potential uses for this atlas. It can serve as an aid to management and planning, as a training tool, and as a means to facilitate public participation. For example, managers can share the atlas with new staff, management partners, regional NPS staff, the media, or policy makers as a way of orienting them to the basic facts about the region. The atlas can be of long-term benefit by establishing

baseline data for monitoring changing socioeconomic conditions and trends in the region, complementing other well-established data collection programs being conducted or planned throughout the state. Planners can use the atlas to examine emerging trends in regions surrounding individual parks and across parks in the state. Researchers can use the atlas to design studies that have practical benefit to ecosystem management. These ideas are discussed further in the concluding section, pages 76-77.

Regardless of how it is used, the atlas can serve as a useful reference tool that adds to the body of usable scientific knowledge about the region of interest surrounding California national park units.

Note: There are several approaches to the use of and display of data in tabular and/or map form. Percentages are a common way to specify and standardize data, and are an accessible approach for users of the atlases in this series.

Socioeconomic Indicators: Valuable Management Tools

The Relevance of Human Activities to Resource Management

The management of natural and cultural resources always requires attention to human behavior and activities. Protection of a threatened archaeological site can mean educating visitors about the Antiquities Act. Controlling non-native plant species can require close collaboration with local neighbors and volunteers. Preservation of scenic values can depend upon the monitoring of emissions from electrical generation plants several states away.

While there is an on-going and healthy debate about how to address this “human factor” in park management, a consensus has emerged about three basic principles:

- people are part of ecosystems, and their needs and activities must be considered in management plans;
- park managers should be concerned with short- and long-term trends, as well as the local, regional, and national consequences of actions; and
- where appropriate, decisions about park resources should be made collaboratively, including federal agencies, local governments, and citizens in the process.

Managing parks in accordance with these principles requires careful planning, for people have many competing needs. Careful planning requires an accurate and objective assessment of current conditions as well as on-going trends. Hence, understanding the social, cultural, and economic characteristics of the region of interest surrounding NPS units in California is crucial for successful management.

The Value of Socioeconomic Indicators

One approach to understanding social, cultural, and economic conditions and trends is to use standardized measures known as *socioeconomic indicators*.

Socioeconomic indicators are regularly collected economic or social statistics that describe or predict changes and trends in the general state of society. For example, the consumer price index (CPI) keeps track of changes in the price of a typical group of consumer goods. The CPI is used to monitor inflation, to compare the cost-of-living in one region of the country to another, and to support economic policy-making. Socioeconomic indicators can address historical trends, present conditions, or future projections.

An integrated set of socioeconomic indicators can be effective in presenting the “basic facts” about the people of a region. Such basic facts are important to management, and can be used in many ways: assessing the potential impact of government policies, developing sound resource management strategies, designing effective interpretive programs, increasing public involvement in the planning process, and so forth. Like measures of water quality or wildlife populations, socioeconomic indicators enable managers and citizens to make scientifically informed decisions concerning public resources.

The Integrated Set of Indicators

The indicators in this atlas are not simply a collection of various statistics displayed in maps, but an integrated set of indicators organized around broad areas of human activity that are of particular relevance to park management. The selection of a broad range of relevant indicators is important because the dynamics of human interaction on a regional scale are complex. For example, the growth of a new industry can influence immigration, which in turn can influence other human activities such as housing development. While industry, immigration, and housing are categorically different indicators, each one could be important for a manager trying to anticipate growth issues that might impact visitation or ecological systems.

The integrated set of indicators displayed in this atlas encompasses six general categories:

- *General population* indicators measure how many people live in a given area, where those people are concentrated, their ages, patterns of migration, and so forth. General population indicators provide a profile of the people who are neighbors within the region and potential partners in management.
- *Economy and commerce* indicators measure the flow and distribution of money, materials, and labor. Economy and commerce indicators provide an overview of the interdependent economic relationships among people, businesses, industries, and government within the region.
- *Social and cultural indicators* measure aspects of personal and group identity such as cultural origin, political and religious beliefs, health, and language. Social and cultural indicators provide insights into the varying perceptions and expectations that people bring with them when they go to their place of work, participate in a public meeting, or visit an interpretive site.
- *Recreation and tourism* indicators measure activities specifically related to the provision of accommodations, entertainment, and personal

services. Recreation and tourism indicators provide a way to analyze the economic role that travelers, vacationers, and other recreationists play in the region.

- *Administration and government* indicators measure the structure, resources, and actions of government organizations. Administration and government indicators provide an orientation to the role of government – local, state, and federal – in the region.
- *Land use indicators* measure the interactions between people and terrestrial resources such as land, water supply, and vegetation. Land use indicators provide a way to gauge the impact of human activities such as farming, forestry, and urban development upon ecosystems within the region.

Selecting Specific Indicators

Drawing from the six general categories of socioeconomic indicators described on page 5, a menu of 68 indicators was developed. Each indicator was determined to be readily available and mappable at the county level. This atlas is part of a series of atlases produced for NPS units throughout the US. Hence, the menu of indicators corresponds with datasets available for *any* county in the US.

From this menu, 17 *core* indicators were selected that are common to all atlases published through this project. The core indicators provide information useful to all park managers. Incorporating these core indicators throughout the series of atlases enables comparisons among national park units in different regions of the country.

NPS Pacific West Region managers and park superintendents chose *additional* indicators from the menu described above. Managers selected these indicators to customize the atlas so that it would focus on information relevant to their particular information and management needs. Figure 1 shows the six general categories and the specific indicators included in this atlas; for each category, indicators are listed in the order they appear in the atlas.

The maps in this atlas are based on county-level data. County-level data have several advantages. Good quality data are available at this scale, are consistently collected at regular intervals, and are comparable across all U.S. counties. Also, counties are stable geographic units for monitoring trends, as few changes are made to county boundaries over time.

Finally, as administrative and political units, counties have significant influence on land use decisions and environmental change and can be important partners in park management.

Technical Notes

Appendix 1 provides the data sources for the indicators presented in this atlas. Appendix 2 provides technical information on the design of the maps. Appendix 3 includes endnotes and text that provide additional information on the measurement of selected indicators.

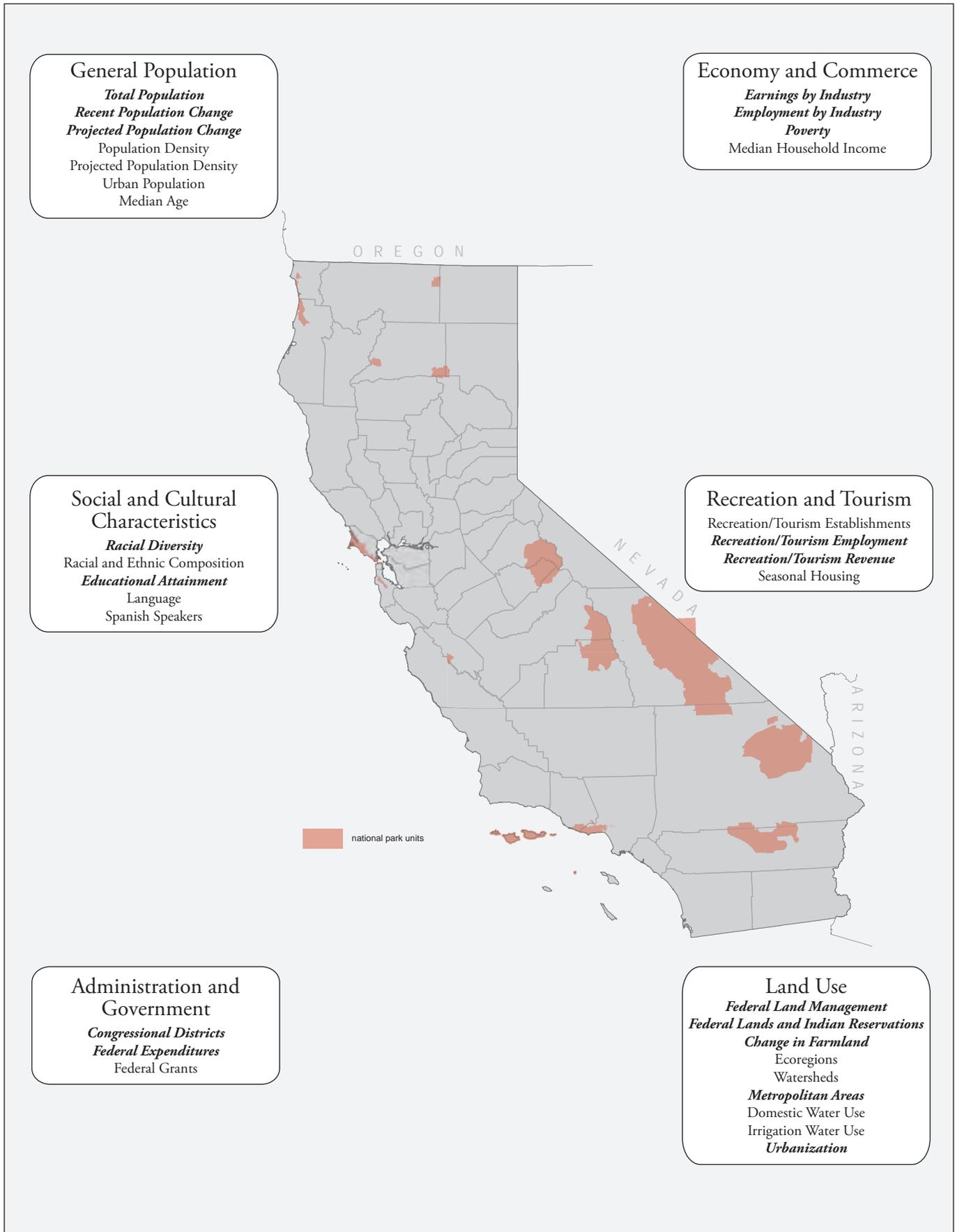


Figure 1. Indicators Included in this Atlas
core indicator || additional indicator

The Region

The region of interest for maps in this atlas is the boundary of the state of California. California is the third largest state in the United States covering 163,707 square miles (Alaska and Texas are larger), and is approximately 770 miles long and 250 miles wide at its farthest points. The state capital is Sacramento.

California's physiographic regions are varied, with mountains, valleys, and deserts, and can be grouped into eight areas. The Klamath Mountains are in the northwest and range from 6,000-8,000 feet. South of the Klamath Mountains is the Coastal Ranges region which continues south to Santa Barbara. Home to the famous redwood forest, this area reaches 20-30 miles inland. In the eastern part of the state, the Sierra-Nevada run about 430 miles north to south, rise to more than 14,000 feet, and include Mount Whitney, the highest peak in the lower 48. Deep valleys in the western Sierra include Yosemite Valley.

The Central Valley (also known as the Great Valley), lies between the Coastal Ranges and the Sierra Nevada. From northwest to southeast, the valley is 450 miles long. Once an inland extension of the Pacific Ocean, the Central Valley slowly accumulated sediments washed from the Sierra, making it fertile for agriculture. The northern half is drained by the Sacramento River; the southern half by the San Joaquin River. These two rivers and their valleys form the Sacramento-San Joaquin Delta, with canals, streambeds, sloughs, marshes, and peat islands that drain into San Francisco Bay. The delta is one of a few inland delta systems in the world. The Bay-Delta system is the largest estuary on the west coast.

The Cascade Mountains are north of the Sierra Nevada and the only mountains in California formed by volcanoes, including Lassen Peak and Mount Shasta. The Basin and Range region includes the deserts of California, from the Modoc Plateau in the northeast to the Mojave and Colorado deserts in the southeast, where Death Valley is located near the Nevada border. Irrigation has allowed for farming in this region in the Imperial and Coachella Valleys near the Mexican border. The Los Angeles Ranges (sometimes called the

Transverse Ranges) are a collection of small east-west mountain ranges between Santa Barbara and San Diego counties and include the Santa Monica Mountains. In the southwest corner, the San Diego Ranges (also known as the Peninsular Ranges) cover most of San Diego county, and extend into Baja California, Mexico.

Native Americans lived in California long before European contact – over 10,000 years – with hundreds of small groups speaking more than 100 languages. Europeans, Russians, and Americans arrived following 1500. The Spanish explorer, Juan Rodriguez Cabrillo, led the first voyage to California in 1542, exploring San Diego Bay. Sir Francis Drake led an English expedition in 1579 near Point Reyes. Colonization was slow, but by the late 1700s, the Spanish had made Monterey the capital, and Franciscan missionaries had established a string of missions extending as far north as Sonoma. Russian fur traders made their way into California from the north in 1812. American fur traders arrived overland in 1826. By the 1820s, the government of Mexico ruled California. Settlement in California accelerated beginning in the 1840s. Following the war between the U.S. and Mexico (1846-1848), Mexico ceded the territory to the U.S. under the Treaty of Guadalupe Hidalgo. The 1849 gold rush resulted in a dramatic increase in population and demands for statehood. California was admitted to the Union as a free state under the Compromise of 1850.

The most populous state, California has 58 counties and 53 congressional districts and the eighth-ranked economy in the world. The population in California more than doubled from 16 million in 1960 to over 36 million in 2008. Agriculture and industry are critical to the state's economy. California ranks first in the U.S. in the production of fruits and vegetables, and dairy products are the single largest share of farm income.

The NPS manages 25 units in California, from Yosemite and Redwood National Parks to Devil's Postpile National Monument and Manzanar National Historic Site.

(Source material for this section is included in Appendix 2.)

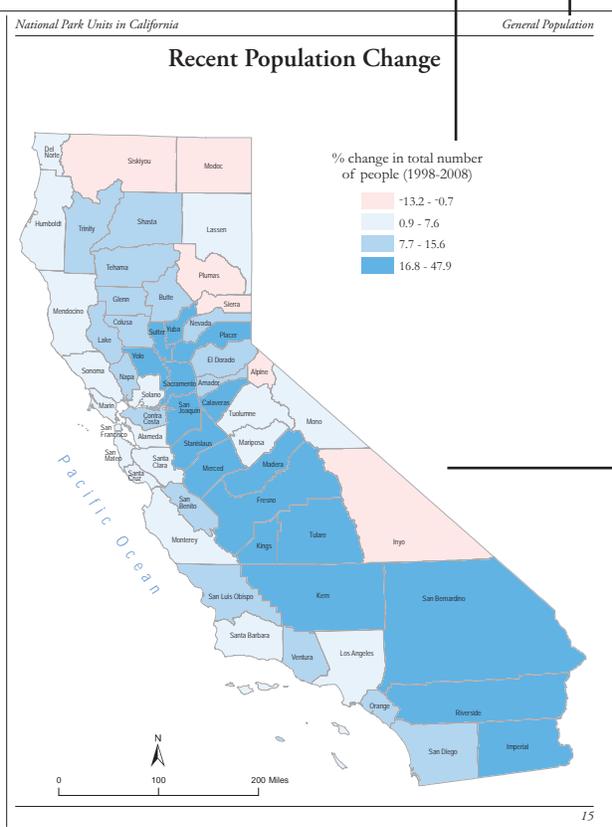
National Park Units in California



Using the Socioeconomic Indicators and Maps

The socioeconomic indicators for the California region of interest are presented in a series of maps. The best available county-level data are presented for each indicator. The following information is provided for each indicator across two facing page spreads:

- a brief description of the socioeconomic indicator and an observation about the spatial variation in the data as displayed on the map. Endnotes for selected indicators refer to technical information in Appendix 3.
- a table that shows the data for each county. The counties are listed alphabetically. The table allows the reader to look up and compare specific values for each county. State and national data are included for comparison.
- a map legend describing how the indicator is measured, the year the data were gathered, and the range of values for each quartile grouping.
- the name of the general category to which this particular indicator belongs (such as general population or land use). Maps in the same general category share similar sets of color symbols.



- a number line that shows the distribution of values for the indicator, useful in understanding patterns in the data.
- a map that displays general patterns in the data. For most indicators, counties are grouped into four classes that correspond to four sub-ranges of data values. These groups are called quartiles. The highest-ranked quartile receives the darkest shading. For more information, see Appendix 2, page 84.

The Socioeconomic Indicators

Total Population

Population size is one of the most important influences on the character of human activities in a place and a key influence on resource use. People bring labor, knowledge, and economic activity to a place. At the same time, they generate demand for natural resources, goods, and services ranging from food to recreational opportunities.

Among California counties, population (2008) ranges from 1,061 (Alpine) to 9,862,049 (Los Angeles).¹

total number of people (2008)					
		Los Angeles	9,862,049	San Luis Obispo	265,297
		Madera	148,333	San Mateo	712,690
		Marin	248,794	Santa Barbara	405,396
Alameda	1,474,368	Mariposa	17,976	Santa Clara	1,764,499
Alpine	1,061	Mendocino	86,221	Santa Cruz	253,137
Amador	38,238	Merced	246,117	Shasta	180,214
Butte	220,337	Modoc	9,184	Sierra	3,263
Calaveras	46,843	Mono	12,774	Siskiyou	44,542
Colusa	21,204	Monterey	408,238	Solano	407,515
Contra Costa	1,029,703	Napa	133,433	Sonoma	466,741
Del Norte	29,100	Nevada	97,118	Stanislaus	510,694
El Dorado	176,075	Orange	3,010,759	Sutter	92,207
Fresno	909,153	Placer	341,945	Tehama	61,550
Glenn	28,237	Plumas	20,275	Trinity	14,317
Humboldt	129,000	Riverside	2,100,516	Tulare	426,276
Imperial	163,972	Sacramento	1,394,154	Tuolumne	55,644
Inyo	17,136	San Benito	54,699	Ventura	797,740
Kern	800,458	San Bernardino	2,015,355	Yolo	197,658
Kings	149,518	San Diego	3,001,072	Yuba	73,067
Lake	64,866	San Francisco	808,976		
Lassen	34,574	San Joaquin	672,388		
				California	36,756,666
				United States	304,059,724



Variation in Distribution of Data Values

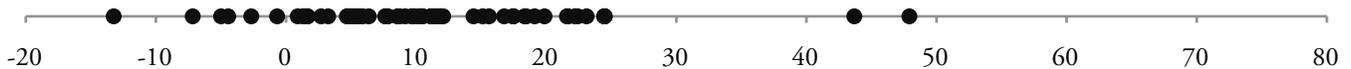
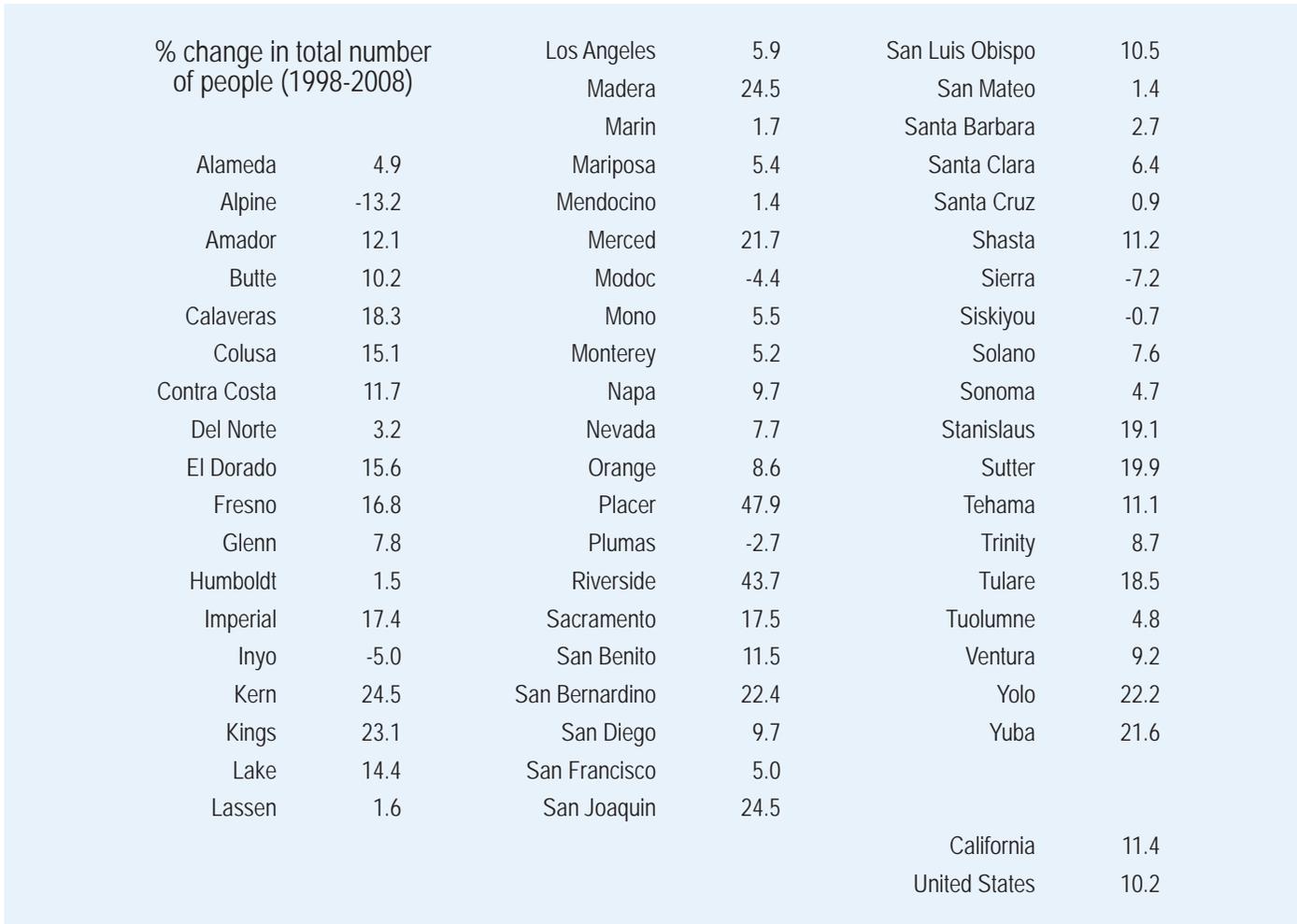
Total Population



Recent Population Change

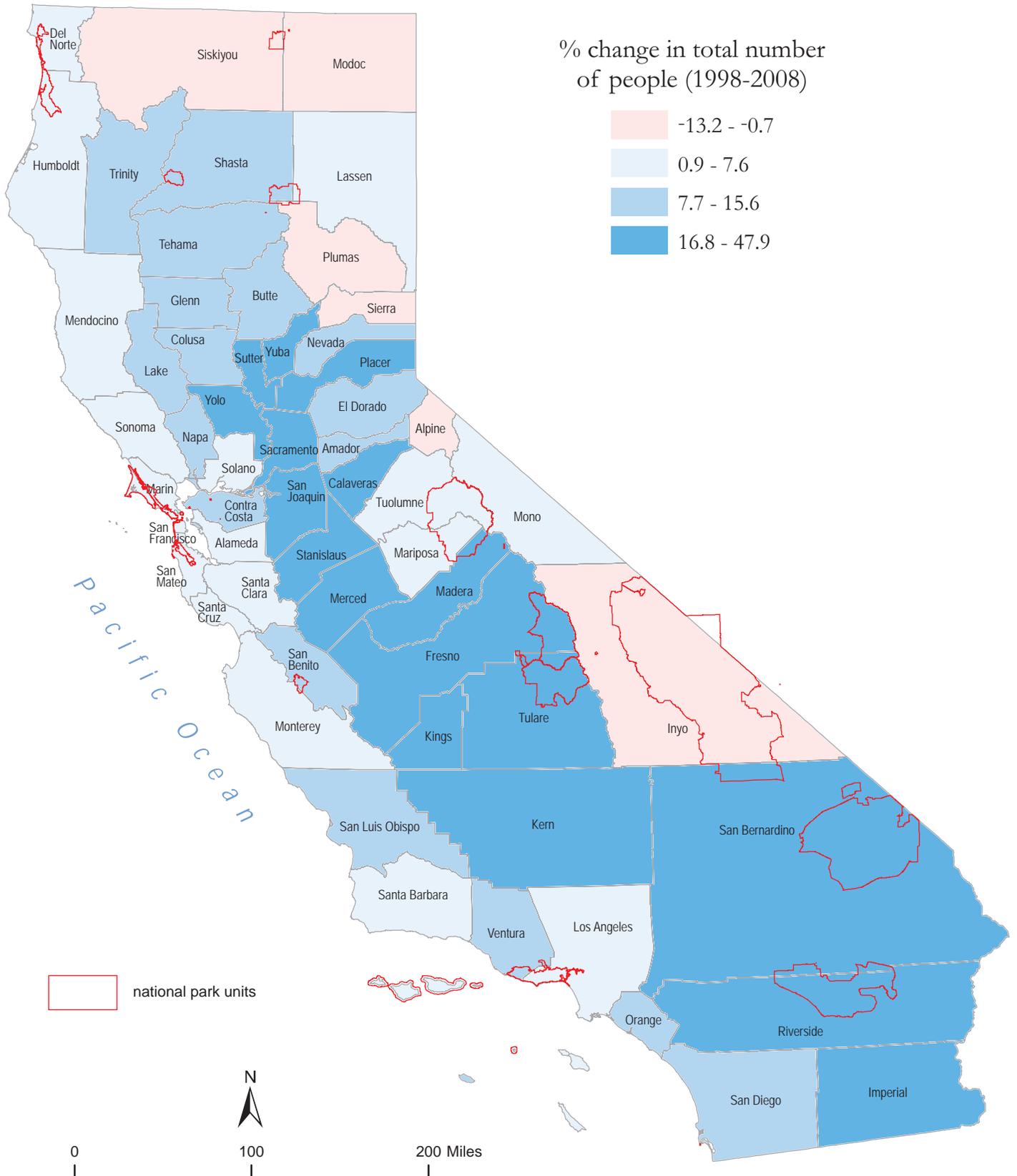
Measuring recent population change provides an indication of the extent to which population change is influencing current local or regional priorities. For example, population growth changes the tax base, adds new voters, and can increase demand for services ranging from schools to transportation to outdoor recreation. Population growth may drive development that, in turn, alters land uses.

Among California counties, the recent change in population (1998-2008) ranges from a decrease of 13.2% (Alpine) to an increase of 47.9% (Placer).



Variation in Distribution of Data Values

Recent Population Change

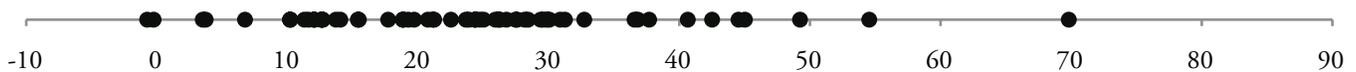


Projected Population Change

Population projections can be made with some accuracy for short and mid-range time spans. Projections can help planners anticipate potential impacts on park and other resources. For example, population growth can generate changes in land use and transportation, growth of new and existing communities, and increases in the demand for park and other outdoor experiences.

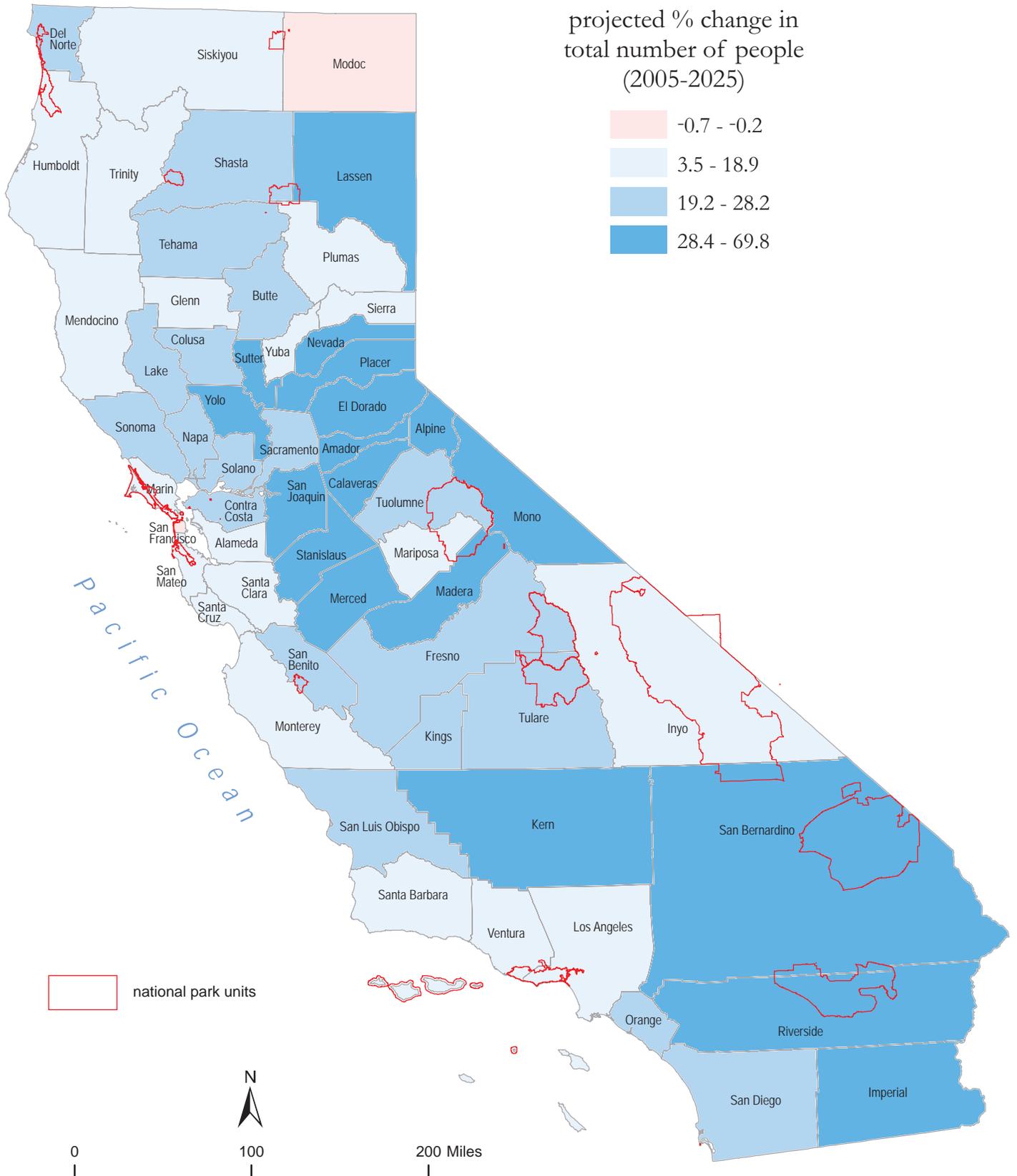
Among California counties, the projected change in county population between 2005 and 2025 ranges from a decrease of 0.7% (San Francisco) to an increase of 69.8% (Riverside).²

projected % change in total number of people (2005-2025)					
		Los Angeles	6.7	San Luis Obispo	26.1
		Madera	44.5	San Mateo	12.1
		Marin	12.0	Santa Barbara	10.2
Alameda	11.6	Mariposa	14.1	Santa Clara	15.5
Alpine	28.4	Mendocino	10.2	Santa Cruz	17.7
Amador	42.5	Merced	30.9	Shasta	28.2
Butte	19.2	Modoc	-0.2	Sierra	15.4
Calaveras	30.1	Mono	31.2	Siskiyou	3.5
Colusa	25.9	Monterey	11.3	Solano	25.0
Contra Costa	26.8	Napa	21.1	Sonoma	22.5
Del Norte	27.5	Nevada	36.6	Stanislaus	29.6
El Dorado	45.0	Orange	19.7	Sutter	32.7
Fresno	24.4	Placer	54.5	Tehama	20.7
Glenn	12.6	Plumas	13.7	Trinity	12.6
Humboldt	12.7	Riverside	69.8	Tulare	24.7
Imperial	37.7	Sacramento	23.7	Tuolumne	27.6
Inyo	3.7	San Benito	24.4	Ventura	18.9
Kern	29.4	San Bernardino	49.2	Yolo	40.6
Kings	21.2	San Diego	26.3	Yuba	18.8
Lake	23.9	San Francisco	-0.7		
Lassen	36.8	San Joaquin	29.9		
				California	21.7
				United States	21.1



Variation in Distribution of Data Values

Projected Population Change

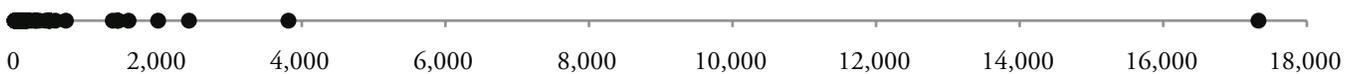


Population Density

Population density is a measure of population in terms of persons per square mile. Higher concentrations of people tend to support more business activities and can generate greater demand for public goods ranging from roads to open space. Thus, monitoring differences in population density can be an important way to detect potential stresses and impacts on natural resources in the region.

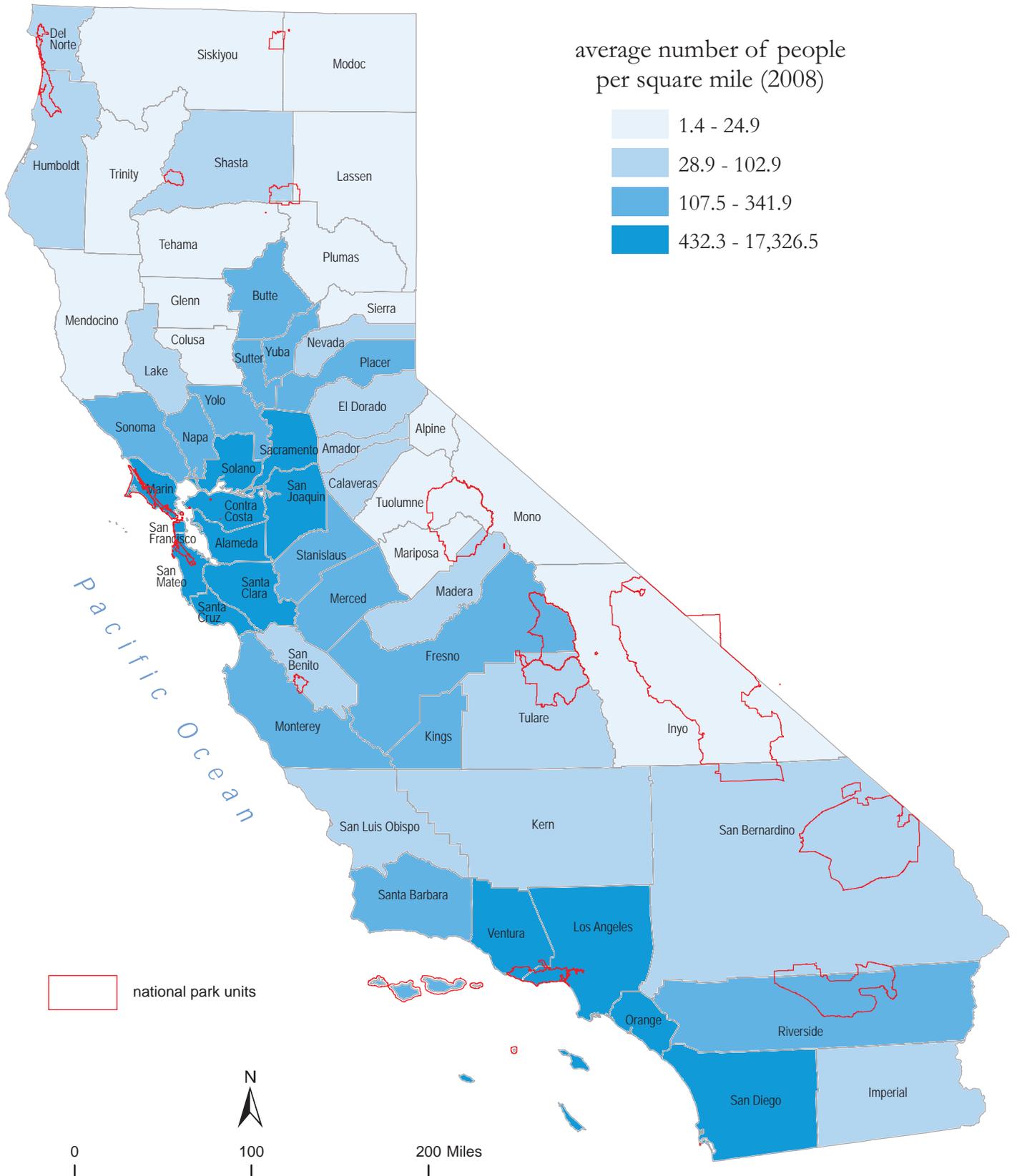
Among California counties, population density (2008) ranges from 1.4 people per square mile (Alpine) to 17,326.5 people per square mile (San Francisco).³

average number of people per square mile (2008)		Los Angeles	2,428.6	San Luis Obispo	80.3
		Madera	69.4	San Mateo	1,587.0
		Marin	478.6	Santa Barbara	148.1
Alameda	1,999.0	Mariposa	12.4	Santa Clara	1,367.1
Alpine	1.4	Mendocino	24.6	Santa Cruz	568.5
Amador	64.5	Merced	127.6	Shasta	47.6
Butte	134.4	Modoc	2.3	Sierra	3.4
Calaveras	45.9	Mono	4.2	Siskiyou	7.1
Colusa	18.4	Monterey	122.9	Solano	491.5
Contra Costa	1,430.2	Napa	177.0	Sonoma	296.2
Del Norte	28.9	Nevada	101.4	Stanislaus	341.9
El Dorado	102.9	Orange	3,814.0	Sutter	153.0
Fresno	152.5	Placer	243.5	Tehama	20.9
Glenn	21.5	Plumas	7.9	Trinity	4.5
Humboldt	36.1	Riverside	291.4	Tulare	88.4
Imperial	39.3	Sacramento	1,443.7	Tuolumne	24.9
Inyo	1.7	San Benito	39.4	Ventura	432.3
Kern	98.3	San Bernardino	100.5	Yolo	195.1
Kings	107.5	San Diego	714.6	Yuba	115.9
Lake	51.6	San Francisco	17,326.5		
Lassen	7.6	San Joaquin	480.5		
				California	235.7
				United States	86.0



Variation in Distribution of Data Values

Population Density



Projected Population Density

Population density projections are based on population projections. Future regional variations in county population density suggest variations in how counties will approach decisions about natural resource-related issues such as transportation, zoning, and water supply. Significantly increased population density can generate rising land costs as well as increased demand for open space to be used for recreation or conservation.

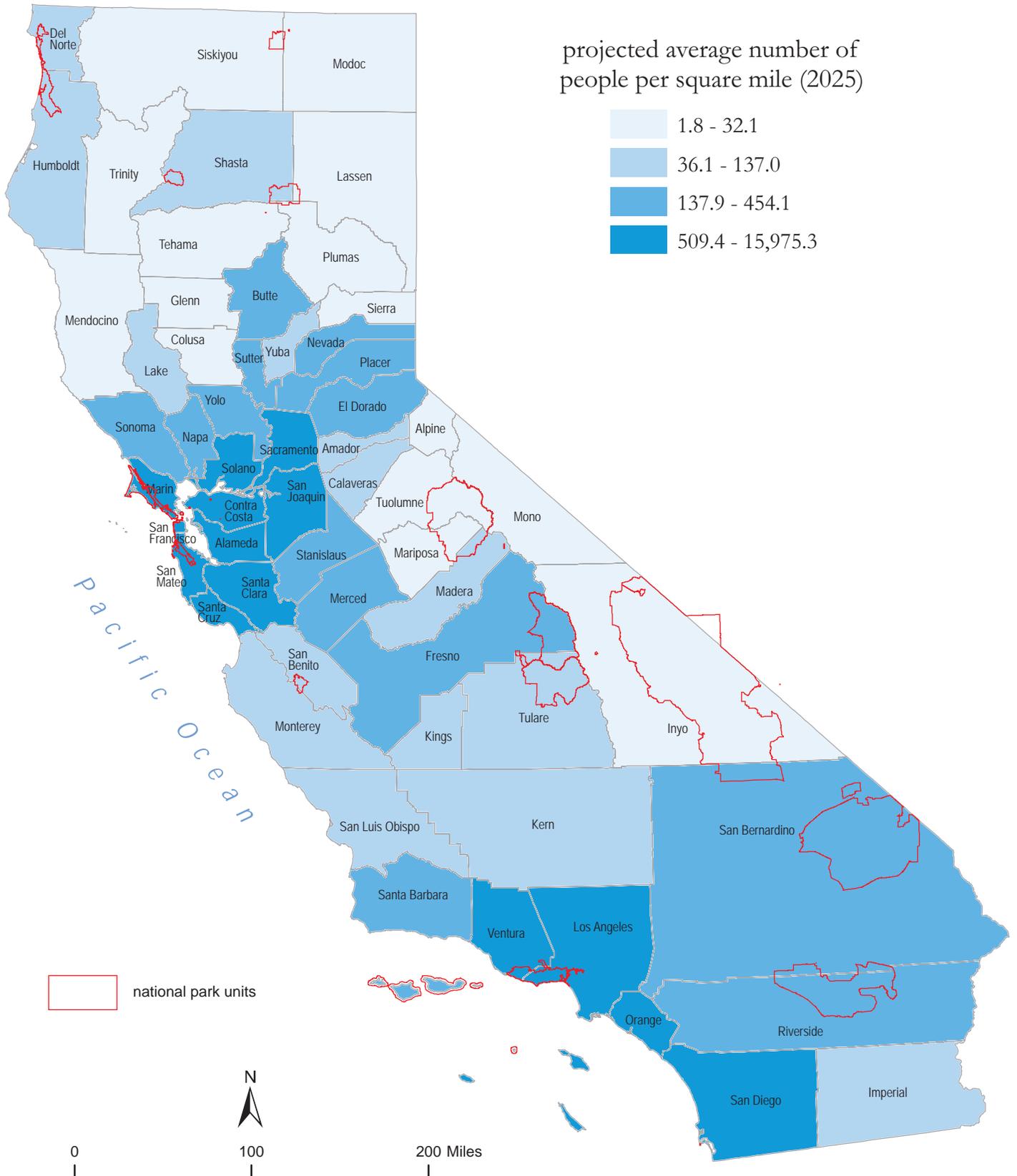
Among California counties, projected population density for the year 2025 ranges from 1.8 people per square mile (Inyo) to 15,975.3 people per square mile (San Francisco).⁴

projected average number of people per square mile (2025)		Los Angeles	2,600.2	San Luis Obispo	98.6
		Madera	95.1	San Mateo	1,741.8
		Marin	528.7	Santa Barbara	162.2
Alameda	2,189.1	Mariposa	13.9	Santa Clara	1,519.6
Alpine	2.0	Mendocino	27.4	Santa Cruz	661.9
Amador	90.9	Merced	162.0	Shasta	60.2
Butte	156.5	Modoc	2.4	Sierra	4.1
Calaveras	58.3	Mono	5.5	Siskiyou	7.3
Colusa	22.6	Monterey	137.0	Solano	615.5
Contra Costa	1,769.8	Napa	209.7	Sonoma	360.5
Del Norte	36.1	Nevada	137.9	Stanislaus	434.7
El Dorado	147.2	Orange	4,522.1	Sutter	193.8
Fresno	182.1	Placer	346.9	Tehama	24.4
Glenn	23.6	Plumas	9.3	Trinity	4.8
Humboldt	40.7	Riverside	454.1	Tulare	105.1
Imperial	50.7	Sacramento	1,744.1	Tuolumne	32.1
Inyo	1.8	San Benito	49.3	Ventura	509.4
Kern	119.3	San Bernardino	145.4	Yolo	259.6
Kings	125.4	San Diego	884.5	Yuba	126.4
Lake	63.2	San Francisco	15,975.3		
Lassen	10.2	San Joaquin	610.4		
				California	21.7
				United States	21.1



Variation in Distribution of Data Values

Projected Population Density

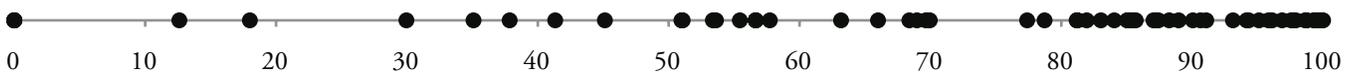


Urban Population

The relative proportion of urban dwellers within counties in the region can be significant in addressing regional issues related to management. Urban dwellers may have easier access to schools, stores, and medical service. They may also benefit from a greater array of public services such as water utilities and municipal police protection. These and many other characteristics can generate differences in urban and rural strategies for dealing with issues such as taxation, development, and environmental protection.

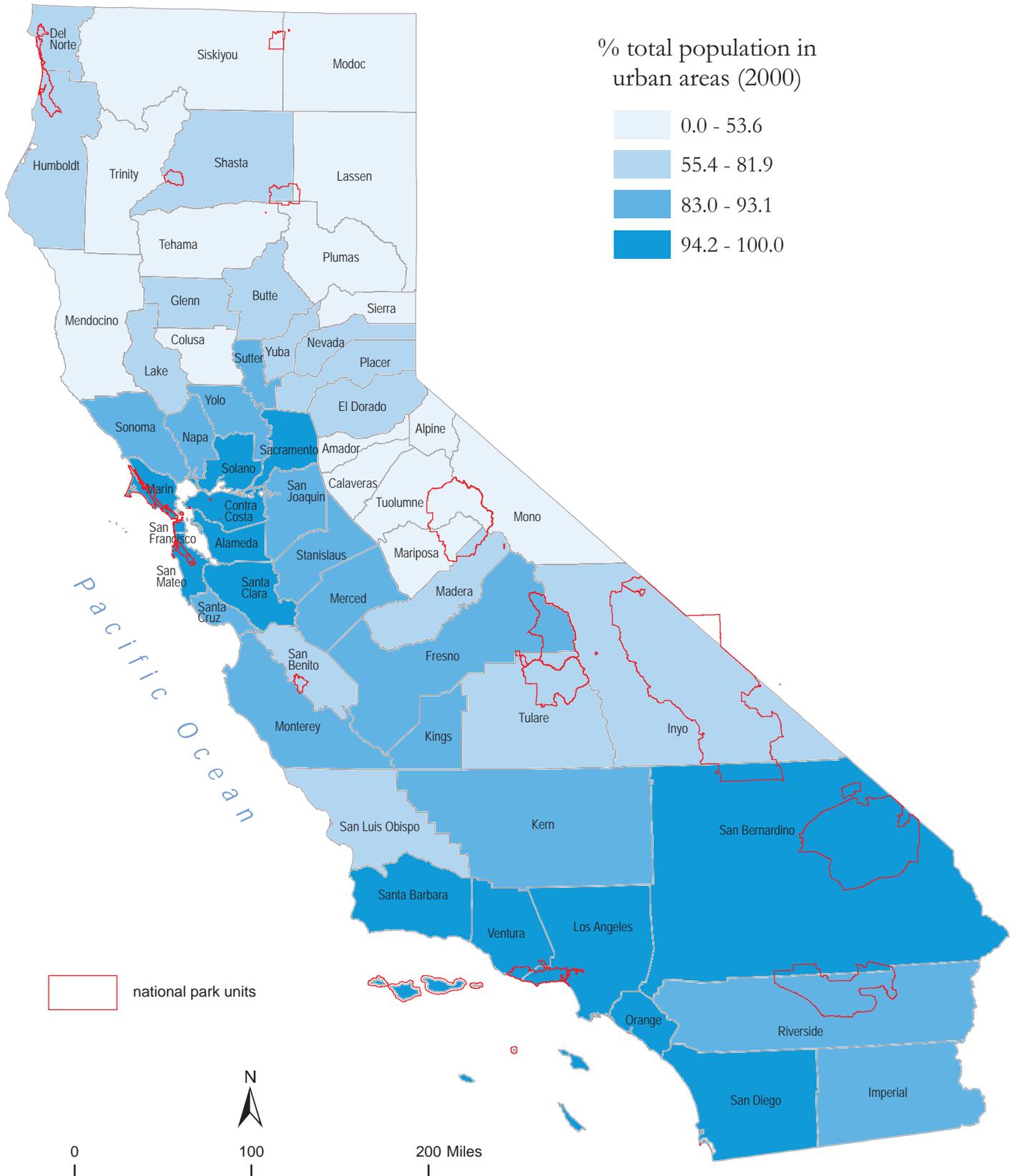
Among California counties, the percentage of total county population living in urban areas (2000) ranges from 0% (four counties) to 100% (two counties).⁵

% total population in urban areas (2000)		Los Angeles	99.3	San Luis Obispo	81.2
		Madera	66.0	San Mateo	98.6
		Marin	94.2	Santa Barbara	95.1
Alameda	99.4	Mariposa	0.0	Santa Clara	98.8
Alpine	0.0	Mendocino	53.6	Santa Cruz	85.1
Amador	37.8	Merced	83.0	Shasta	69.0
Butte	81.9	Modoc	30.0	Sierra	0.0
Calaveras	18.0	Mono	45.1	Siskiyou	35.1
Colusa	51.1	Monterey	89.0	Solano	95.8
Contra Costa	97.9	Napa	84.0	Sonoma	85.7
Del Norte	68.4	Nevada	56.7	Stanislaus	91.1
El Dorado	63.2	Orange	99.8	Sutter	85.0
Fresno	87.4	Placer	78.7	Tehama	51.0
Glenn	56.6	Plumas	12.6	Trinity	0.0
Humboldt	69.7	Riverside	93.1	Tulare	81.2
Imperial	85.5	Sacramento	97.6	Tuolumne	53.4
Inyo	57.7	San Benito	77.4	Ventura	96.9
Kern	88.2	San Bernardino	94.3	Yolo	90.6
Kings	87.0	San Diego	96.1	Yuba	69.9
Lake	55.4	San Francisco	100.0		
Lassen	41.3	San Joaquin	90.1		
				California	94.4
				United States	79.0



Variation in Distribution of Data Values

Urban Population

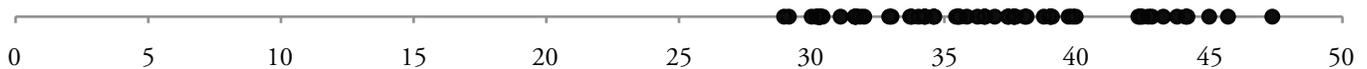


Median Age

Median age expresses the age of a “typical” county resident for whom half the population is older and half is younger. Just as age is an important influence on individual behavior, the median age of a county’s population can influence its character in many ways. For example, a relatively young county population might place a higher priority on schools, while a relatively old county population might place a higher priority on health care.

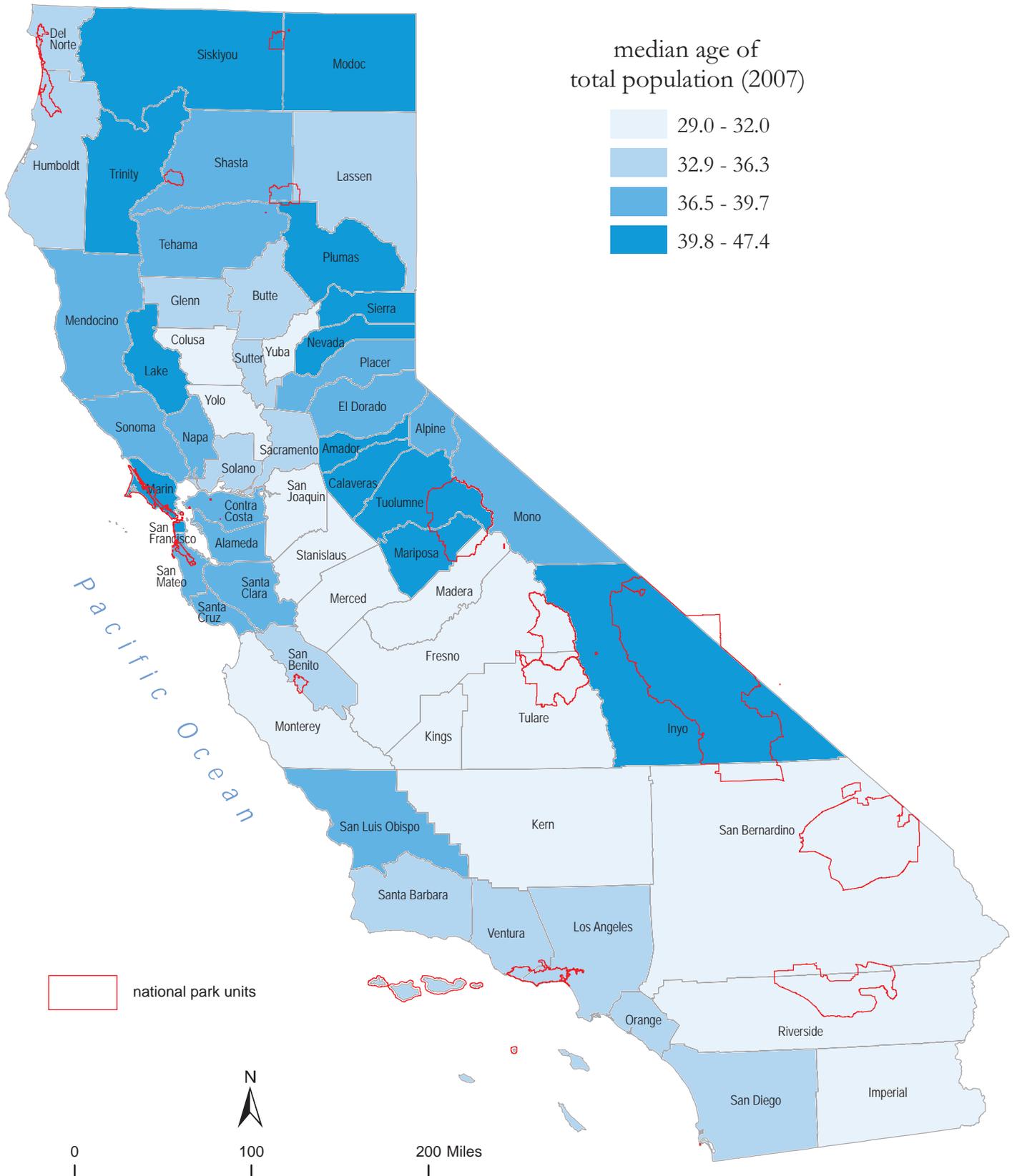
Among California counties, the median age of the total population (2007) ranges from 29 (Tulare) to 47.4 (Trinity).

median age of total population (2007)					
		Los Angeles	34.2	San Luis Obispo	37.7
		Madera	31.6	San Mateo	39.7
		Marin	44.2	Santa Barbara	33.8
Alameda	36.9	Mariposa	42.4	Santa Clara	36.5
Alpine	39.0	Mendocino	39.1	Santa Cruz	37.4
Amador	42.3	Merced	29.1	Shasta	38.0
Butte	34.6	Modoc	42.7	Sierra	45.0
Calaveras	43.2	Mono	37.4	Siskiyou	43.8
Colusa	31.1	Monterey	32.0	Solano	35.4
Contra Costa	37.6	Napa	38.1	Sonoma	38.8
Del Norte	36.2	Nevada	44.1	Stanislaus	31.7
El Dorado	39.0	Orange	35.6	Sutter	33.7
Fresno	30.2	Placer	37.6	Tehama	36.5
Glenn	32.9	Plumas	45.7	Trinity	47.4
Humboldt	35.9	Riverside	31.8	Tulare	29.0
Imperial	30.3	Sacramento	34.3	Tuolumne	42.8
Inyo	42.5	San Benito	33.0	Ventura	35.5
Kern	30.0	San Bernardino	30.4	Yolo	30.2
Kings	30.3	San Diego	34.0	Yuba	30.3
Lake	39.8	San Francisco	40.0		
Lassen	34.6	San Joaquin	31.6		
				California	34.5
				Uniteds States	36.6



Variation in Distribution of Data Values

Median Age



Earnings by Industry

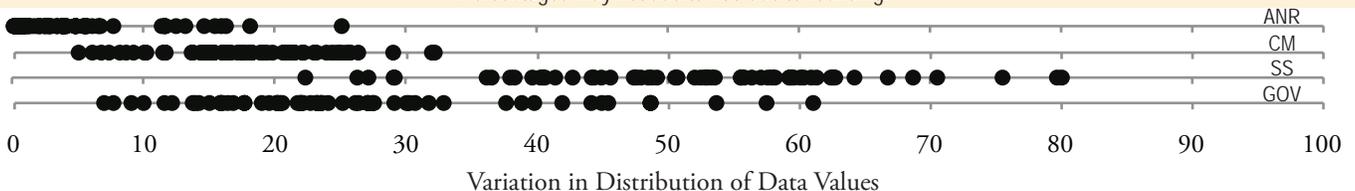
Earnings by industry are indicative of the overall size of a local economy as well as the relative importance of each major industrial sector within that economy. The diversity of economic activities in the region presents an array of challenges to park management. For example, relatively mobile industries such as light manufacturing or financial services may be concerned with land costs and tax rates, whereas natural resource dependent industries such as farming or mining may be concerned with land use regulations and other environmental policies.

Among California counties (2007), the leading sector of earnings in 49 of 58 counties is Sales and Services. The second-ranking sector is Government.⁶

% total earnings by industrial category (2007)					ANR	CM	SS	GOV
Alameda	0.2	20.6	62.4	16.7	0.6	15.2	70.6	13.6
Alpine	0.1	6.6	64.2	29.0	11.7	18.1	44.2	26.0
Amador	3.5	14.2	40.5	41.8	0.6	9.9	79.7	9.9
Butte	2.8	15.0	60.4	21.9	2.2	11.5	47.6	38.8
Calaveras	1.8	26.3	48.5	23.4	4.8	19.3	53.3	22.6
Colusa	25.1	21.4	27.2	26.3	14.7	22.9	40.6	21.8
Contra Costa	1.3	20.5	66.8	11.4	11.7	8.0	36.2	44.1
Del Norte	3.9	7.2	40.3	48.6	0.7	14.7	57.1	27.5
El Dorado	0.9	20.8	62.6	15.7	18.2	11.3	47.4	23.1
Fresno	7.7	18.1	52.5	21.6	4.8	31.9	49.2	14.1
Glenn	15.5	16.2	38.3	29.9	1.3	24.7	58.2	15.9
Humboldt	4.1	15.9	53.0	27.0	0.3	22.1	68.7	8.9
Imperial	13.2	9.1	38.0	39.7	0.2	25.0	62.8	12.0
Inyo	1.0	8.5	45.6	44.9	4.9	23.1	41.4	30.6
Kern	16.0	14.6	44.4	25.1	1.0	25.7	52.9	20.5
Kings	11.4	13.6	26.3	48.6	0.3	14.5	53.6	31.6
Lake	5.5	11.5	55.6	27.3	12.5	28.9	39.7	18.9
Lassen	3.8	5.9	29.2	61.0	0.6	19.7	57.6	22.1
Los Angeles	0.6	15.2	70.6	13.6	0.5	17.0	59.4	23.1
Madera	11.7	18.1	44.2	26.0	0.2	4.9	80.1	14.9
Marin	0.6	9.9	79.7	9.9	3.9	21.1	55.6	19.5
Mariposa	2.2	11.5	47.6	38.8	3.0	18.8	58.0	20.3
Mendocino	4.8	19.3	53.3	22.6	0.2	17.4	75.5	6.8
Merced	14.7	22.9	40.6	21.8	5.7	17.8	56.4	20.1
Modoc	11.7	8.0	36.2	44.1	0.2	32.1	60.1	7.6
Mono	0.7	14.7	57.1	27.5	3.8	19.0	59.6	17.6
Monterey	18.2	11.3	47.4	23.1	2.1	16.5	61.4	20.0
Napa	4.8	31.9	49.2	14.1	6.8	17.3	22.4	53.6
Nevada	1.3	24.7	58.2	15.9	5.7	13.5	50.6	30.2
Orange	0.3	22.1	68.7	8.9	0.9	21.4	50.7	27.0
Placer	0.2	25.0	62.8	12.0	1.5	25.4	59.3	13.8
Plumas	4.9	23.1	41.4	30.6	6.6	23.8	52.1	17.5
Riverside	1.0	25.7	52.9	20.5	5.5	17.3	60.9	16.3
Sacramento	0.3	14.5	53.6	31.6	6.1	22.0	48.0	24.0
San Benito	12.5	28.9	39.7	18.9	2.8	15.2	36.6	45.4
San Bernardino	0.6	19.7	57.6	22.1	16.3	17.5	42.8	23.5
San Diego	0.5	17.0	59.4	23.1	2.5	15.9	48.8	32.8
San Francisco	0.2	4.9	80.1	14.9	4.1	24.3	55.8	15.8
San Joaquin	3.9	21.1	55.6	19.5	2.5	15.0	44.9	37.6
San Luis Obispo	3.0	18.8	58.0	20.3	3.4	10.1	29.1	57.5
San Mateo	0.2	17.4	75.5	6.8	1.6	18.7	63.8	16.0
Santa Barbara	5.7	17.8	56.4	20.1	2.1	18.8	62.7	16.5
Santa Clara	0.2	32.1	60.1	7.6	0.2	18.8	62.7	16.5
Santa Cruz	3.8	19.0	59.6	17.6	2.1	18.8	62.7	16.5
Shasta	2.1	16.5	61.4	20.0	2.1	18.8	62.7	16.5
Sierra	6.8	17.3	22.4	53.6	2.1	18.8	62.7	16.5
Siskiyou	5.7	13.5	50.6	30.2	2.1	18.8	62.7	16.5
Solano	0.9	21.4	50.7	27.0	2.1	18.8	62.7	16.5
Sonoma	1.5	25.4	59.3	13.8	2.1	18.8	62.7	16.5
Stanislaus	6.6	23.8	52.1	17.5	2.1	18.8	62.7	16.5
Sutter	5.5	17.3	60.9	16.3	2.1	18.8	62.7	16.5
Tehama	6.1	22.0	48.0	24.0	2.1	18.8	62.7	16.5
Trinity	2.8	15.2	36.6	45.4	2.1	18.8	62.7	16.5
Tulare	16.3	17.5	42.8	23.5	2.1	18.8	62.7	16.5
Tuolumne	2.5	15.9	48.8	32.8	2.1	18.8	62.7	16.5
Ventura	4.1	24.3	55.8	15.8	2.1	18.8	62.7	16.5
Yolo	2.5	15.0	44.9	37.6	2.1	18.8	62.7	16.5
Yuba	3.4	10.1	29.1	57.5	2.1	18.8	62.7	16.5
California	1.6	18.7	63.8	16.0	2.1	18.8	62.7	16.5
United States	2.1	18.8	62.7	16.5	2.1	18.8	62.7	16.5

ANR = Agriculture and Natural Resources, CM = Construction and Manufacturing, SS = Sales and Services, GOV = Government

Percentages may not add to 100 due to rounding.



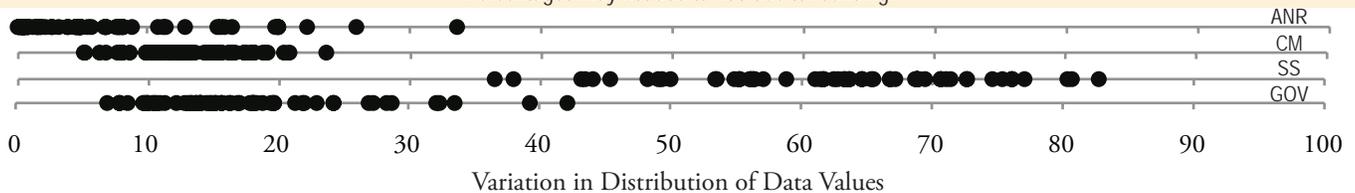
Earnings by Industry



Employment by Industry

One indicator of the way a particular county's job market is structured is the percentage of workers employed in each of four major industrial sectors. This employment distribution is indicative of the kinds of skills, knowledge, and concerns that are most prevalent among workers. Occupational patterns can influence people's priorities and actions with regard to parks and resource protection. For example, construction workers might welcome the prospect of rapid growth, whereas government workers such as teachers and police might worry that rapid growth would stress existing government resources.

Among California counties (2007), the leading sector of employment in all counties is Sales and Services. The second-ranking sector is Government.⁷



Employment by Industry

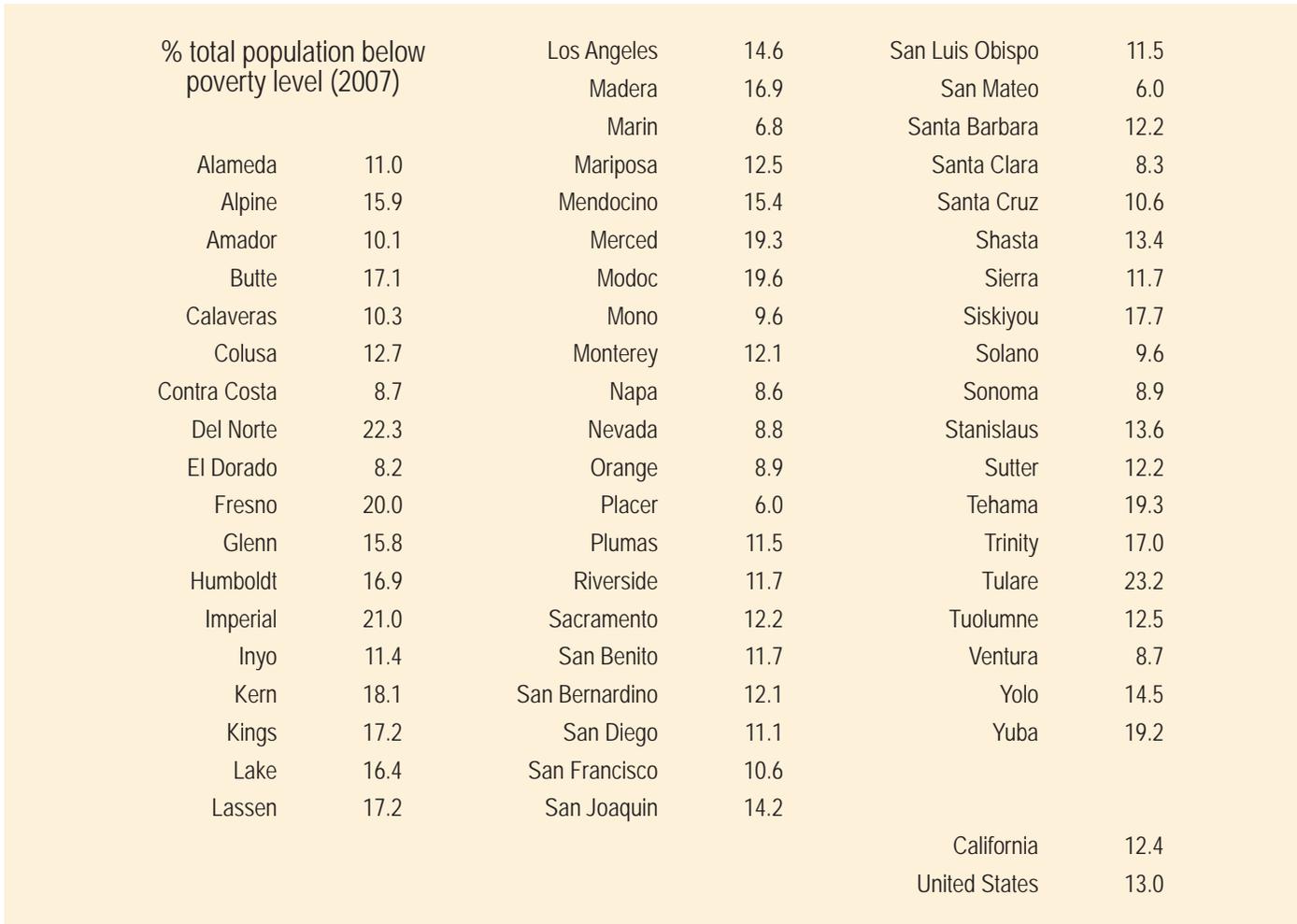


Poverty

Poverty is officially defined as the condition of living in a household with income below the federally-determined poverty threshold. Poverty thresholds vary according to the size of the family and number of children. For example, \$21,386 was the poverty threshold in 2007 for a family of four people (no children). The extent of poverty can be measured as the percentage of the total population living below that threshold. Those living in poverty can face such difficulties as finding adequate housing and health care, getting enough food, and reaching job sites and government services, including parks. The level of poverty in the region necessarily

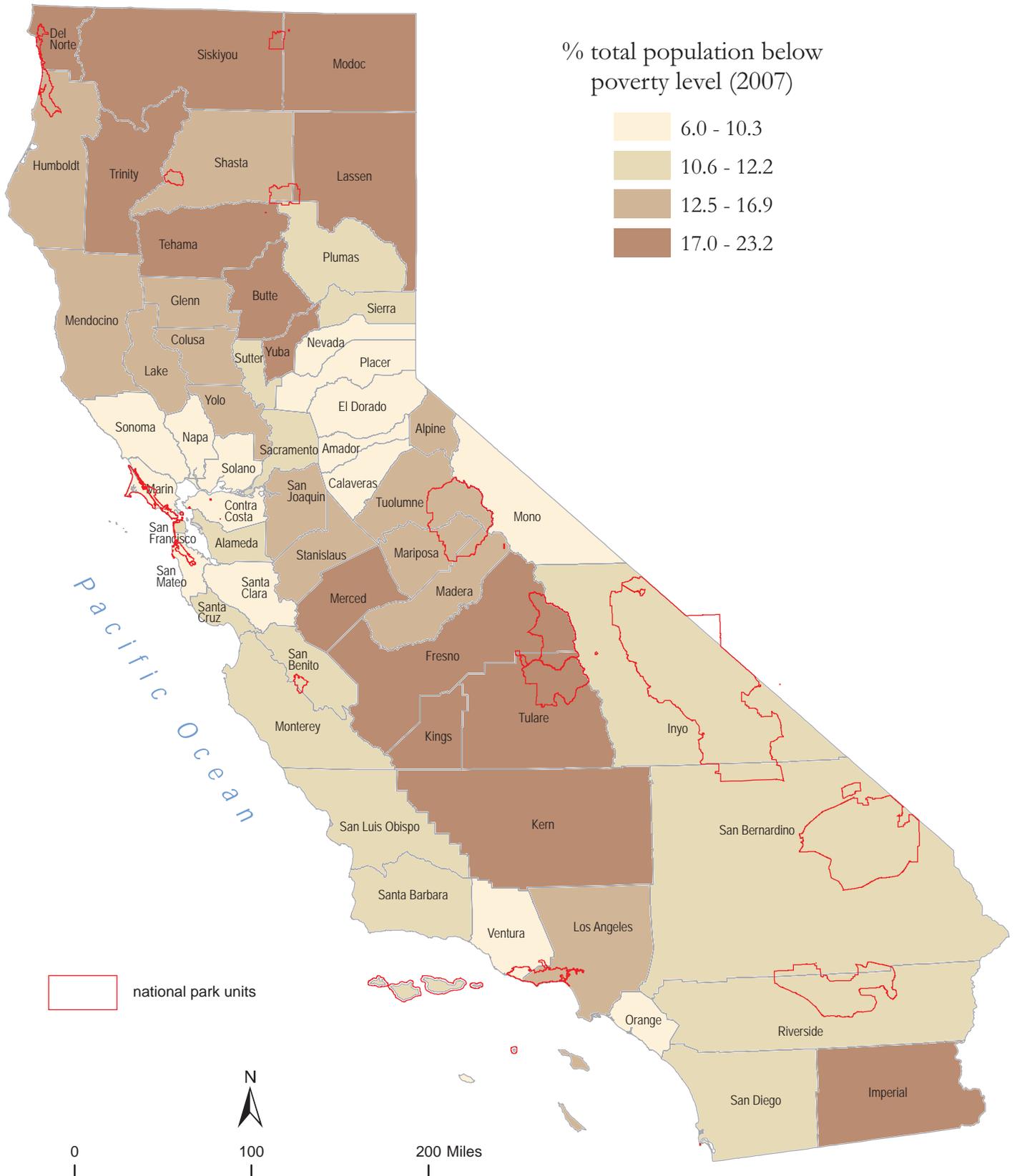
becomes significant to management decisions and priorities.

Among California counties, the incidence of poverty (2007) ranges from 6% (Placer) to 23.2% (Tulare).⁸



Variation in Distribution of Data Values

Poverty



Median Household Income

Median household income is indicative of the general level of income among households in a county. The median value is the central value in a ranked dataset, with an equal number of observations both above and below the median. General income measures can provide insights into the opportunities to pursue recreation activities in the region.

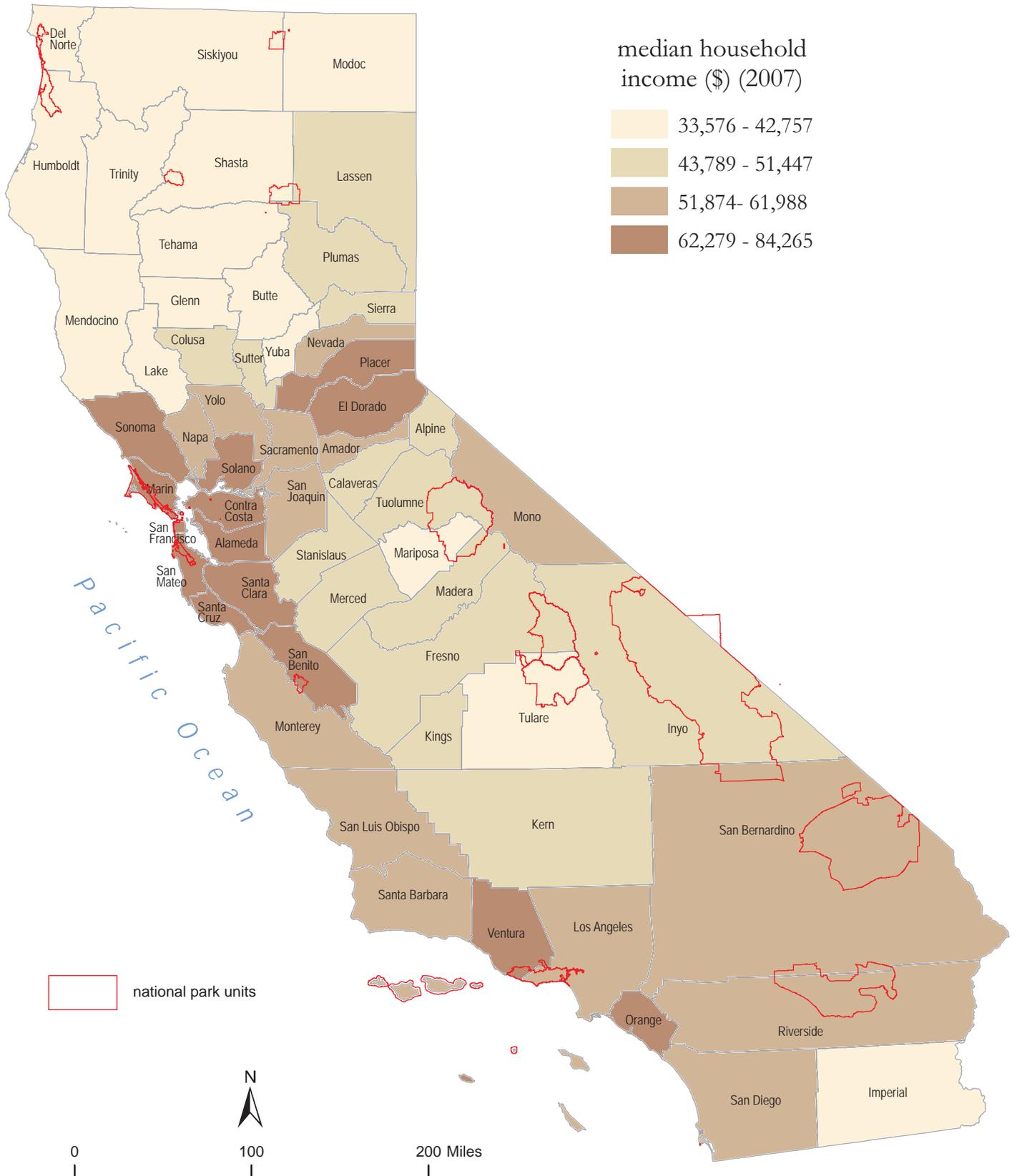
Among counties in California, median household income (2007) ranges from \$33,576 (Imperial) to \$84,265 (Santa Clara).

County	Median Household Income (\$ (2007))	County	Median Household Income (\$ (2007))	County	Median Household Income (\$ (2007))
Alameda	68,263	Los Angeles	53,494	San Luis Obispo	55,942
Alpine	46,136	Madera	44,259	San Mateo	82,913
Amador	54,903	Marin	83,910	Santa Barbara	57,741
Butte	39,466	Mariposa	42,757	Santa Clara	84,265
Calaveras	51,447	Mendocino	42,329	Santa Cruz	62,849
Colusa	43,882	Merced	43,789	Shasta	41,980
Contra Costa	76,317	Modoc	33,713	Sierra	44,950
Del Norte	35,910	Mono	54,174	Siskiyou	35,692
El Dorado	64,256	Monterey	56,668	Solano	66,575
Fresno	46,547	Napa	61,988	Sonoma	62,279
Glenn	38,521	Nevada	58,658	Stanislaus	50,367
Humboldt	37,281	Orange	73,107	Sutter	49,104
Imperial	33,576	Placer	69,667	Tehama	36,884
Inyo	46,865	Plumas	45,516	Trinity	35,439
Kern	46,639	Riverside	57,736	Tulare	40,444
Kings	45,087	Sacramento	56,823	Tuolumne	45,478
Lake	38,113	San Benito	66,273	Ventura	72,762
Lassen	47,676	San Bernardino	55,995	Yolo	55,988
		San Diego	61,724	Yuba	40,602
		San Francisco	67,333		
		San Joaquin	51,874		
				California	59,928
				United States	50,740



Variation in Distribution of Data Values

Median Household Income

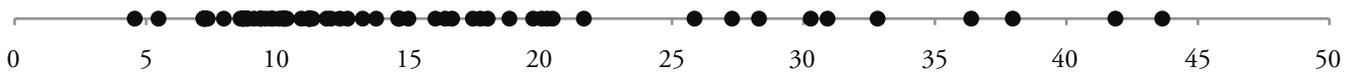
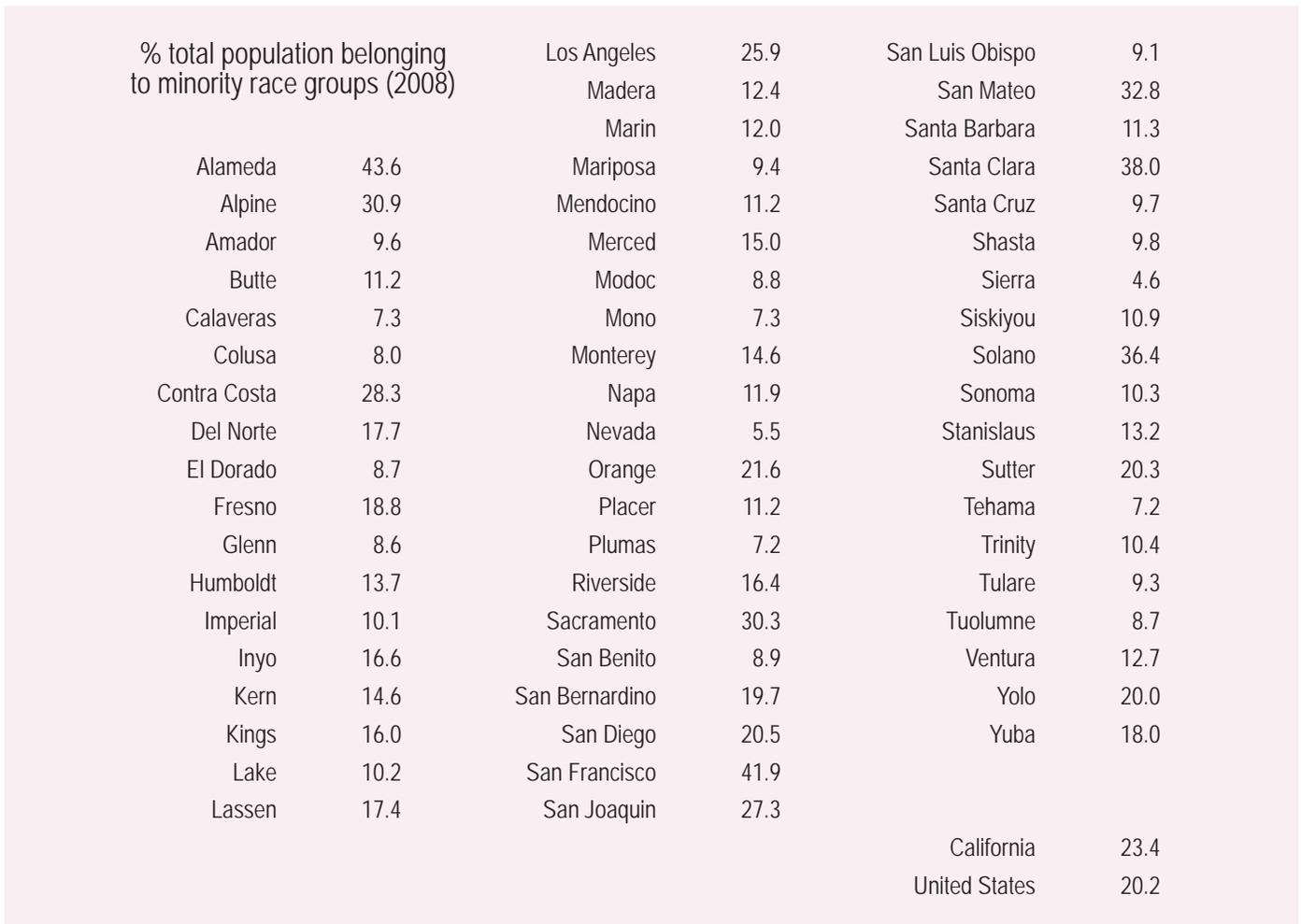


Racial Diversity

Racial diversity is measured as the percentage of the population who identify themselves as belonging to minority race groups. In the current U.S. context, “minority” races are defined as non-White (Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, and Two or More Races). Interactions among people can be influenced by racial identity. Hence, it makes sense for institutions ranging from retailers to police to parks to consider regional racial diversity when recruiting and training staff, when designing public information

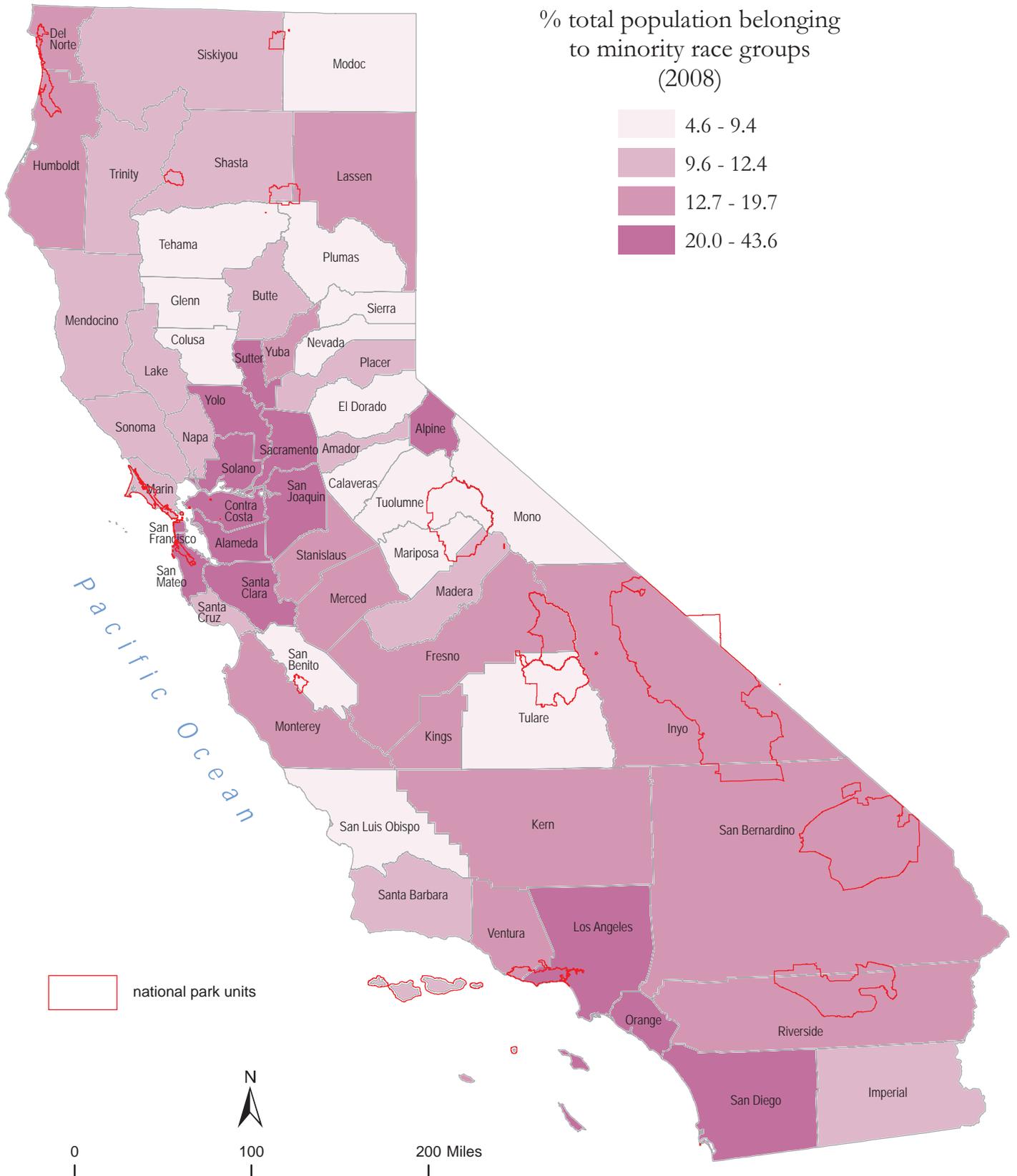
and educational materials, and when soliciting public involvement in decision-making.

Among California counties, the percentage of the total population belonging to minority race groups (2008) ranges from 4.6% (Sierra) to 43.6% (Alameda).⁹



Variation in Distribution of Data Values

Racial Diversity



Racial and Ethnic Composition

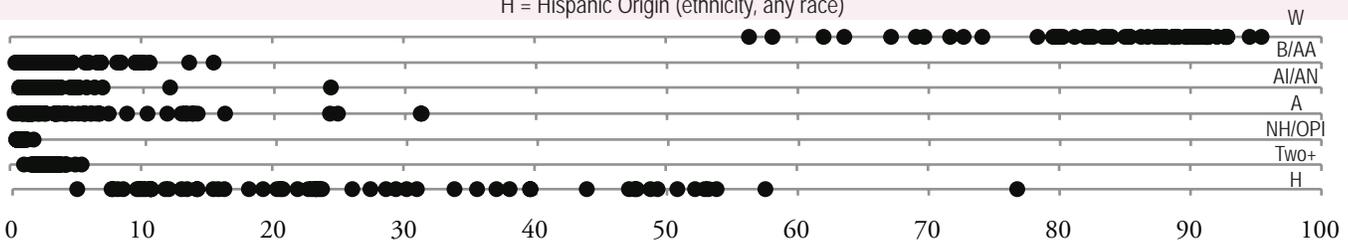
Racial and ethnic composition is indicated by the relative size of each of the major race groups and the separate Hispanic origin (ethnicity) category as classified by the U.S. Census Bureau. These characteristics of the region's population reveal its diversity, which informs park activities such as interpretation and outreach.

Among California counties (2008), White people constitute the largest racial group in all cases. Asians are the second largest race group in 31 counties. Imperial County has the highest percentage (76.8%) of the population of Hispanic origin.¹⁰

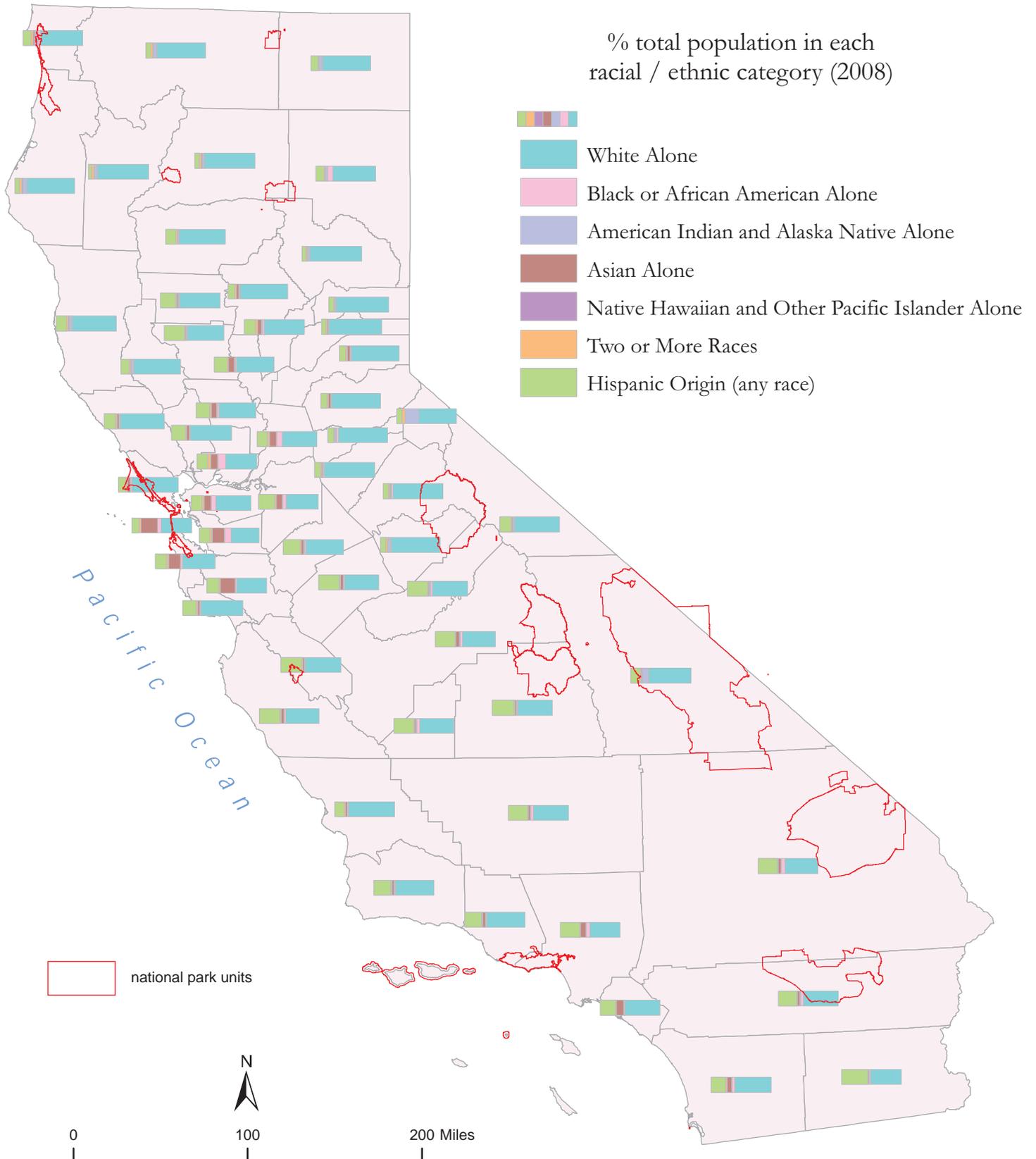
		% total population in each racial / ethnic category (2008)															
		W	B/AA	AI/AN	A	NH/OPI	Two+	H									
	Los Angeles	74.1	9.4	1.0	13.2	0.3	1.9	47.7	San Luis Obispo	90.9	2.1	1.1	3.2	0.1	2.5	19.1	
	Madera	87.6	4.5	3.3	2.1	0.3	2.2	50.8	San Mateo	67.2	3.3	0.5	24.2	1.4	3.4	23.4	
	Marin	88.0	3.1	0.6	5.6	0.2	2.6	14.1	Santa Barbara	88.7	2.4	1.7	4.5	0.2	2.5	39.5	
	Mariposa	90.6	1.2	3.6	1.1	0.1	3.3	10.5	Santa Clara	62.0	2.9	0.8	31.2	0.4	2.7	26.0	
	Mendocino	88.8	0.8	5.7	1.5	0.3	2.9	20.6	Santa Cruz	90.3	1.3	1.2	4.1	0.2	2.9	29.3	
	Merced	85.0	4.1	1.6	6.6	0.3	2.4	52.9	Shasta	90.2	1.1	3.0	2.3	0.1	3.3	8.0	
	Modoc	91.2	0.9	4.7	0.7	0.1	2.4	13.3	Sierra	95.4	0.2	2.2	0.2	0.1	1.9	9.5	
	Mono	92.7	1.0	2.9	1.4	0.1	1.8	23.6	Siskiyou	89.1	1.6	4.4	1.3	0.2	3.4	9.7	
	Monterey	85.4	3.6	1.4	6.4	0.5	2.8	53.2	Solano	63.6	15.4	1.0	14.1	0.9	5.0	22.6	
	Napa	88.1	2.0	1.0	6.1	0.3	2.4	30.1	Sonoma	89.7	1.7	1.6	3.9	0.3	2.9	23.2	
	Nevada	94.5	0.6	1.0	1.2	0.1	2.5	7.7	Stanislaus	86.8	3.2	1.6	5.0	0.6	2.8	39.6	
	Orange	78.4	2.0	0.9	16.2	0.4	2.2	33.8	Sutter	79.7	2.5	1.7	12.9	0.2	2.9	27.3	
	Placer	88.8	1.8	0.9	5.4	0.2	2.8	11.9	Tehama	92.8	0.9	2.3	1.2	0.1	2.7	20.5	
	Plumas	92.8	1.0	2.8	0.8	0.1	2.5	7.6	Trinity	89.6	0.5	5.1	0.8	0.1	3.9	4.9	
	Riverside	83.6	6.7	1.4	5.5	0.4	2.4	43.9	Tulare	90.7	2.1	1.9	3.5	0.2	1.7	57.5	
	Sacramento	69.7	10.5	1.3	13.4	0.8	4.4	20.2	Tuolumne	91.3	2.4	2.1	1.2	0.2	2.8	9.9	
	San Benito	91.1	1.3	1.6	3.3	0.3	2.4	53.8	Ventura	87.3	2.2	1.3	6.6	0.3	2.3	38.0	
	San Bernardino	80.3	9.4	1.5	5.9	0.4	2.5	47.5	Yolo	80.0	3.0	1.4	11.8	0.6	3.2	28.5	
	San Diego	79.5	5.5	1.0	10.3	0.5	3.1	30.9	Yuba	82.0	3.5	2.7	7.3	0.3	4.3	23.1	
	San Francisco	58.1	6.8	0.6	31.3	0.5	2.8	14.1	California	76.6	6.7	1.2	12.5	0.4	2.6	36.6	
	San Joaquin	72.7	8.0	1.4	13.8	0.5	3.5	37.0	United States	79.8	12.8	1.0	4.5	0.2	1.7	15.4	

W = White Alone, B/AA = Black or African American Alone, AI/AN = American Indian and Alaska Native Alone, A = Asian Alone, NH/OPI = Native Hawaiian and Other Pacific Islander Alone, Two+ = Two or More Races

H = Hispanic Origin (ethnicity, any race)



Racial and Ethnic Composition

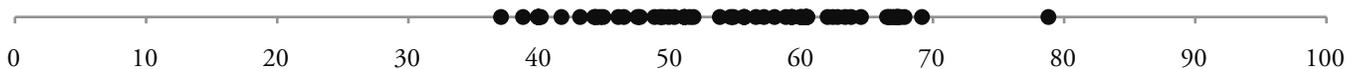


Educational Attainment

Educational attainment indicators measure the average amount of formal education that a county’s residents have received. One indicator of educational attainment is the percentage of adults who have attended or graduated from college. Educational attainment can influence many aspects of life, such as how much money people earn, what they do for recreation, where they get their information, and how they participate in civic life. With regard to management, the educational attainment of the general public is an important consideration in activities, such as marketing, public participation processes, and the design of interpretive programs.

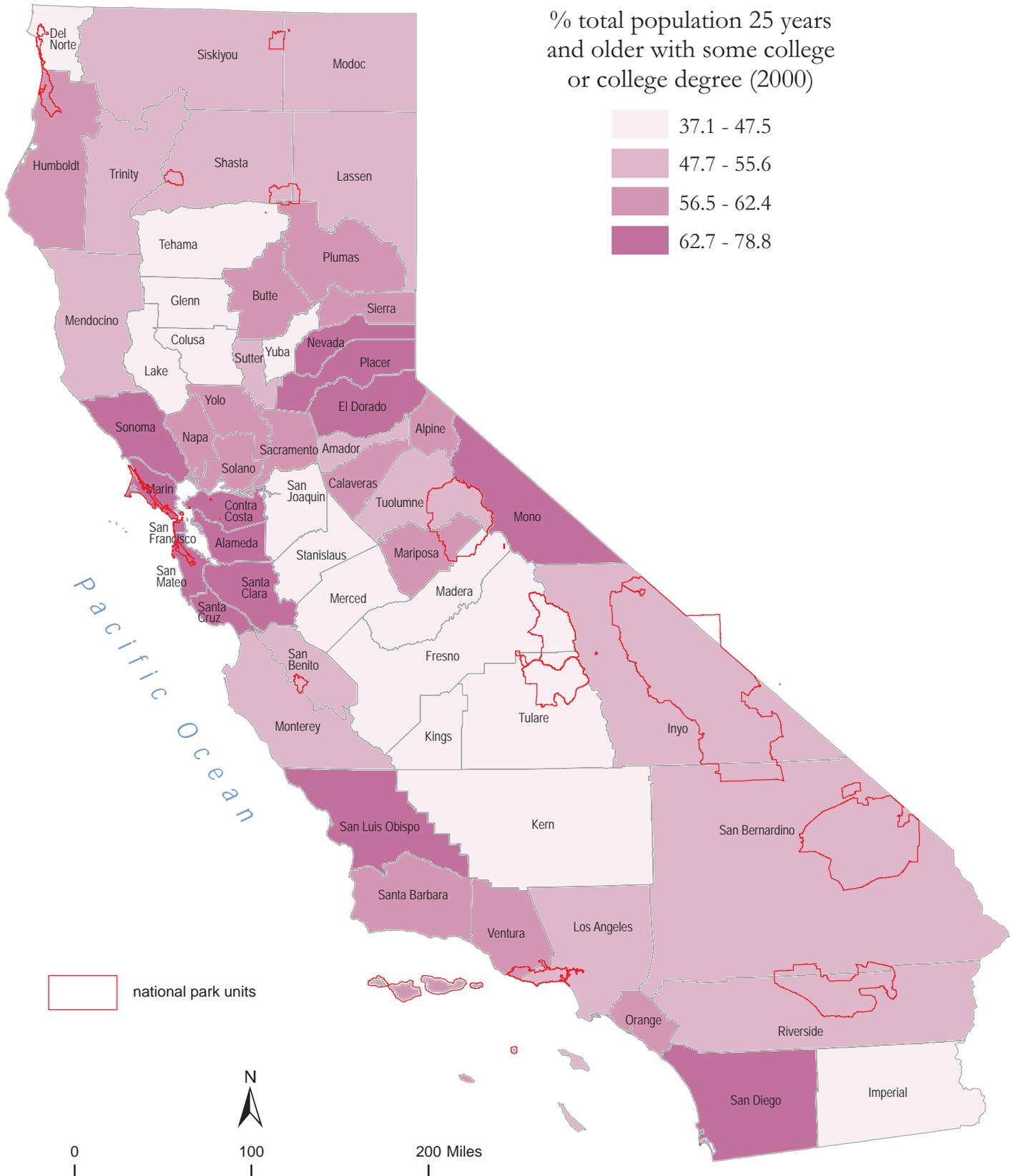
Among California counties, the percentage of adults with some college education (2000) ranges from 37.1% (Imperial) to 78.8% (Marin).¹¹

% total population 25 years and older with some college or college degree (2000)					
		Los Angeles	51.1	San Luis Obispo	63.8
		Madera	40.1	San Mateo	67.8
		Marin	78.8	Santa Barbara	60.2
Alameda	63.3	Mariposa	58.8	Santa Clara	67.5
Alpine	62.4	Mendocino	54.8	Santa Cruz	66.7
Amador	53.7	Merced	39.9	Shasta	55.6
Butte	57.9	Modoc	47.7	Sierra	56.5
Calaveras	57.1	Mono	67.3	Siskiyou	55.6
Colusa	39.9	Monterey	49.9	Solano	59.3
Contra Costa	67.1	Napa	59.9	Sonoma	64.5
Del Norte	44.2	Nevada	66.5	Stanislaus	44.3
El Dorado	66.9	Orange	62.0	Sutter	49.4
Fresno	46.4	Placer	69.2	Tehama	44.9
Glenn	41.7	Plumas	60.3	Trinity	51.4
Humboldt	59.2	Riverside	50.3	Tulare	38.7
Imperial	37.1	Sacramento	60.4	Tuolumne	54.6
Inyo	51.0	San Benito	51.7	Ventura	60.4
Kern	43.1	San Bernardino	49.2	Yolo	60.0
Kings	39.9	San Diego	62.7	Yuba	44.6
Lake	47.5	San Francisco	67.3		
Lassen	48.8	San Joaquin	46.0		
				California	56.7
				United States	51.8



Variation in Distribution of Data Values

Educational Attainment



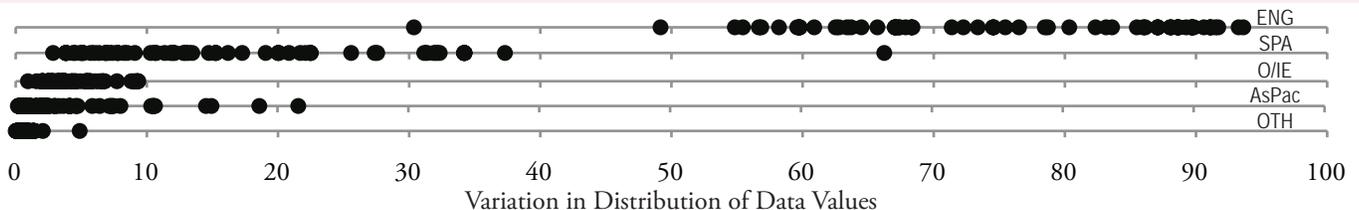
Language

Indicators of language ability measure proficiency in languages other than English. One approach is to measure proficiency by collecting information about the primary language spoken at the household level. Households are an important place where people may feel most comfortable speaking in their primary language. Awareness of the language spoken at home, by major language category, can inform park managers about the relative diversity of languages in the counties in the broader region around parks. Such information can be used to develop outreach and interpretive programs.

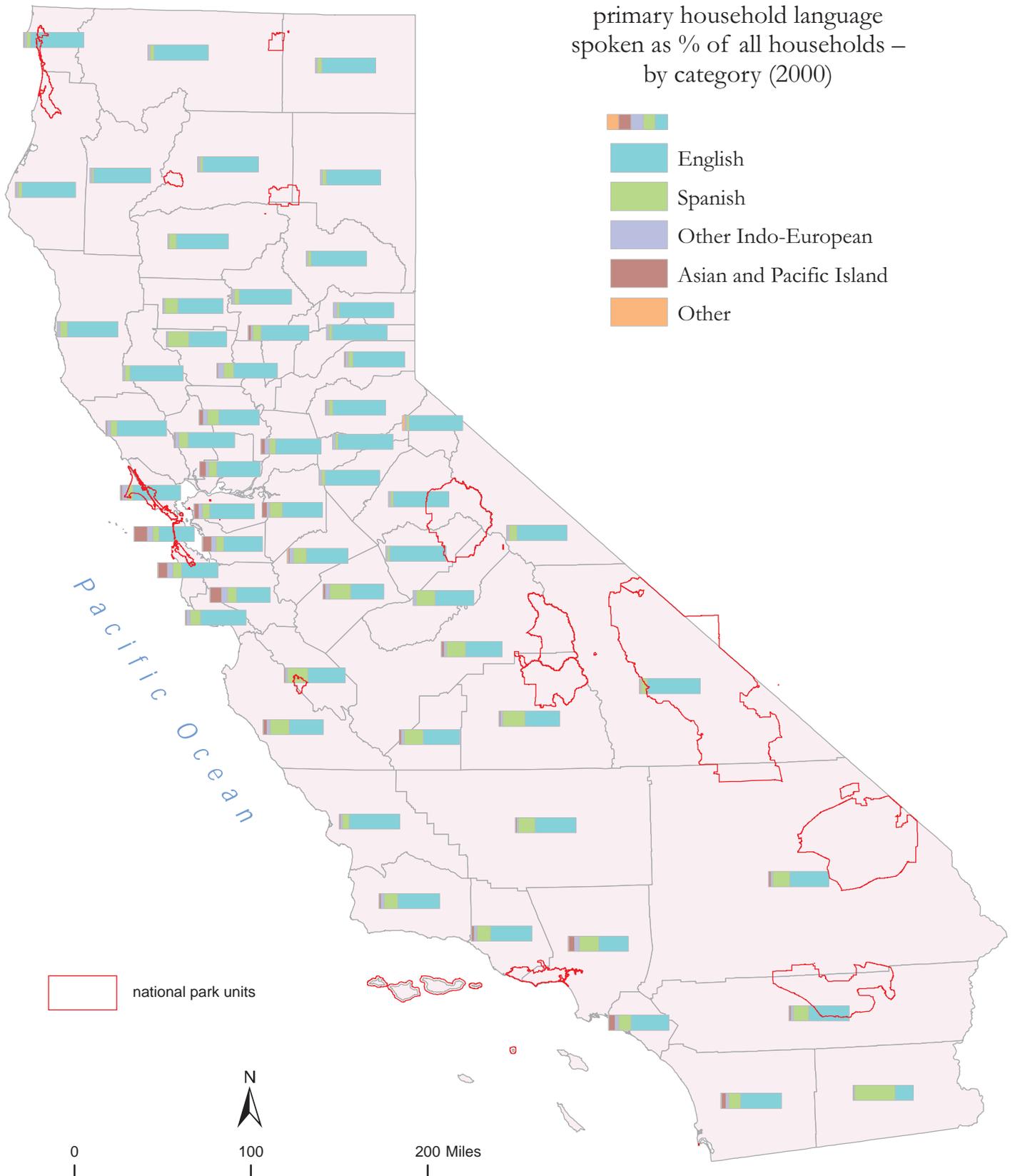
Among California counties, Spanish-speaking households are generally the largest non-English category as a percentage of all households. In seven counties, more than 10% of households are Asian and Pacific Island-speaking.¹²

primary household language spoken as % of all households – by category (2000)						ENG	SPA	O/IE	AsPac	OTH		ENG	SPA	O/IE	AsPac	OTH	
	ENG	SPA	O/IE	AsPac	OTH	Los Angeles	49.2	32.3	6.8	10.3	1.4	San Luis Obispo	83.6	10.6	3.6	2.0	0.2
						Madera	63.4	31.9	3.1	1.0	0.6	San Mateo	59.7	14.7	9.2	15.0	1.4
Alameda	63.7	12.8	7.7	14.5	1.3	Marin	78.7	8.2	9.3	3.0	0.8	Santa Barbara	68.4	22.5	5.4	3.3	0.5
Alpine	88.6	3.9	2.0	0.6	4.9	Mariposa	93.2	3.8	2.4	0.2	0.3	Santa Clara	55.4	15.3	9.3	18.6	1.3
Amador	91.1	4.4	3.7	0.7	0.1	Mendocino	83.1	11.8	3.7	0.7	0.6	Santa Cruz	74.6	17.3	5.6	2.2	0.4
Butte	86.1	8.5	2.8	1.9	0.6	Merced	54.8	34.2	6.6	4.1	0.3	Shasta	91.1	4.9	2.5	1.3	0.3
Calaveras	89.8	6.0	3.6	0.2	0.4	Modoc	88.7	7.8	1.6	0.5	1.5	Sierra	89.7	3.8	5.7	0.8	0.0
Colusa	62.5	34.2	2.6	0.7	0.1	Mono	82.3	13.2	2.8	1.1	0.6	Siskiyou	89.3	6.3	3.1	0.7	0.6
Contra Costa	73.4	12.0	6.4	7.5	0.8	Monterey	56.8	31.1	5.6	5.8	0.6	Solano	71.4	13.0	4.5	10.6	0.5
Del Norte	88.1	6.9	2.7	1.6	0.7	Napa	76.5	15.2	5.3	2.5	0.5	Sonoma	80.3	11.4	5.4	2.2	0.7
El Dorado	87.1	7.1	3.9	1.6	0.4	Nevada	90.6	5.2	3.6	0.5	0.2	Stanislaus	67.9	22.1	5.4	2.6	2.1
Fresno	59.6	31.4	3.7	4.7	0.6	Orange	62.8	20.0	5.7	10.5	1.0	Sutter	72.3	16.2	9.0	2.3	0.2
Glenn	74.5	21.7	2.0	1.6	0.2	Placer	86.0	7.4	4.3	1.9	0.4	Tehama	85.5	12.1	1.9	0.2	0.2
Humboldt	88.6	5.7	3.7	1.1	0.9	Plumas	91.7	5.1	2.5	0.5	0.2	Trinity	93.6	2.8	2.7	0.4	0.5
Imperial	30.4	66.2	0.9	1.9	0.6	Riverside	67.3	25.6	3.5	2.9	0.7	Tulare	56.7	37.3	3.4	2.4	0.3
Inyo	87.1	9.1	2.1	0.8	1.0	Sacramento	75.5	10.7	6.1	7.1	0.6	Tuolumne	91.4	4.5	3.3	0.7	0.0
Kern	67.4	27.6	2.2	2.3	0.5	San Benito	60.9	34.2	2.9	1.9	0.1	Ventura	68.3	22.5	4.4	4.2	0.7
Kings	59.8	32.1	4.2	3.6	0.3	San Bernardino	64.5	27.4	3.2	4.1	0.8	Yolo	67.1	19.1	6.6	6.4	0.8
Lake	88.0	7.8	3.2	0.8	0.2	San Diego	67.0	20.1	4.6	7.3	1.0	Yuba	78.5	13.5	3.3	4.6	0.2
Lassen	89.6	6.9	2.5	0.4	0.7	San Francisco	58.2	10.3	8.8	21.6	1.1	California	62.2	22.4	5.8	8.6	1.0
						San Joaquin	65.7	20.8	4.9	8.0	0.5	United States	81.1	10.2	5.2	2.6	0.8

ENG = English, SPA = Spanish, O/IE = Other Indo-European, AsPac = Asian and Pacific Island, OTH = Other



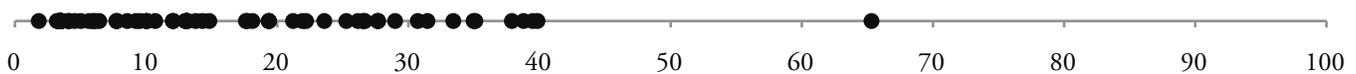
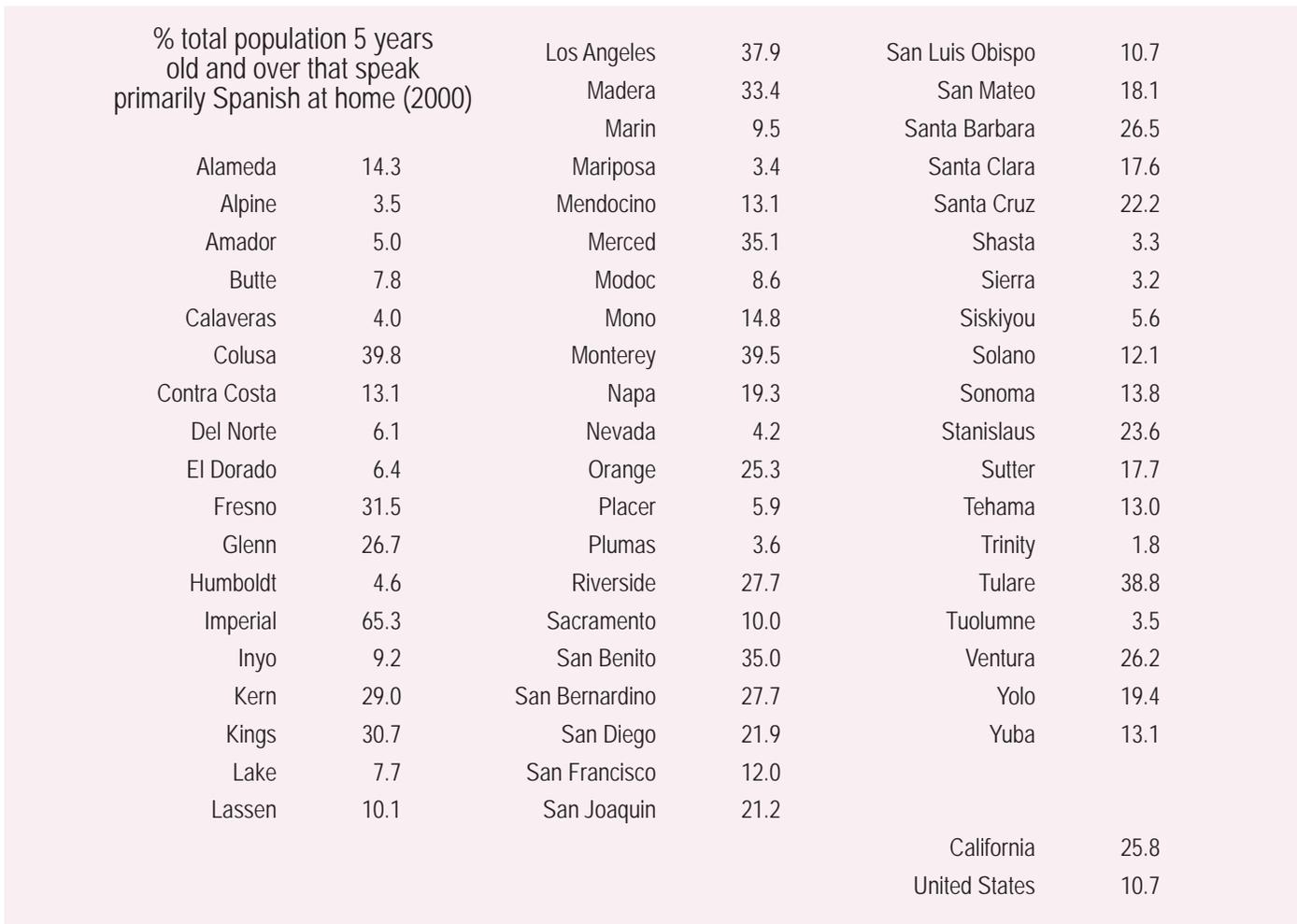
Language



Spanish Speakers

Indicators of language ability measure proficiency in languages other than English. For example, one indicator of Spanish language ability is the percentage of people 5 years old and over that speaks primarily Spanish at home. Awareness of people’s primary language (other than English) can help park managers customize information and interpretive programs in a certain language, such as Spanish.

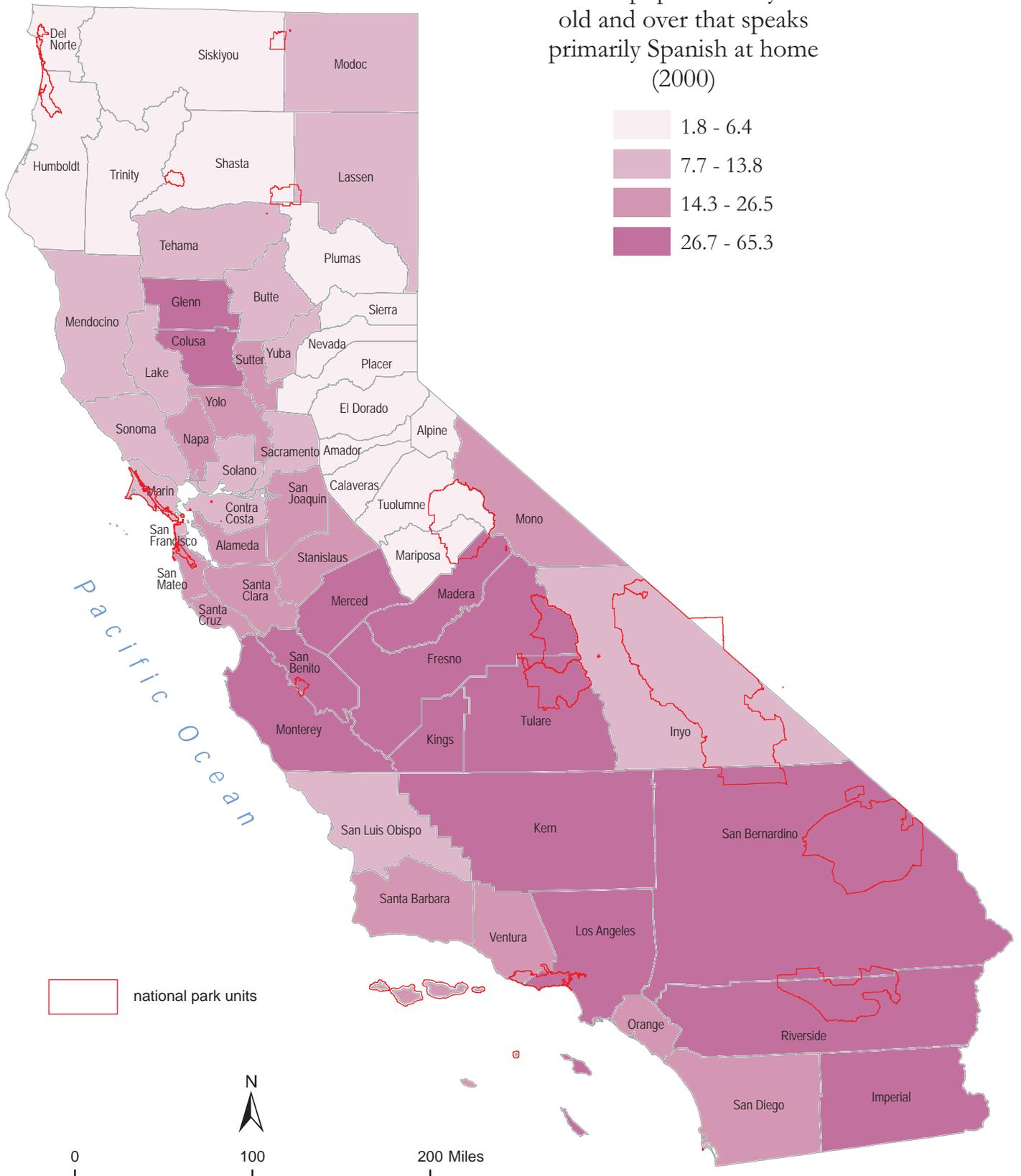
Among California counties, the percentage of the total population 5 years old and over that speaks primarily Spanish at home (2000) ranges from 1.8% (Trinity) to 65.3% (Imperial).



Variation in Distribution of Data Values

Spanish Speakers

% total population 5 years old and over that speaks primarily Spanish at home (2000)



Recreation/Tourism Establishments

The recreation and tourism industry is measured using two categories: the arts, entertainment and recreation sector (ranging from museums and concerts, to sporting events and amusement parks) and the accommodation and food services sector (ranging from hotels to campsites). The size of these sectors is a broad indicator of a county’s economic reliance on recreation and tourism relative to the other sectors of the economy. Recreation and tourism establishments can be proponents of actions that enhance their area’s attractiveness as a visitor destination (such as transportation improvements, protection of scenic or

cultural landmarks, or marketing campaigns). Recreation and tourism establishments also can be vulnerable to, and thus wary of, actions, policies, or chance events that could affect business, such as visitor use restrictions, fires, or economic downturns.

Among California counties, the percentage of total establishments in arts, entertainment, recreation, accommodation and food services (2007) ranges from 8.6% (Orange) to 31.8% (Alpine).¹³

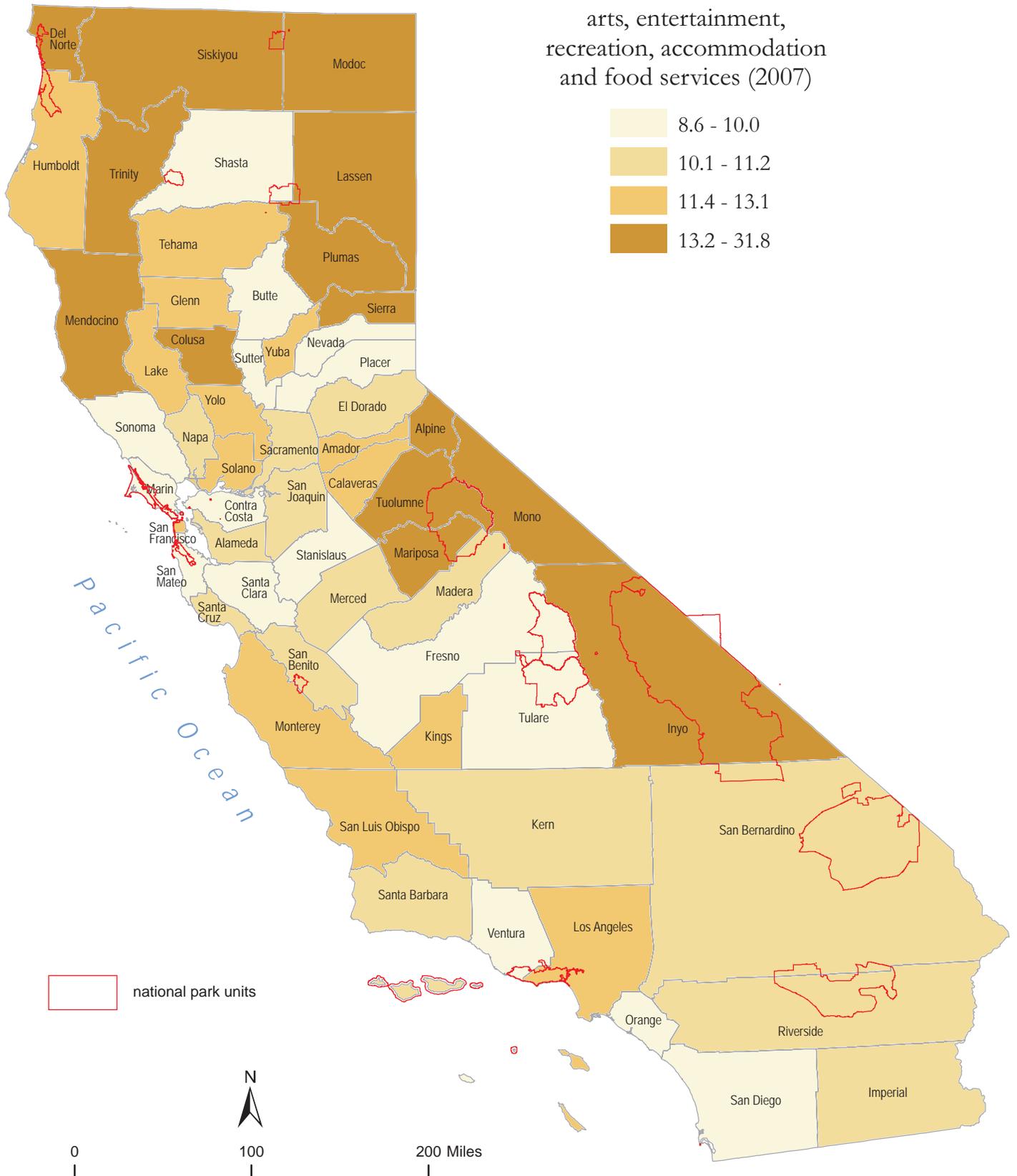
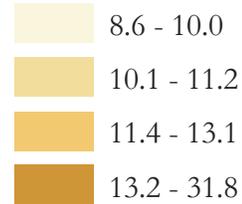
% total establishments in arts, entertainment, recreation, accommodation and food services (2007)		Los Angeles		San Luis Obispo	
Alameda	10.2	Madera	10.5	San Mateo	10.0
Alpine	31.8	Marin	9.4	Santa Barbara	10.9
Amador	12.8	Mariposa	16.2	Santa Clara	10.0
Butte	9.7	Mendocino	14.4	Santa Cruz	10.6
Calaveras	12.5	Merced	10.8	Shasta	9.5
Colusa	13.2	Modoc	16.4	Sierra	18.9
Contra Costa	9.0	Mono	24.9	Siskiyou	13.4
Del Norte	15.7	Monterey	12.6	Solano	11.5
El Dorado	11.1	Napa	10.4	Sonoma	9.9
Fresno	9.9	Nevada	8.9	Stanislaus	10.0
Glenn	13.0	Orange	8.6	Sutter	9.5
Humboldt	11.7	Placer	9.6	Tehama	12.1
Imperial	10.6	Plumas	17.1	Trinity	20.8
Inyo	20.2	Riverside	10.5	Tulare	9.5
Kern	10.6	Sacramento	10.3	Tuolumne	13.6
Kings	11.5	San Benito	11.2	Ventura	9.7
Lake	12.2	San Bernardino	10.1	Yolo	11.4
Lassen	14.1	San Diego	9.7	Yuba	11.7
		San Francisco	13.1		
		San Joaquin	10.5		
				California	10.7
				United States	9.8



Variation in Distribution of Data Values

Recreation/Tourism Establishments

% total establishments in arts, entertainment, recreation, accommodation and food services (2007)

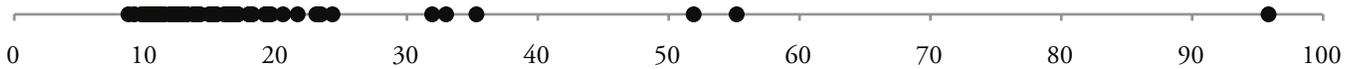


Recreation/Tourism Employment

The significance of the recreation/tourism industry to a county economy can be indicated by the percentage of county workers that it employs. Workers counted as recreation and tourism employees include country club managers, blackjack dealers, campground employees, fishing guides, motel attendants, and other providers of recreation services. A high level of recreation/tourism employment may mean that residents have more disposable income or that the area attracts visitors or vacationers.

Among California counties, the percentage of total paid employees in arts, entertainment, recreation, accommodation and food services (2007) ranges from 8.7% (Santa Clara) to 95.8% (Alpine).¹⁴

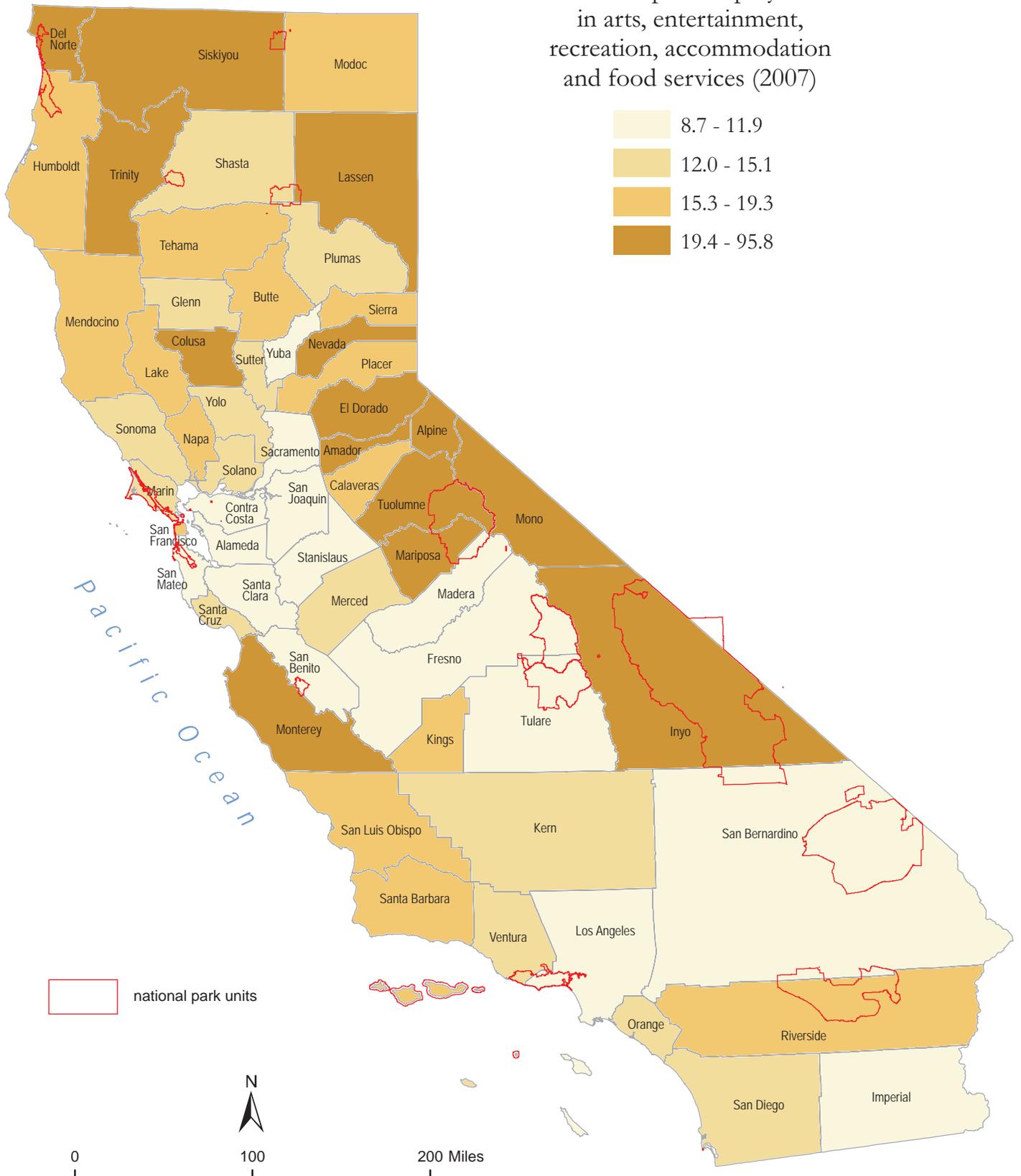
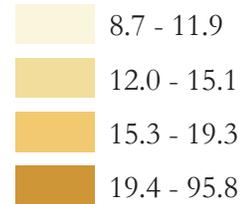
% total paid employees in arts, entertainment, recreation, accommodation and food services (2007)					
Alameda	9.2	Los Angeles	10.8	San Luis Obispo	18.2
Alpine	95.8	Madera	9.7	San Mateo	10.0
Amador	31.9	Marin	13.7	Santa Barbara	16.7
Butte	16.1	Mariposa	51.9	Santa Clara	8.7
Calaveras	18.0	Mendocino	19.3	Santa Cruz	15.1
Colusa	33.0	Merced	12.0	Shasta	13.8
Contra Costa	10.4	Modoc	15.3	Sierra	19.2
Del Norte	23.1	Mono	55.2	Siskiyou	20.5
El Dorado	19.6	Monterey	19.4	Solano	12.9
Fresno	11.9	Napa	16.5	Sonoma	13.1
Glenn	13.8	Nevada	21.7	Stanislaus	11.3
Humboldt	17.1	Orange	12.2	Sutter	13.2
Imperial	11.2	Placer	17.1	Tehama	15.5
Inyo	35.3	Plumas	14.2	Trinity	23.3
Kern	12.2	Riverside	16.2	Tulare	10.2
Kings	17.9	Sacramento	11.5	Tuolumne	24.3
Lake	18.1	San Benito	11.1	Ventura	12.5
Lassen	23.4	San Bernardino	11.2	Yolo	14.9
		San Diego	15.0	Yuba	10.8
		San Francisco	15.3		
		San Joaquin	10.5		
				California	12.0
				United States	11.3



Variation in Distribution of Data Values

Recreation/Tourism Employment

% total paid employees in arts, entertainment, recreation, accommodation and food services (2007)



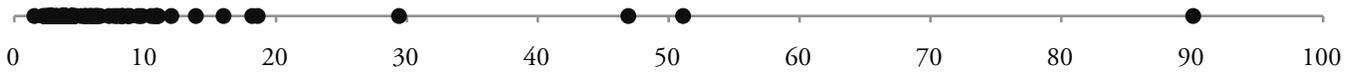
Recreation/Tourism Revenue

Recreation and tourism revenue is a key indicator of the economic importance of recreation and tourism to a county. Recreation and tourism revenue can be expressed as a percentage of total sales and service receipts.

Recreation and tourism establishments can occupy an important position within a county economy because they attract visitor dollars from elsewhere. Secondary economic benefits are realized when these dollars are re-spent within the local economy or deposited in banks, where they provide capital to other businesses.

Among California counties, the percentage of total sales from arts, entertainment, recreation, accommodation and food services (2002) ranges from 1.5% (Ventura) to 90.1% (Alpine).¹⁵

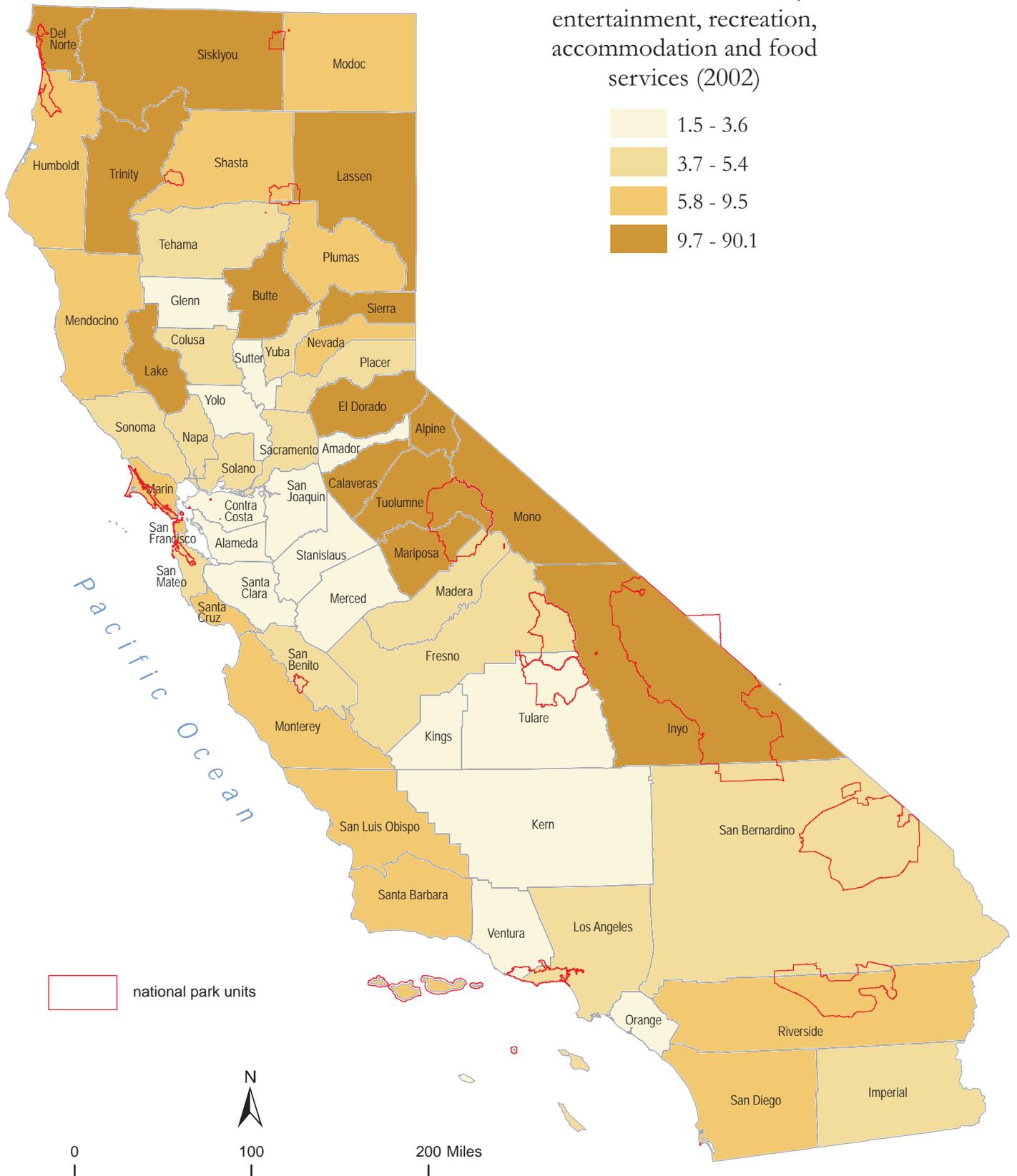
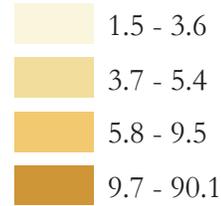
% total sales from arts, entertainment, recreation, accommodation and food services (2002)					
Alameda	2.5	Los Angeles	4.7	San Luis Obispo	8.8
Alpine	90.1	Madera	3.8	San Mateo	3.7
Amador	2.2	Marin	6.3	Santa Barbara	7.9
Butte	10.5	Mariposa	51.1	Santa Clara	3.6
Calaveras	11.0	Mendocino	9.5	Santa Cruz	5.9
Colusa	4.4	Merced	3.1	Shasta	6.3
Contra Costa	2.8	Modoc	8.2	Sierra	29.4
Del Norte	10.9	Mono	46.9	Siskiyou	9.7
El Dorado	16.0	Monterey	7.7	Solano	3.9
Fresno	4.3	Napa	5.4	Sonoma	4.6
Glenn	3.2	Nevada	8.3	Stanislaus	2.9
Humboldt	7.2	Orange	3.3	Sutter	2.8
Imperial	3.9	Placer	5.1	Tehama	4.4
Inyo	18.6	Plumas	5.8	Trinity	12.0
Kern	3.6	Riverside	6.6	Tulare	2.3
Kings	2.9	Sacramento	4.3	Tuolumne	13.9
Lake	18.2	San Benito	5.4	Ventura	1.5
Lassen	10.7	San Bernardino	3.8	Yolo	2.6
		San Diego	6.1	Yuba	4.0
		San Francisco	8.6		
		San Joaquin	2.7		
				California	4.3



Variation in Distribution of Data Values

Recreation/Tourism Revenue

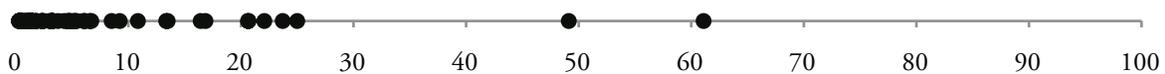
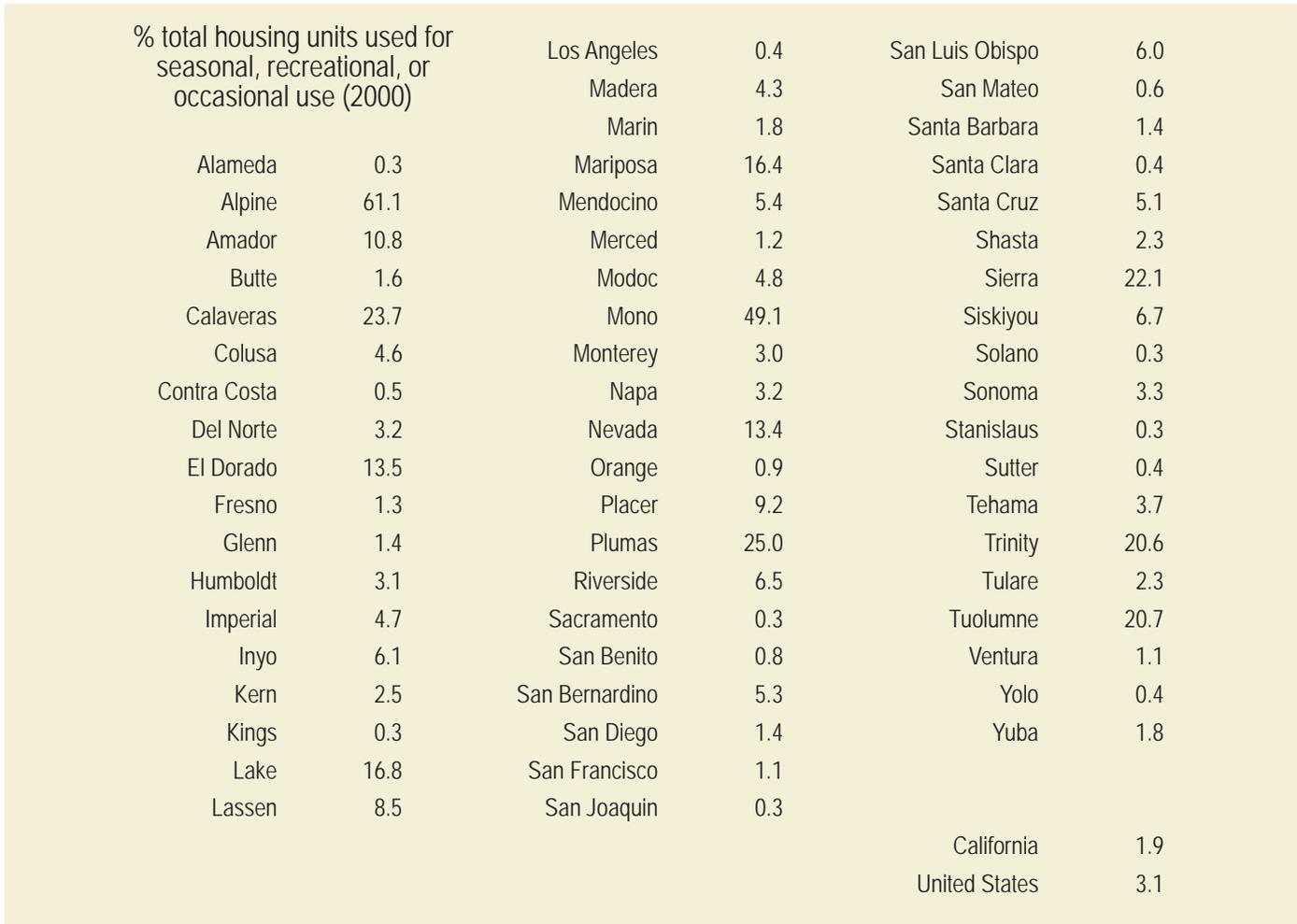
% total sales from arts, entertainment, recreation, accommodation and food services (2002)



Seasonal Housing

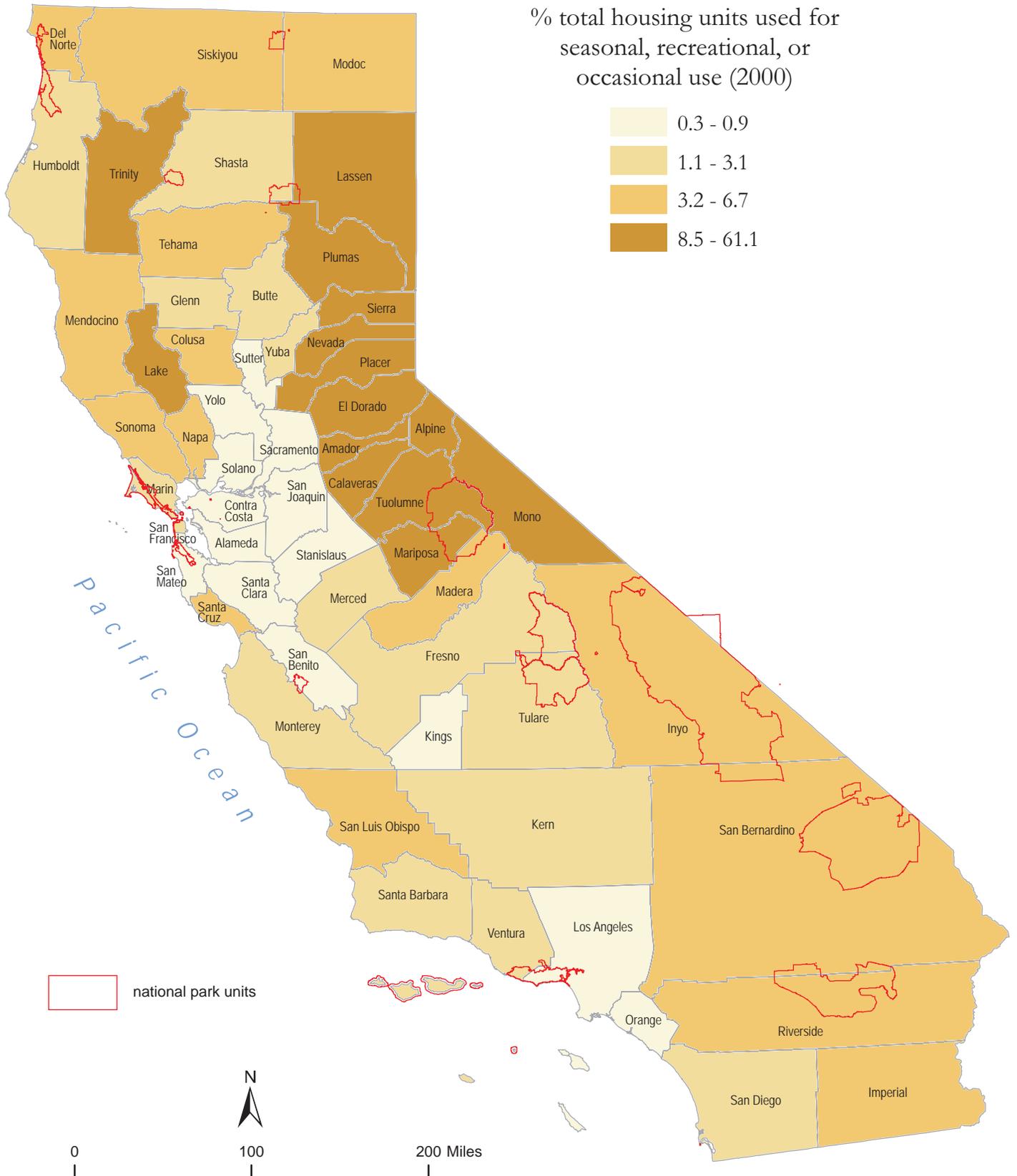
Seasonal, recreational, and occasional use housing units are those intended for occupancy only during certain seasons of the year and are found primarily in resort areas. National parks with a large number of seasonal housing units located near their boundaries can be considered “destination parks.” Such parks may attract people who can afford to travel a considerable distance and spend a few days in or near the park.

Among California counties, the percentage of total housing units classified for seasonal, recreational, or occasional use (2000) ranges from 0.3% (six counties) to 61.1% (Alpine).¹⁶



Variation in Distribution of Data Values

Seasonal Housing



Congressional Districts

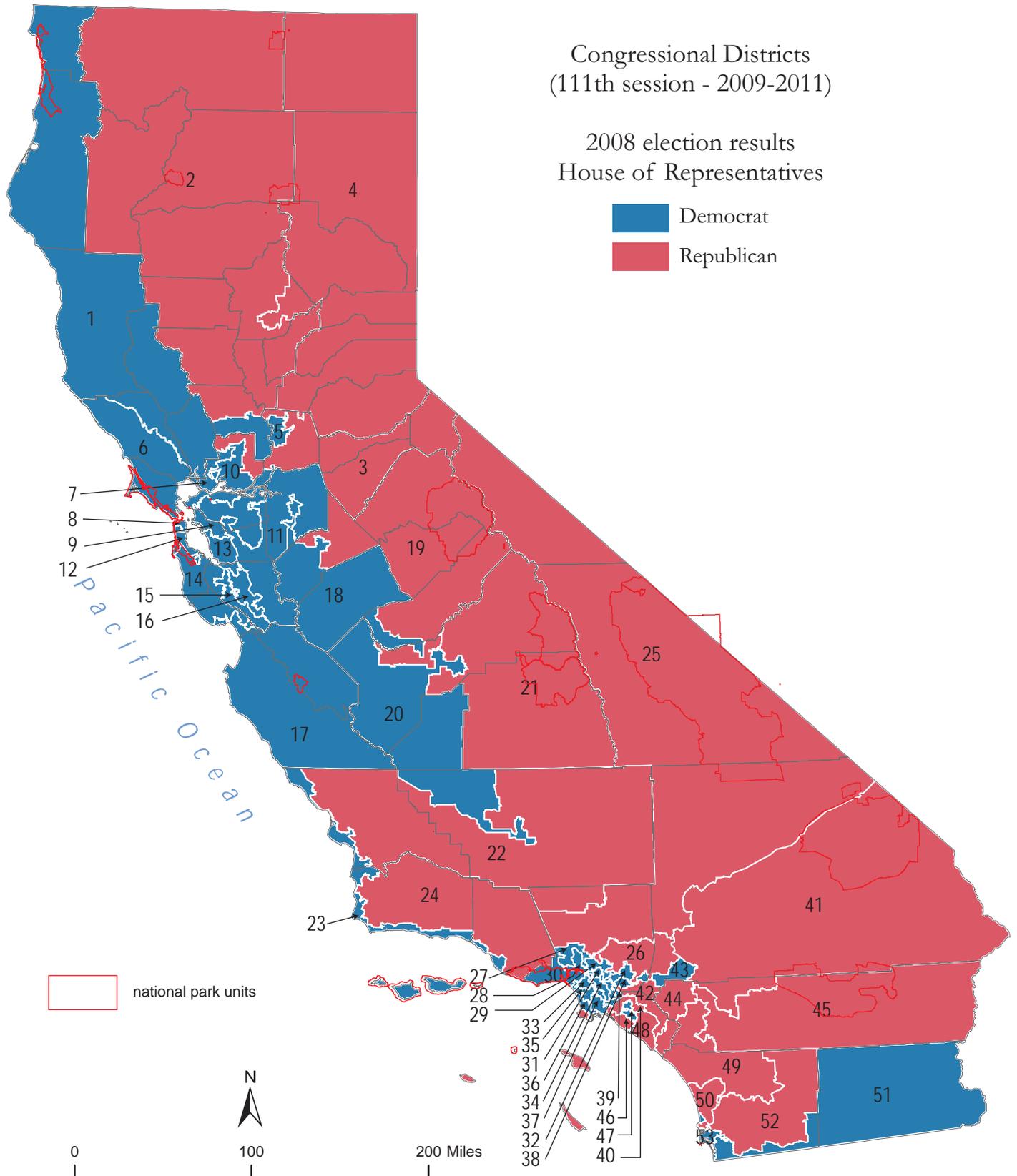
Congressional districts form a key layer in the political structure of a region of interest for national parks. These districts, roughly equivalent in population, are defined by state legislatures based on the national census and redrawn every ten years. Members of Congress are key points of access for citizens and organizations seeking to influence federal-level policies and programs, including those related to federal lands such as national parks and national forests.

Congressional districts in the map on the facing page are identified by numbers, and the results of the 2008 House of Representatives election are shown. The table below lists Congressional districts by county. The congressional districts for the 110th Congress are based on Census 2000. California includes 53 Congressional districts.

congressional districts January 2009 - January 2011

		22, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 42, 46		
		Los Angeles		San Luis Obispo 22, 23
		Madera 18, 19		San Mateo 12, 14
		Marin 6		Santa Barbara 23, 24
Alameda 9, 10, 11, 13		Mariposa 19		Santa Clara 11, 14, 15, 16
Alpine 3		Mendocino 1		Santa Cruz 14, 17
Amador 3		Merced 18		Shasta 2
Butte 2, 4		Modoc 4		Sierra 4
Calaveras 3		Mono 25		Siskiyou 2
Colusa 2		Monterey 17		Solano 3, 7, 10
Contra Costa 7, 10, 11		Napa 1		Sonoma 1, 6
Del Norte 1		Nevada 4		Stanislaus 18, 19
El Dorado 4		Orange 40, 42, 44, 46, 47, 48		Sutter 2
Fresno 18, 19, 20, 21		Placer 4		Tehama 2
Glenn 2		Plumas 4		Trinity 2
Humboldt 1		Riverside 41, 44, 45, 49		Tulare 21
Imperial 51		Sacramento 3, 4, 5, 10		Tuolumne 19
Inyo 25		San Benito 17		Ventura 23, 24
Kern 20, 22		San Bernardino 25, 26, 41, 42, 43		Yolo 1, 2
Kings 20		San Diego 49, 50, 51, 52, 53		Yuba 2
Lake 1		San Francisco 8, 12		
Lassen 4		San Joaquin 11, 18		

Congressional Districts

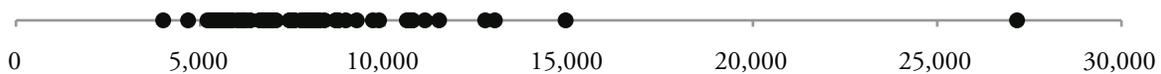


Federal Expenditures

The importance of the federal government to a county economy can be indicated by the amount of federal expenditures per person. These expenditures can be a key source of dollars flowing into the county economy (in contrast, taxes and fees are an outflow of dollars). Federal spending can influence the region through such wide-ranging initiatives as agricultural subsidies, social programs, military bases, and national parks.

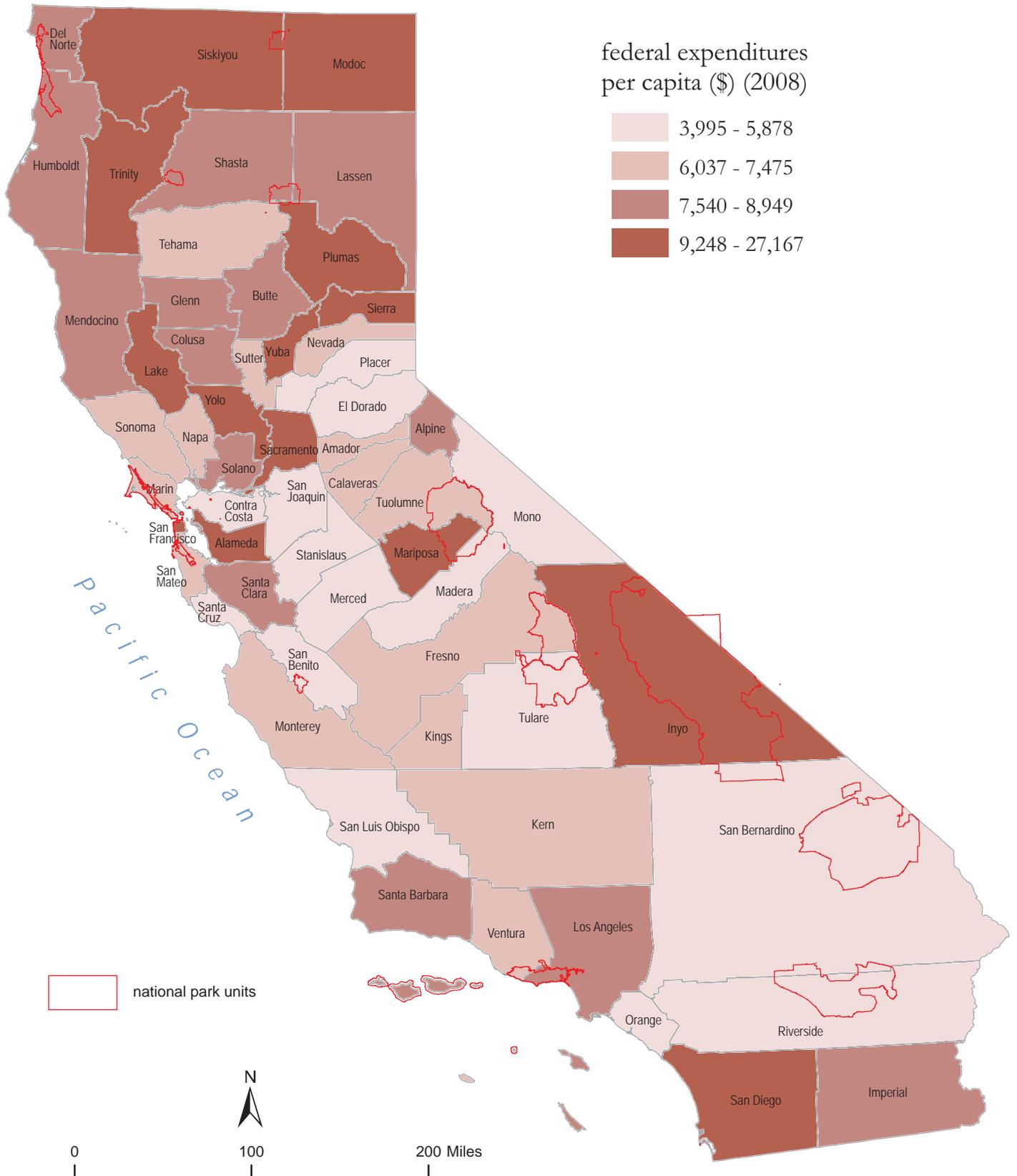
Among California counties, federal expenditures per person (2008) range from \$3,995 (San Benito) to \$27,167 (Inyo).¹⁷

federal expenditures per capita (\$) (2008)		Los Angeles		San Luis Obispo	
			7,730		5,777
		Madera	5,282	San Mateo	6,616
		Marin	6,360	Santa Barbara	8,949
Alameda	9,685	Mariposa	10,733	Santa Clara	8,723
Alpine	7,909	Mendocino	8,746	Santa Cruz	5,784
Amador	6,664	Merced	5,431	Shasta	8,204
Butte	7,540	Modoc	10,608	Sierra	11,481
Calaveras	6,725	Mono	5,300	Siskiyou	10,768
Colusa	7,856	Monterey	6,811	Solano	8,369
Contra Costa	5,727	Napa	6,914	Sonoma	6,210
Del Norte	8,206	Nevada	7,421	Stanislaus	5,472
El Dorado	5,376	Orange	5,879	Sutter	6,781
Fresno	6,069	Placer	5,421	Tehama	7,057
Glenn	8,099	Plumas	9,853	Trinity	11,100
Humboldt	8,676	Riverside	4,670	Tulare	5,570
Imperial	7,545	Sacramento	14,916	Tuolumne	7,475
Inyo	27,167	San Benito	3,995	Ventura	6,173
Kern	6,939	San Bernardino	5,198	Yolo	12,733
Kings	6,037	San Diego	10,734	Yuba	10,690
Lake	9,249	San Francisco	12,995		
Lassen	8,054	San Joaquin	5,640		
				California	8,160



Variation in Distribution of Data Values

Federal Expenditures

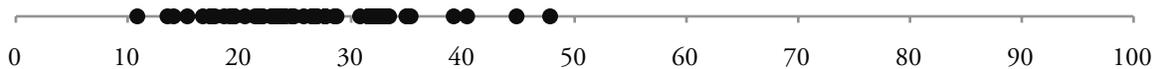
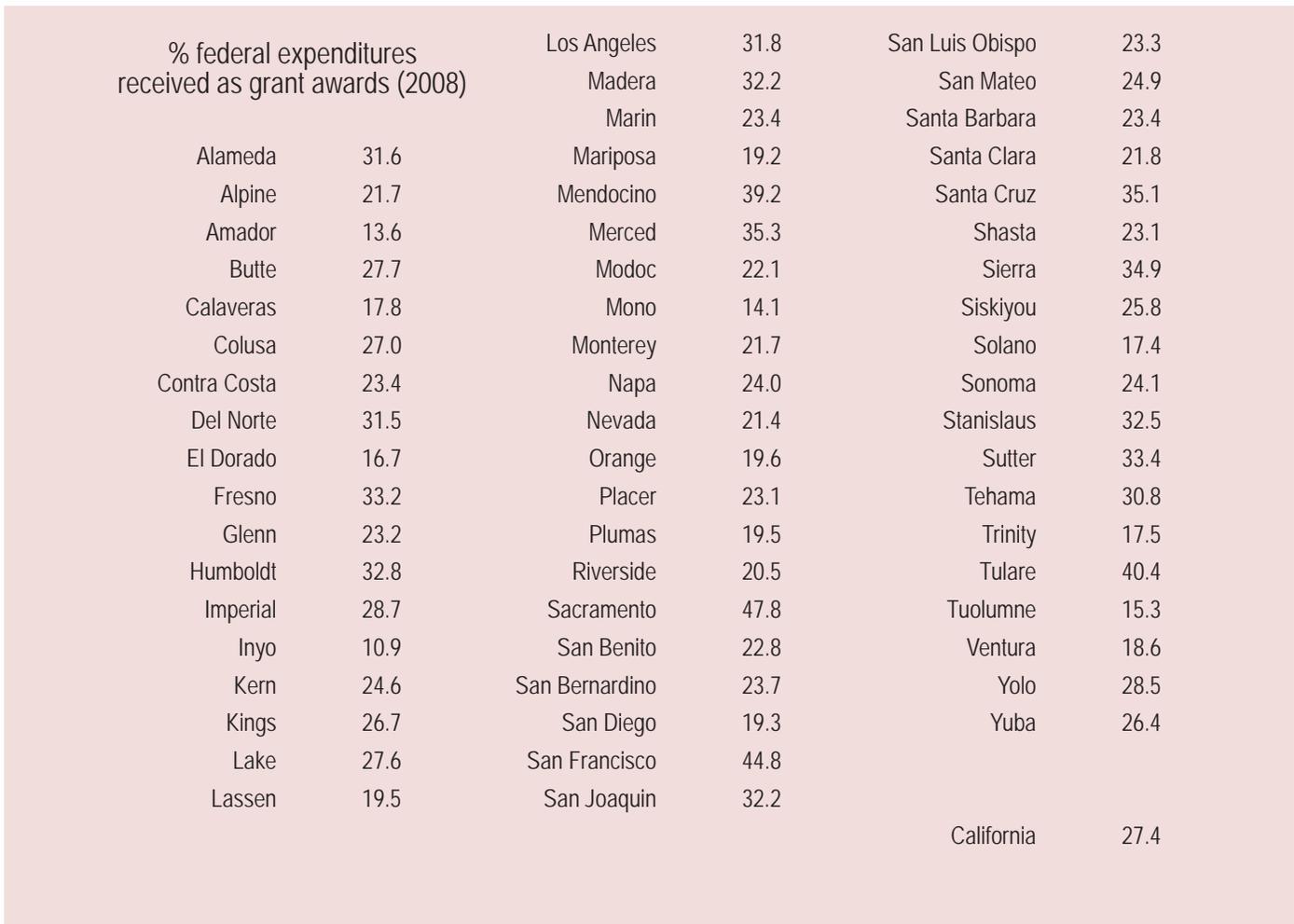


Federal Grants

Federal grants are a specific type of spending, generally intended to assist local governments in carrying out major capital projects or program enhancements. These grants differ from other federal expenditures in that they are centrally received and administered (as opposed to individual wages and loans), are short-term disbursements (as opposed to entitlement programs), and are not exchanged for any goods or services (as opposed to salaries and procurement). Federal grants represent an important short-term flow of dollars into a county. If a county receives a relatively high percentage of federal expenditures in the form of grants, this may

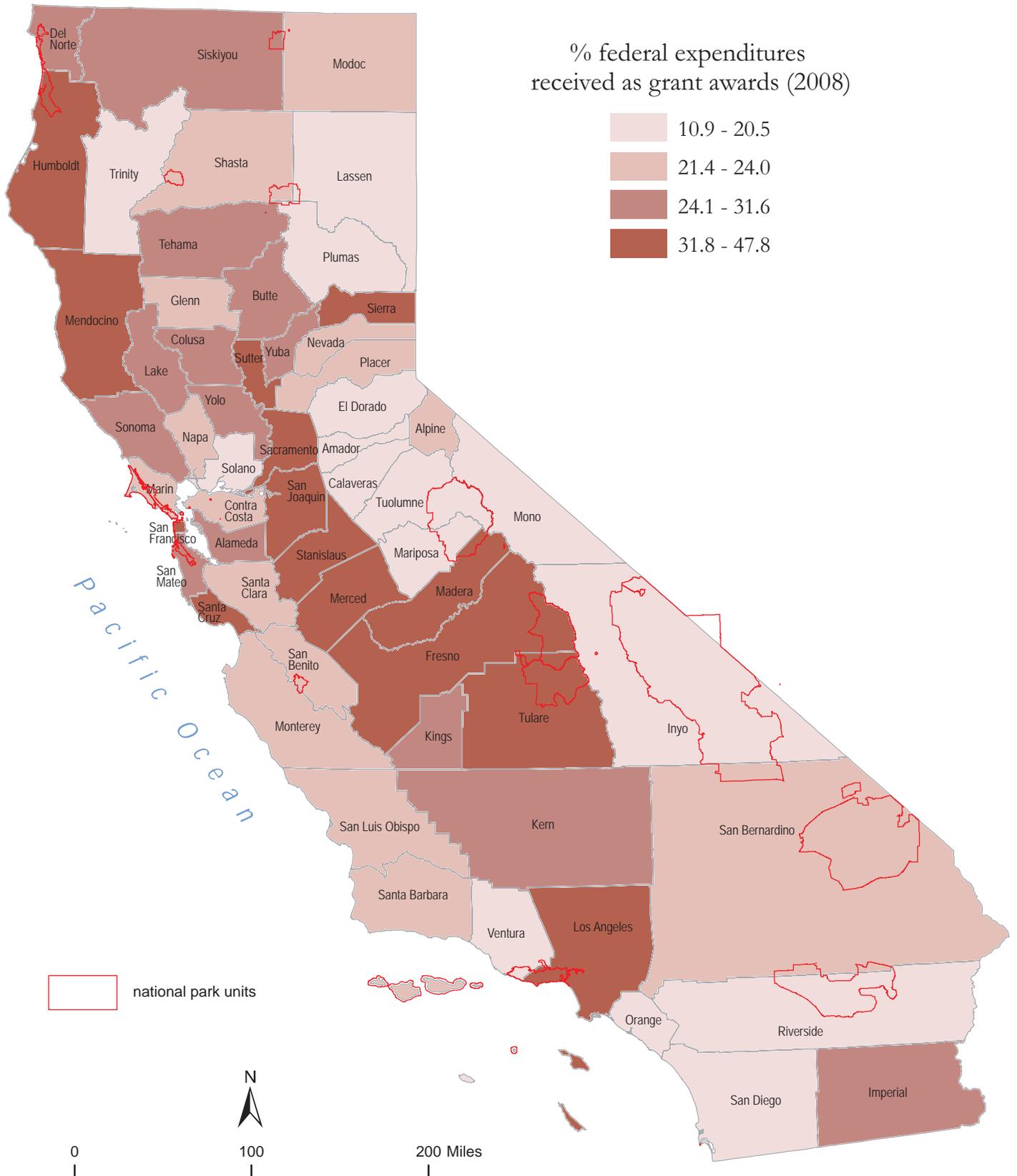
indicate that other types of federal spending in the county are relatively limited. It also may indicate that the county has a relatively greater need for grant-funded projects and programs such as roads, sewage treatment, and school subsidies.

Among California counties, the percentage of federal expenditures received in the form of grant awards (2008) ranges from 10.9% (Inyo) to 47.8% (Sacramento).¹⁸



Variation in Distribution of Data Values

Federal Grants

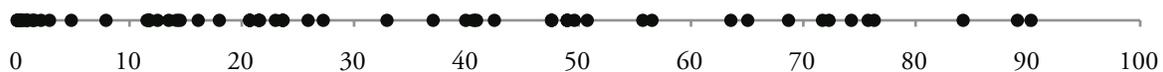


Federal Land Management

One indicator of the federal government’s role in regional resource management is the amount of land under federal management. This amount can be measured as a percentage of the total land area in each county. Stewardship of private land is carried out through a combination of regulation, market forces, and voluntary action. In contrast, stewardship of public land is carried out through direct implementation of agency policies. Thus the variation in public versus private land ownership across the region can significantly influence the design and implementation of resource protection strategies.

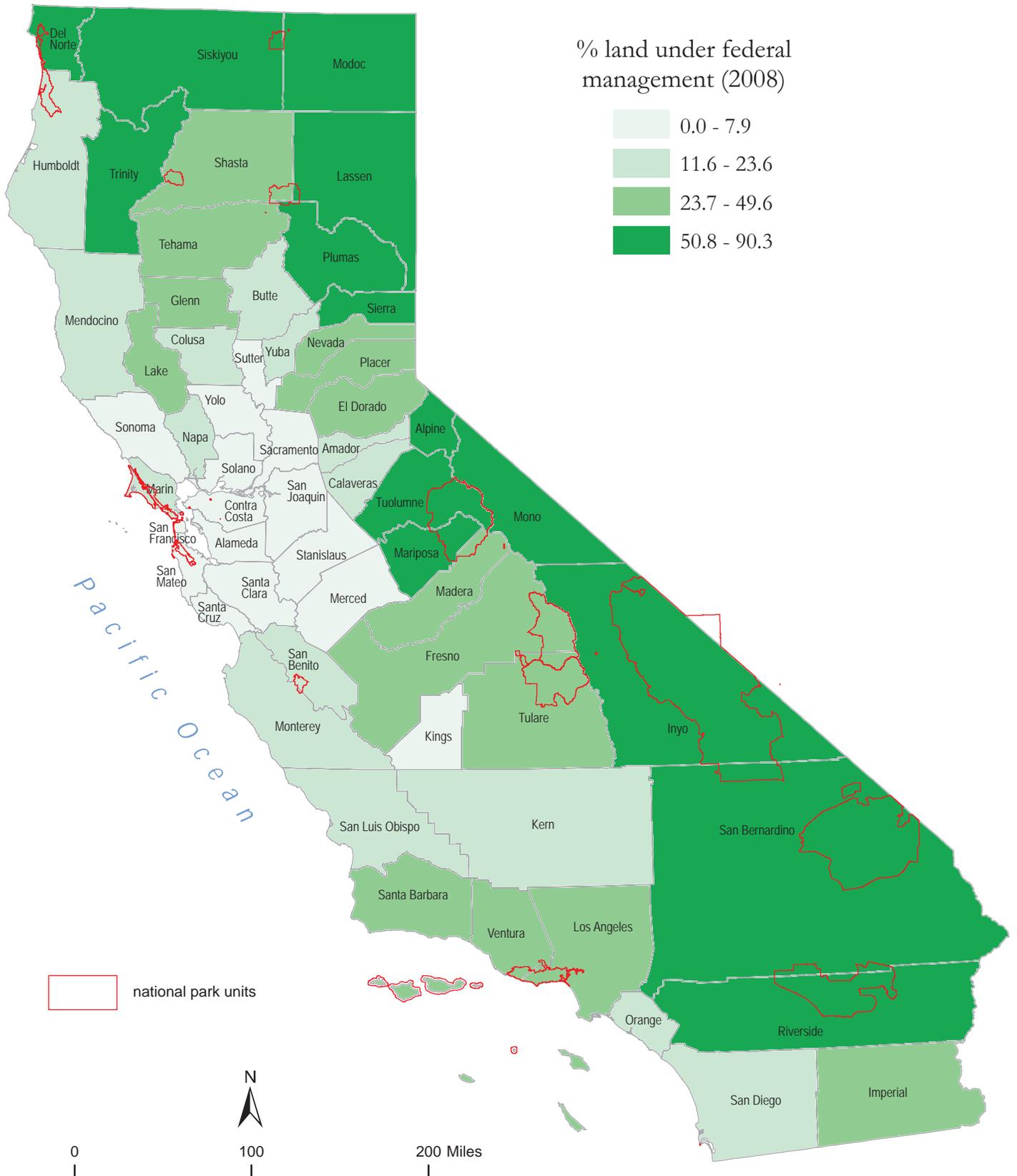
Among California counties, land under federal management (2008) ranges from 0% (Santa Cruz and Sutter) to 90.3% (Mono).¹⁹

% land under federal management (2008)		Los Angeles	27.3	San Luis Obispo	20.7
		Madera	37.0	San Mateo	0.8
		Marin	23.6	Santa Barbara	40.9
Alameda	0.2	Mariposa	55.7	Santa Clara	0.2
Alpine	89.1	Mendocino	13.5	Santa Cruz	0.0
Amador	23.0	Merced	2.9	Shasta	40.6
Butte	14.5	Modoc	68.7	Sierra	74.3
Calaveras	21.5	Mono	90.3	Siskiyou	63.6
Colusa	14.2	Monterey	16.1	Solano	1.3
Contra Costa	0.5	Napa	12.5	Sonoma	2.1
Del Norte	72.3	Nevada	32.9	Stanislaus	0.3
El Dorado	49.0	Orange	11.8	Sutter	0.0
Fresno	39.9	Placer	42.5	Tehama	23.7
Glenn	25.9	Plumas	71.7	Trinity	75.8
Humboldt	21.6	Riverside	50.8	Tulare	49.6
Imperial	47.6	Sacramento	1.6	Tuolumne	76.3
Inyo	84.2	San Benito	11.6	Ventura	49.0
Kern	20.7	San Bernardino	65.1	Yolo	4.8
Kings	0.9	San Diego	18.0	Yuba	11.8
Lake	47.6	San Francisco	7.9		
Lassen	56.5	San Joaquin	0.2		



Variation in Distribution of Data Values

Federal Land Management

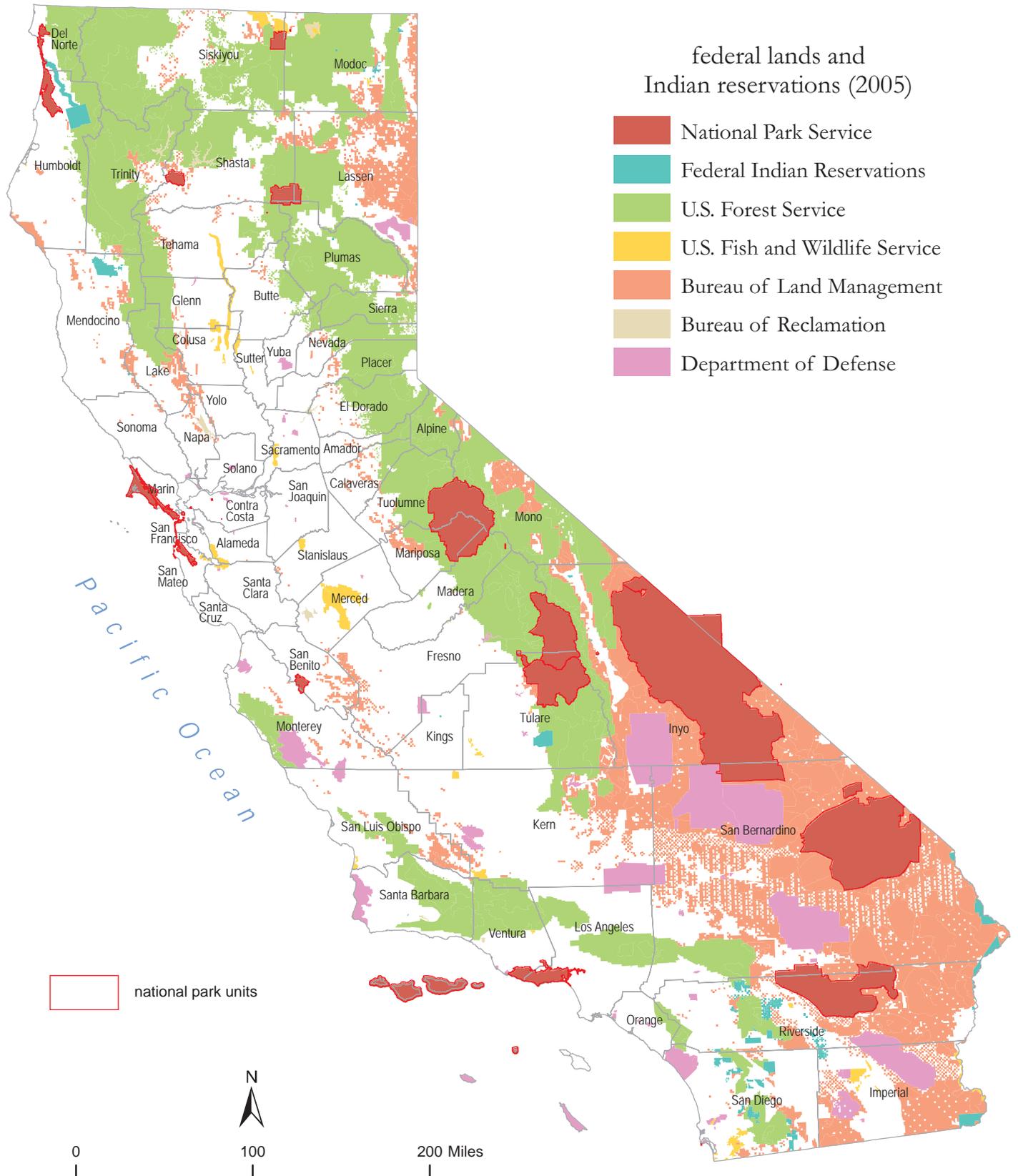


Federal Lands and Indian Reservations

National park units, administered by the National Park Service, are part of a larger system of public lands. Other federal agencies that administer public lands include the Bureau of Land Management, Bureau of Reclamation, Department of Defense, U.S. Fish and Wildlife Service, and U.S. Forest Service. Indian reservations are also an important part of the landscape. Public land managed by one federal agency may share boundaries with land managed by a different federal agency or with an Indian reservation. Or, federal land management units may be isolated or distant from other federal lands. Understanding the location and pattern of federal

lands (by agency) and Indian reservations can help park managers and others in the region cooperate on resource protection and planning issues.²⁰

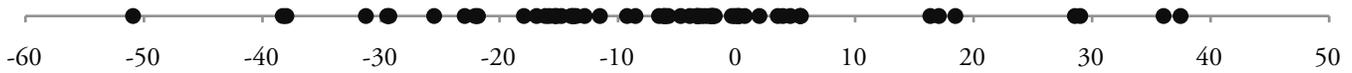
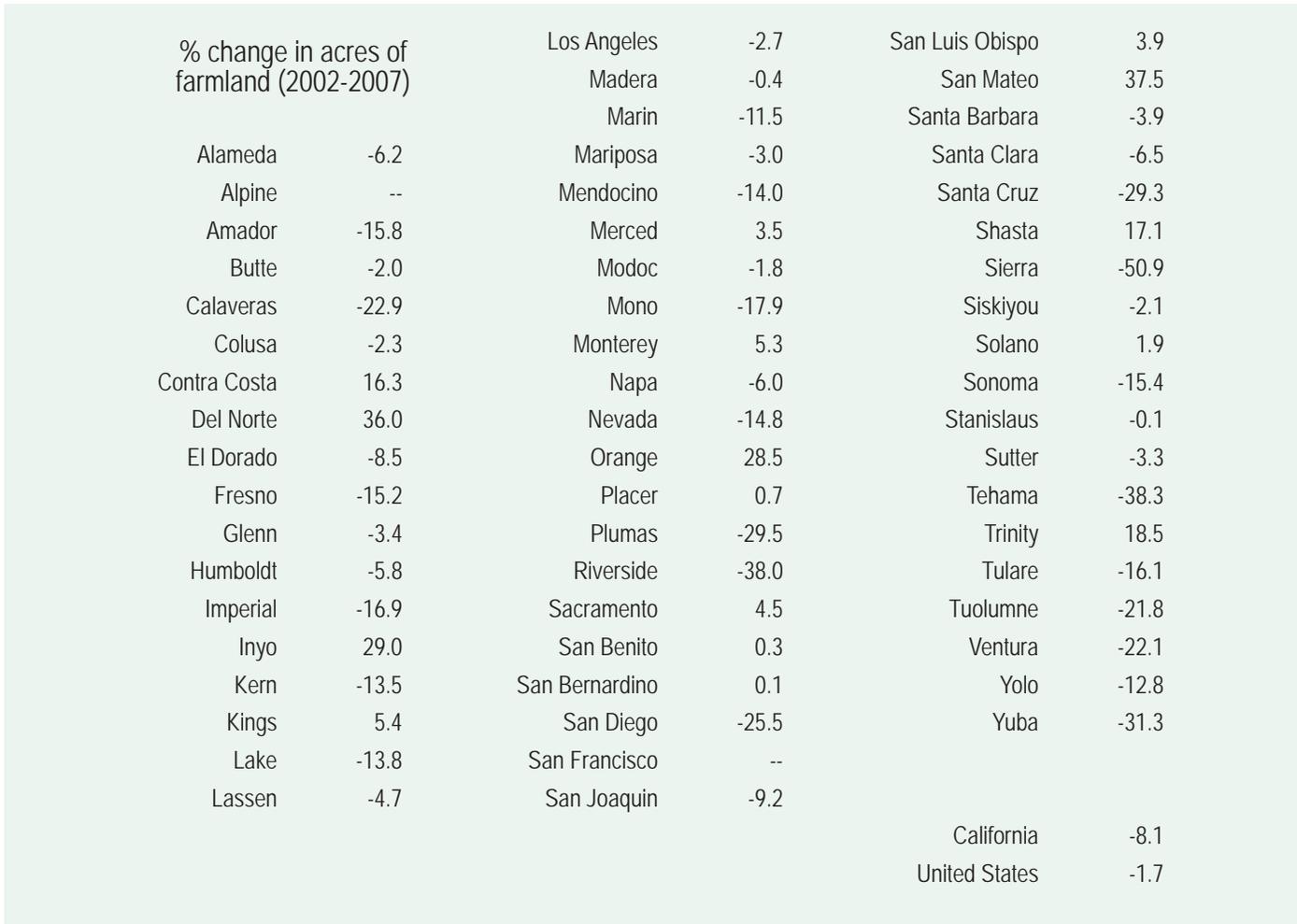
Federal Lands and Indian Reservations



Change in Farmland

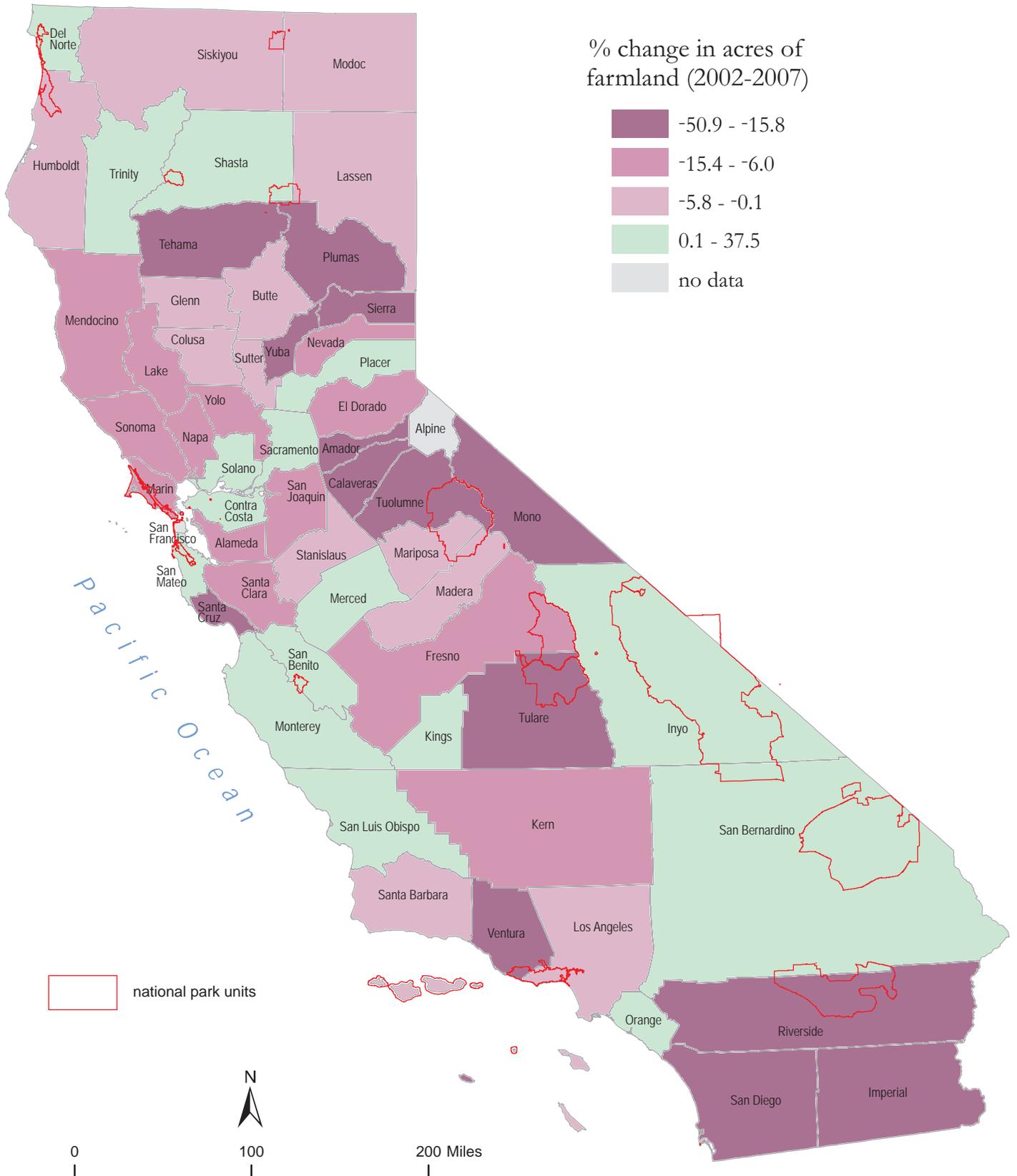
Changes in the amount of farmland provide an indication of economic and land use trends among counties in the park region. Land can be converted to farming because of increased demand for agricultural products or because new technology, business practices, or government programs make farming profitable. Land can be taken out of farming due to soil depletion, competition from growers elsewhere, loss of labor, or conversion of land to other (often urban) uses.

Among California counties, the change in farmland (2002-2007) ranged from a net decrease of 50.9% (Sierra) to a net increase of 37.5% (San Mateo).²¹



Variation in Distribution of Data Values

Change in Farmland



Ecoregions

Ecoregions are areas of similar climate, landforms, and soils that support similar communities of vegetation and animals. People affect natural systems within an ecoregion through such activities as agriculture, development, the creation of protected areas, hunting, and the introduction of non-native species. Natural resource protection efforts throughout an ecoregion may share many of the same approaches and techniques, since these efforts often focus on maintaining or restoring similar communities of indigenous animals and plants. Hence, many challenges of resource protection can be addressed effectively at the ecoregion level.

Ecoregions are ecosystems of regional extent, differentiated according to a hierarchical scheme (domains, divisions, and provinces). Robert Bailey of the Forest Service, U.S. Department of Agriculture, developed one system of ecoregional classifications (Bailey, R.G. 1995. Description of the Ecoregions of the United States, 2nd edition, Misc. Pub. No. 1391).

California includes all or part of eight ecoregion provinces. Descriptions of the provinces are as follows:

American Semidesert and Desert – climate is characterized by long, hot summers with moderate winters. In southeastern California, summer rains are rare, and vegetation is sparse. While cacti and thorny shrubs are prevalent, thornless shrubs and herbs are also present. Joshua trees are found along the northern edge of this province.

Intermountain Semidesert and Desert – climate is characterized by hot summers and moderately cold winters. Annual precipitation often falls as snow, with little rain during the summer. Sagebrush vegetation dominates areas of low elevation. Above the sagebrush are woodland zones with pinyon pine and juniper. Ponderosa pine and Douglas fir can be found above woodland zones in a montane belt.

Intermountain Semidesert – climate of the plateaus is cool and semiarid. Precipitation is evenly distributed throughout the year, except during summer. Sagebrush or shadscale together with short grasses are the dominant vegetation. Willows and sedges line valleys bottoms along streams that are near mountains.

California Coastal Chaparral Forest Shrub – climate is marked by hot, dry summers and rainy, mild winters. Summer drought is typical. Endemic tree species include Monterey cypress, Torrey pine, Monterey pine, and Bishop pine. Sagebrush and grasslands are found in the coastal plains and larger valleys. On hills and lower mountains, sclerophyll forests (trees with small leathery evergreen leaves) are found that can withstand the effects of limited summer precipitation. Chaparral is present on steep slopes. Exposed coastal areas support desert-like coastal shrub.

California Dry Steppe – summers are hot and winters are mild, often foggy, with little or no snow. Farming, fire, and grazing have eliminated all but a few remaining stands of native grasses. Remnants indicate that bunch grasses were dominant. Tule marshes line the lower reaches of the San Joaquin and Sacramento rivers.

California Coastal Range Open Woodland-Shrub-Coniferous Forest-Meadow – climate is characterized by hot, dry summers and rainy mild winters. Precipitation increases with elevation. Vegetation is dominated by either sclerophyll forests (northfacing slopes) or chaparral (southfacing slopes and drier sites).

Sierran Steppe-Mixed Forest-Coniferous Forest-Alpine Meadow – characterized by steeply sloping mountains crossed by valleys with steep gradients, temperature and precipitation are strongly influenced by elevation as well as prevailing west winds. Vegetation shifts with elevation, from shrubs in the foothills to pines, firs, and cedar in the montane zone. Giant sequoia groves are found on western slopes. Mountain hemlock and lodgepole pine are among several species found in the subalpine zone.

California Coastal Steppe-Mixed Forest and Redwood Forest – cool temperatures are typical in summer and winter temperatures are more mild than inland locations at similar latitudes. Rainfall is uncommon during summer, but substantial during winter. Fog can be heavy along the coast during summer. The redwood dominates vegetation on seaward slopes of northwestern California. Douglas fir, hemlock, and cedar are associated with these areas, too. Headlands are dry, and tend to be covered with fescue-oatgrass grasslands.

Ecoregions



Watersheds

Watersheds are delineated by the U.S. Geological Survey using a nationwide hierarchical system based on surface hydrological features. Watersheds are increasingly serving as the geographical units within which governments, institutions, and citizens organize to carry out initiatives for environmental protection and restoration. Familiarity with watershed boundaries is fundamental in developing educational programs and in mobilizing constituencies to protect water quality throughout the region.

California includes all or portions of 25 river basins.²²

Watersheds



Metropolitan Areas

Maps of metropolitan statistical areas show managers densely populated urban areas that are near national park units and other important areas. The federal Office of Management and Budget (OMB) defines a metropolitan areas. The current definition refers to “core based statistical areas” which includes *metropolitan* and *micropolitan* statistical areas. A metro area has at least one population center of 50,000 people or more; a micro area has a core population center of at least 10,000 people. Each metro or micro area includes one or more counties containing the core population center, and adjacent counties that have close economic and social integration with the population center(s). Most counties in core statistical areas include both urban and rural land uses.

California includes all or portions of 34 metropolitan and micropolitan statistical areas.²³

Metropolitan Areas



Domestic Water Use

Domestic water use can be measured in gallons per day. The level of domestic water consumption can be indicative of local consumption patterns, attitudes toward conservation, the cost of water, or the amount of regulatory control over water use. Higher levels of domestic water use may be associated with water-intensive landscaping, swimming pools, and so forth. Relatively low levels of domestic water use may indicate the presence of higher water costs or stricter water conservation guidelines.

Among California counties, domestic water use (2005) ranges from 0.1 millions of gallons (Alpine) to 1,125.8 millions of gallons/day (Los Angeles).²⁴

millions of gallons of water used per day (2005)		Los Angeles	1,125.8	San Luis Obispo	37.6
		Madera	29.3	San Mateo	71.2
		Marin	20.3	Santa Barbara	44.7
Alameda	76.8	Mariposa	6.3	Santa Clara	135.4
Alpine	0.1	Mendocino	18.9	Santa Cruz	31.5
Amador	4.9	Merced	53.5	Shasta	43.2
Butte	45.3	Modoc	2.8	Sierra	2.2
Calaveras	13.0	Mono	3.4	Siskiyou	9.8
Colusa	4.0	Monterey	42.5	Solano	39.2
Contra Costa	141.2	Napa	12.2	Sonoma	63.1
Del Norte	2.9	Nevada	30.1	Stanislaus	127.0
El Dorado	38.3	Orange	216.5	Sutter	20.0
Fresno	200.0	Placer	43.8	Tehama	26.4
Glenn	8.3	Plumas	3.9	Trinity	2.6
Humboldt	14.6	Riverside	373.2	Tulare	90.8
Imperial	24.3	Sacramento	137.9	Tuolumne	19.1
Inyo	8.6	San Benito	8.9	Ventura	90.3
Kern	131.0	San Bernardino	276.6	Yolo	35.7
Kings	24.1	San Diego	254.2	Yuba	12.8
Lake	7.9	San Francisco	34.9		
Lassen	10.8	San Joaquin	116.0		
				California	4,470
				United States	29,400



Variation in Distribution of Data Values

Domestic Water Use



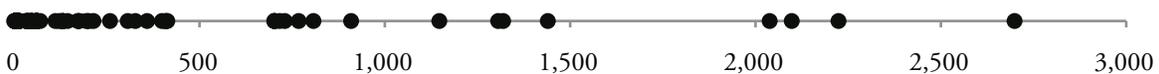
Irrigation Water Use

The amount of water used for irrigation is an indicator of the relative importance of irrigation agriculture to a county. Particularly in arid regions, the control and distribution of irrigation water is a major source of economic, social, and political power. Irrigation agriculture impacts a park region through its diversion of water from river systems or extraction of water from underground aquifers. Also, like other forms of crop cultivation, irrigation agriculture usually involves the use of mechanized equipment, a range of techniques for tilling the soil, and application of fertilizers and pesticides. All of these practices can influence air, water,

and soil quality and are therefore relevant to regional resource management.

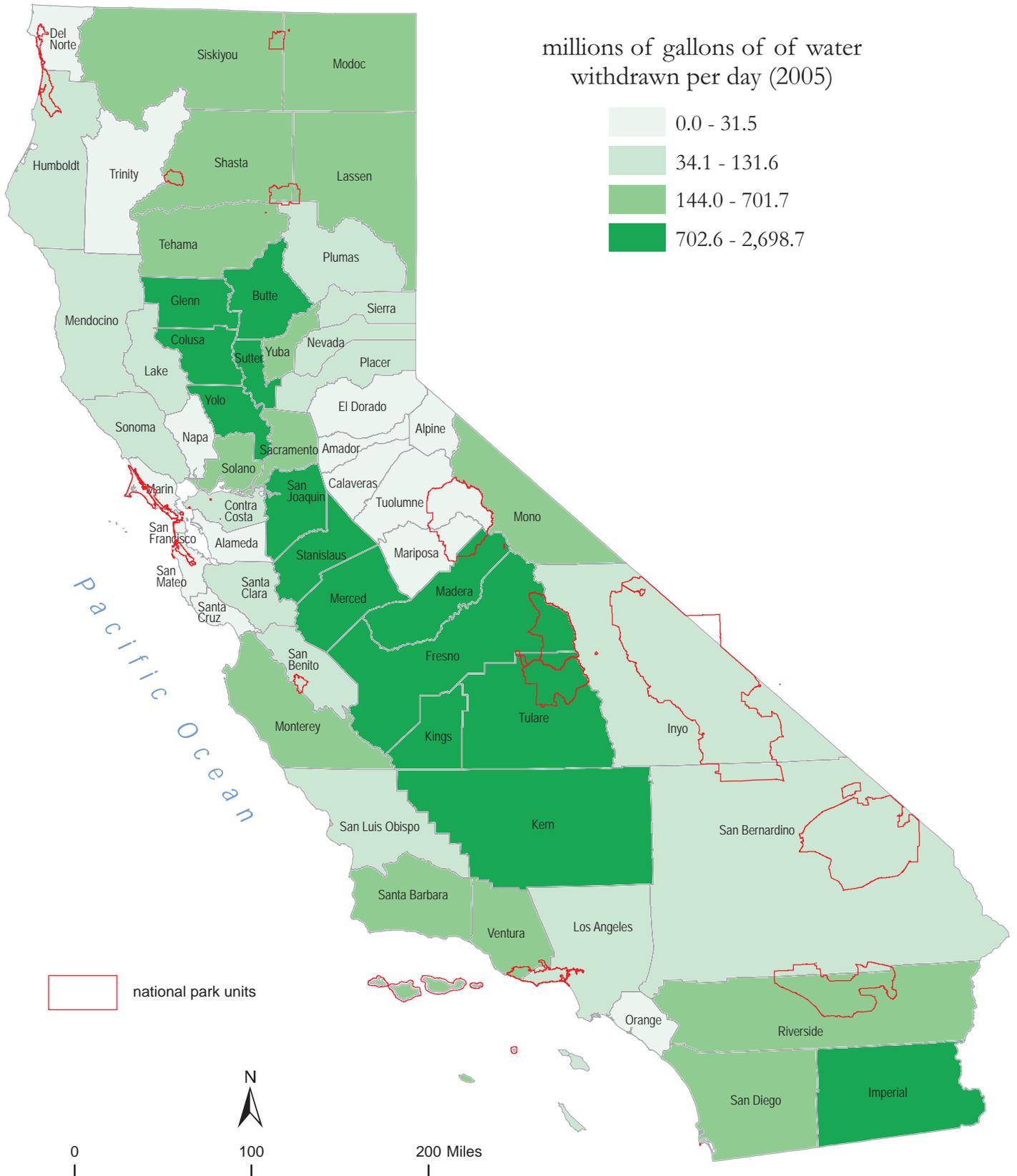
Among California counties, irrigation water use (2005) ranges from 0 millions of gallons/day (San Francisco) to 2,698.7 millions of gallons/day (Fresno).²⁵

millions of gallons of water withdrawn per day (2005)		Los Angeles	60.8	San Luis Obispo	122.0
		Madera	767.6	San Mateo	2.2
		Marin	3.8	Santa Barbara	171.7
Alameda	6.6	Mariposa	2.1	Santa Clara	47.6
Alpine	15.0	Mendocino	41.0	Santa Cruz	11.5
Amador	11.1	Merced	1,439.7	Shasta	144.0
Butte	716.1	Modoc	306.4	Sierra	61.4
Calaveras	4.3	Mono	194.9	Siskiyou	358.7
Colusa	909.1	Monterey	413.2	Solano	398.8
Contra Costa	111.4	Napa	31.5	Sonoma	46.1
Del Norte	4.8	Nevada	58.9	Stanislaus	1,147.0
El Dorado	8.2	Orange	12.8	Sutter	807.5
Fresno	2,698.7	Placer	130.81	Tehama	258.6
Glenn	730.0	Plumas	70.3	Trinity	3.2
Humboldt	34.1	Riverside	701.7	Tulare	2,038.1
Imperial	2,097.7	Sacramento	408.8	Tuolumne	3.8
Inyo	61.1	San Benito	50.7	Ventura	201.9
Kern	2,223.8	San Bernardino	131.6	Yolo	702.6
Kings	1,305.7	San Diego	175.4	Yuba	237.1
Lake	37.6	San Francisco	0.0		
Lassen	213.9	San Joaquin	1,319.1		
				California	24,400
				United States	128,000



Variation in Distribution of Data Values

Irrigation Water Use



Urbanization

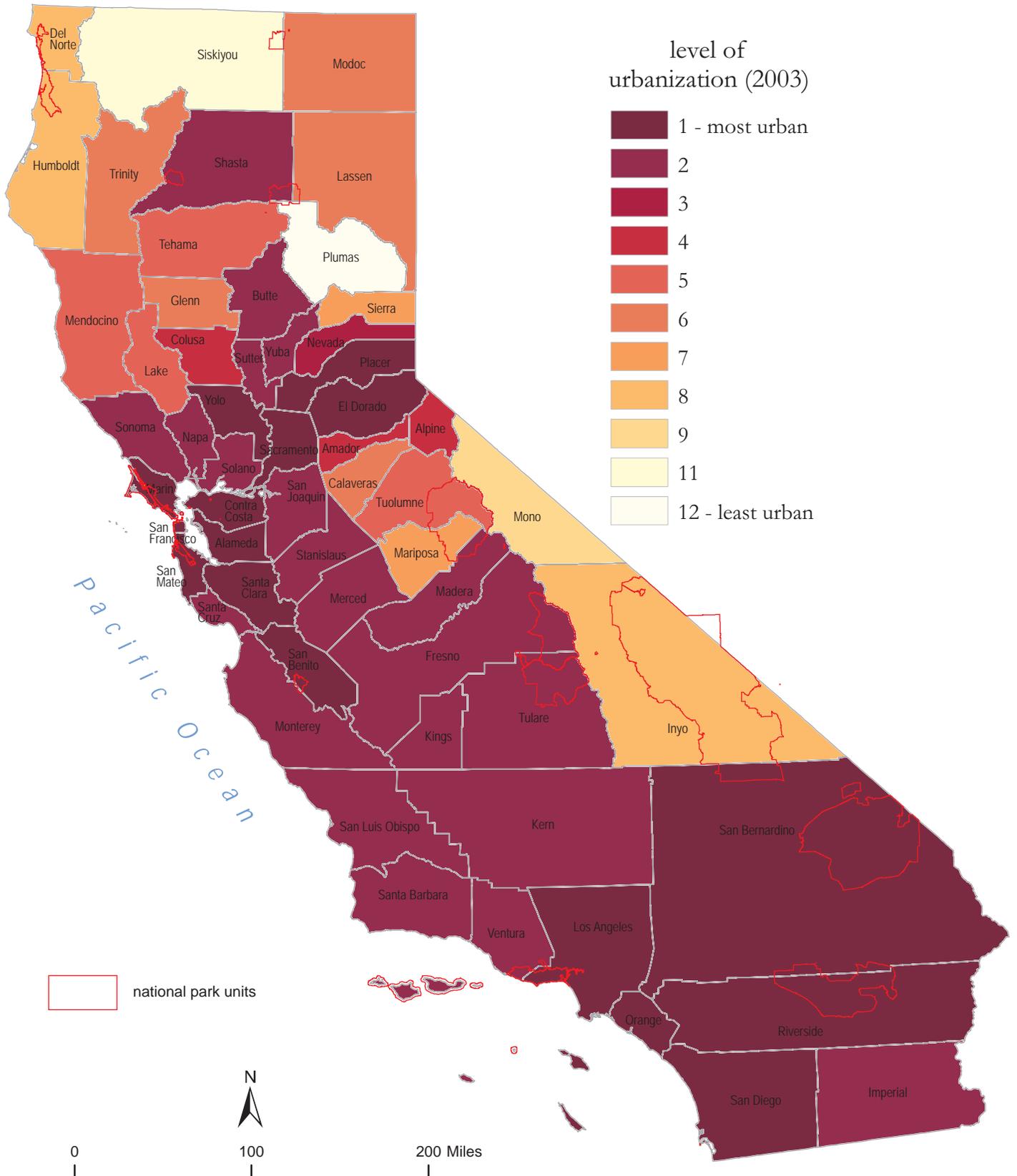
Urbanization is a measure of the degree to which land has been developed as towns and cities. The political and economic priorities of more urbanized counties tend to differ from those of less urbanized counties. The concentration of people in towns, cities, and large metropolitan areas creates opportunities for cooperative efforts (such as municipal water systems, public transportation, and a host of non-governmental organizations) but also can increase the incidence of problems such as congestion, air pollution, and habitat fragmentation.

The Economic Research Service classifies counties' degree of urbanization along a continuum of 12 mutually exclusive codes ranging from most urban (1) to least urban (12). Each code is defined in Appendix 3.

Among California counties, 37 of the 58 counties (2003) are coded as either "1" (large metropolitan) or "2" (small metropolitan).²⁶

level of urbanization (2003)		Los Angeles		San Luis Obispo	
			1		2
		Madera	2	San Mateo	1
		Marin	1	Santa Barbara	2
Alameda	1	Mariposa	7	Santa Clara	1
Alpine	4	Mendocino	5	Santa Cruz	2
Amador	4	Merced	2	Shasta	2
Butte	2	Modoc	6	Sierra	7
Calaveras	6	Mono	9	Siskiyou	11
Colusa	4	Monterey	2	Solano	2
Contra Costa	1	Napa	2	Sonoma	2
Del Norte	8	Nevada	3	Stanislaus	2
El Dorado	1	Orange	1	Sutter	2
Fresno	2	Placer	1	Tehama	5
Glenn	6	Plumas	12	Trinity	6
Humboldt	8	Riverside	1	Tulare	2
Imperial	2	Sacramento	1	Tuolumne	5
Inyo	8	San Benito	1	Ventura	2
Kern	2	San Bernardino	1	Yolo	1
Kings	2	San Diego	1	Yuba	2
Lake	5	San Francisco	1		
Lassen	6	San Joaquin	2		

Urbanization



Conclusion: Using this Atlas for Management

National park units and nearby lands and waters function as part of a regional human ecosystem. A natural ecosystem can be understood in terms of factors such as flora, fauna, rainfall, temperature, elevation, and soil. Similarly, a human ecosystem can be understood in terms of factors such as population changes, commercial activities, social and cultural practices, recreational activities, politics, and land-use patterns.

The regional human ecosystem, like the natural ecosystem, strongly influences the long-term health of park natural and cultural resources. Just as parks may be concerned with upstream activities outside their boundaries yet inside their watersheds, parks are also concerned with human activities taking place outside their boundaries yet inside their region. Knowledge of natural and human conditions external to parks is as essential to resource management as knowledge of internal natural and cultural conditions.

This atlas focuses on human activities and features in the region surrounding NPS units in California. Five primary applications of this atlas as a tool for management are:

- monitoring activities and analyzing trends that could have short- or long-term impacts on parks;
- making comparative studies, both within the region and between regions;
- assessing potential social impacts of management decisions;
- supporting collaborative decision-making and public participation; and
- educating NPS staff, their management partners, and other stakeholders about regional socioeconomic trends.

Monitoring activities and analyzing trends. The standardized data sources and presentation format of this atlas allow it to serve as a baseline for long-term monitoring of human conditions and trends that impact parks, such as population or economic shifts.

These human conditions and trends can have significant implications for planning and management. For example, the atlas can be consulted to determine trends in educational attainment among regional residents. This information could be helpful in designing interpretive and public participation programs and materials that can increase access to and understanding of the role of parks in the region.

The atlas can be used to gain knowledge about the overall structure of and local variations in the regional economy. This information could be important to developing a strong collaborative working relationship with regional business leaders. The atlas can be examined to complement other efforts to understand trends in land use. This information could support proactive planning to mitigate potential impacts of development such as habitat fragmentation, degradation of air or water quality, or intrusions upon historic settings and/or scenic values.

Comparative studies. This atlas can support comparative studies of two kinds. First, the atlas can be used to compare counties within the region. By displaying the range of values for a particular indicator or a set of indicators, the atlas can help guide or prioritize location-specific management planning and/or outreach activities within the region. Second, the atlas can be used to make comparisons with the regions surrounding other national park units.

Social impact assessment. Federal law and NPS planning directives require that park managers evaluate the social impacts of potential management actions. The socioeconomic indicators displayed in this atlas can help managers and their partners evaluate the social impacts of potential management actions. For example, the information provided in this atlas could be used to provide context for a range of collaborative management plans, from regional to more local scales.

Collaborative decision making. Tools such as this atlas can support the goal of applying a *regional* perspective to park planning and management. Distribution of this atlas to citizens, elected officials, educators, business

and service groups, resource managers, and others can strengthen their ability to effectively and collaboratively participate in management activities and decision-making. Maps that present facts in a standardized format can be particularly helpful for establishing common ground on which to decide upon management priorities.

Education and orientation. The atlas can be used to orient new NPS staff and their management partners throughout the state, as well as other NPS staff, to some of the basic facts about human activities in the region. It can also serve as a tool for sharing information about socioeconomic trends with the public, gateway communities, media, and Congress.

In conclusion, effective management requires a clear understanding of human activities in the region that surrounds NPS units in California. By providing the “basic facts” about such activities, this atlas can help managers, citizens, and others better provide for the preservation and enjoyment of such a unique and important region.

Appendices

Appendix 1: Data Sources for Indicators

The data sources used to obtain the measures for the socioeconomic indicators are listed below. The indicators on the left correspond to the titles of the maps in the atlas (* = core indicator). The measure corresponds to the legends used in the maps and the ranked data tables.

INDICATOR	MEASURE	DATA SOURCE
General Population		
*Total Population	total number of people (2008)	U.S. Department of Commerce, Census Bureau http://www.census.gov/popest/datasets.html http://www.census.gov/popest/archives/2000s/
*Recent Population Change	% change in total number of people (1998-2008)	U.S. Department of Commerce, Census Bureau http://www.census.gov/popest/archives/2000s http://www.census.gov/popest/archives/1990s/
*Projected Population Change	projected % change in total number of people (2005-2025)	Woods & Poole Economics, Inc. © 2008, State Profile for California on CD-Rom. Washington, DC. Woods & Poole Economics, Inc. provides long-term socioeconomic data projections: http://www.woodsandpoole.com/ . Woods and Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of the user.
Population Density	average number of people per square mile (2008)	U.S. Department of Commerce, Census Bureau http://www.census.gov/popest/datasets.html http://www.census.gov/popest/archives/2000s http://www.census.gov/population/www/censusdata/density.html
Projected Population Density	projected average number of people per square mile (2025)	Woods & Poole Economics, Inc. © 2008, State Profile for California on CD-Rom. Washington, DC. Woods & Poole Economics, Inc. provides long-term socioeconomic data projections in both hardcopy and electronic format: http://www.woodsandpoole.com/ . Woods and Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of the user.

Appendix 1: Data Sources for Indicators (cont.)

INDICATOR	MEASURE	DATA SOURCE
Urban Population	% total population in urban areas (2000)	U.S. Department of Commerce, Census Bureau http://factfinder.census.gov/ -- Census 2000 Summary File 1 (SF1) 100% Data, Table P2
Median Age	median age of total population (2007)	Woods & Poole Economics, Inc. © 2008, State Profile for California on CD-Rom. Washington, DC. Woods & Poole Economics, Inc. provides long-term socioeconomic data projections: http://www.woodsandpoole.com/ . Woods and Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of the user.
Economy and Commerce		
*Earnings by Industry	% total earnings by industrial category (2007)	Woods & Poole Economics, Inc. © 2008, State Profile for California on CD-Rom. Washington, DC. Woods & Poole Economics, Inc. provides long-term socioeconomic data projections: http://www.woodsandpoole.com/ . Woods and Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of the user.
*Employment by Industry	% employment by industrial category (2007)	Woods & Poole Economics, Inc. © 2008, State Profile for California on CD-Rom. Washington, DC. Woods & Poole Economics, Inc. provides long-term socioeconomic data projections: http://www.woodsandpoole.com/ . Woods and Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of the user.

Appendix 1: Data Sources for Indicators (cont.)

INDICATOR	MEASURE	DATA SOURCE
*Poverty	% total population below poverty level (2007)	U.S. Department of Commerce, Census Bureau http://www.census.gov/hhes/www/saipe/ http://www.census.gov/hhes/www/poverty/poverty.html
Median Household Income	median household income (\$) (2007)	U.S. Department of Commerce, Census Bureau http://www.census.gov/hhes/www/saipe/
Social and Cultural Characteristics		
*Racial Diversity	% total population belonging to minority race groups (2008)	U.S. Department of Commerce, Census Bureau http://www.census.gov/popest/datasets.html http://www.census.gov/popest/archives/2000s/
Racial and Ethnic Composition	% total population in each racial / ethnic category (2008)	U.S. Department of Commerce, Census Bureau http://www.census.gov/popest/datasets.html http://www.census.gov/popest/archives/2000s/
*Educational Attainment	% total population 25 years and older with some college or college degree (2000)	U.S. Department of Commerce, Census Bureau http://factfinder.census.gov/ -- Census 2000 Summary File 3 (SF3), Sample Data, Table P37
Language	primary household language spoken as % of all households – by category (2000)	U.S. Department of Commerce, Census Bureau http://factfinder.census.gov/ -- Census 2000 Summary File 3 (SF3), Sample Data, Table P20
Spanish Speakers	% total population 5 years old and over that speak primarily Spanish at home (2000)	U.S. Department of Commerce, Census Bureau http://factfinder.census.gov/ -- Census 2000 Summary File 3 (SF3), Sample Data, Table PCT-10
Recreation and Tourism		
Recreation / Tourism Establishments	% total establishments in arts, entertainment, recreation, accommodation and food services (2007)	U.S. Department of Commerce, Census Bureau http://censtats.census.gov/cbpnaic/cbpnaic.shtml http://www.census.gov/econ/cbp/index.html

Appendix 1: Data Sources for Indicators (cont.)

INDICATOR	MEASURE	DATA SOURCE
*Recreation / Tourism Employment	% total paid employees in arts, entertainment, recreation, accommodation and food services (2007)	U.S. Department of Commerce, Census Bureau http://censtats.census.gov/cbpnaic/cbpnaic.shtml http://www.census.gov/econ/cbp/index.html
*Recreation / Tourism Revenue	% total sales from arts, entertainment, recreation, accommodation and food services (2002)	U.S. Department of Commerce, Census Bureau http://www.census.gov/econ/census02/data/us/US000.HTM
Seasonal Housing	% total housing units used for seasonal, recreational, or occasional use (2000)	U.S. Department of Commerce, Census Bureau http://factfinder.census.gov/ -- Census 2000 Summary File 1 (SF1), 100% Data, Table H5, H3
Administration and Government		
*Congressional Districts	congressional districts (January 2009 - January 2011) 2008 election results House of Representatives	U.S. Department of Commerce, Census Bureau http://www.census.gov/geo/www/cob/cd110.html http://www.census.gov/geo/www/cd110th/tables110.html http://elections.nytimes.com/2008/results/states/california.html
*Federal Expenditures	federal expenditures per capita (\$) (2008)	U.S. Department of Commerce, Census Bureau http://www.census.gov/govs/cffr/index.html http://www.census.gov/prod/2009pubs/cffr-08.pdf , Table 15
Federal Grants	% federal expenditures received as grant awards (2008)	U.S. Department of Commerce, Census Bureau http://www.census.gov/govs/cffr/index.html http://www.census.gov/prod/2009pubs/cffr-08.pdf , Table 15
Land Use		
*Federal Land Management	% land under federal management (2008)	U.S. Department of the Interior http://www.nbc.gov/pilt/pilt/_search.cfm

Appendix 1: Data Sources for Indicators (cont.)

INDICATOR	MEASURE	DATA SOURCE
*Federal Lands and Indian Reservations	federal lands and Indian reservations (2005)	U.S. Department of the Interior http://nationalatlas.gov/atlasftp.html
*Change in Farmland	% change in acres of farmland (2002-2007)	U.S. Department of Agriculture, National Agriculture Statistics Service http://www.agcensus.usda.gov/
Ecoregions	ecoregion provinces (2004)	U.S. Department of the Interior http://nationalatlas.gov/atlasftp.html U.S. Department of Agriculture, Forest Service: Bailey, Robert G. (1995). Description of the Ecoregions of the United States (2nd ed.). Misc. Pub. No. 1391, USDA Forest Service, 108 pp. http://www.fs.fed.us/land/ecosysmgmt/index.html
Watersheds	river basins (2005)	U.S. Department of the Interior http://nationalatlas.gov/atlasftp.html U.S. Department of the Interior, U.S. Geological Survey http://water.usgs.gov/GIS/huc.html
*Metropolitan Areas	metropolitan areas (2003)	U.S. Department of Commerce, Census Bureau http://www.census.gov/geo/www/cob/mmsa2003.html
Domestic Water Use	millions of gallons of water used per day (2005)	U.S. Department of the Interior, US Geological Survey http://water.usgs.gov/watuse/data/2005/
Irrigation Water Use	millions of gallons of water withdrawn per day (2005)	U.S. Department of the Interior, US Geological Survey http://water.usgs.gov/watuse/data/2005/

Appendix 1: Data Sources for Indicators (cont.)

INDICATOR	MEASURE	DATA SOURCE
*Urbanization	level of urbanization (2003)	U.S. Department of Agriculture, Economic Research Service http://www.ers.usda.gov/Data/UrbanInfluenceCodes/

** Denotes a core indicator, common to all atlases in this series. Additional indicators were selected by NPS Pacific West Regional superintendents and managers to include information specific to their particular management needs.*

Appendix 2: Technical Notes on Map Design

Selection of Base Map Data – Note that this is not a general purpose atlas of the region, for it focuses on socioeconomic indicators.

Choropleth Mapping – For most maps, data are grouped by quartiles (four classes) which vary in shading from light to dark (for low to high values). This shading technique, known as choropleth mapping, is usually applied to ratio data. Population density, infant deaths per 1,000 live births, and median income are examples. Maps that display total amounts (such as total population) often use other approaches, such as proportional symbols. However, for clarity, ease of use, and consistent design, choropleth mapping is used for most of the social indicator data.

Quartile Classification – The quartile classification means that for most maps, the dataset was divided into four equal classes. This approach emphasizes the *rankings* of data values among counties over individual values. The legend accompanying the map allows the reader to see the range of values within a class. Quartiles make it easy for the reader to make intuitive comparisons among counties; the darkest shaded counties are in the “top quartile” or top 25%, the lightest shaded counties are in the “bottom quartile” or lowest 25%, and so forth. Quartiles also facilitate comparisons between maps in the atlas (“this county ranks in the bottom quartile on all three of these indicators”).

Three notes: (1) Whenever the number of counties cannot be evenly divided by four, the convention for this atlas series is to reduce the size of the highest quartile first, then the next quartile if needed, then the third and fourth quartile if needed. Hence, 58 counties would be divided into groups of 15, 15, 14, and 14, with the last groups of 14 having the highest data values/darkest shading. (2) Counties with identical data values are grouped in the same quartile, even if this results in quartiles of unequal size. (3) If a data set has negative values, they are always put in the same class(es) even if the result is uneven quartiles.

Political Boundaries – The regional base map depicts the formally defined political boundaries of states and counties.

Map Sources – The regional map on the cover was adapted from the NPS Harper’s Ferry Center “April 2009 Adobe Illustrator 12 print production file” (<http://home.nps.gov/applications/hafe/hfc/carto-detail.cfm?Alpha=nps>). The standard county region of interest map and contextual information (roads, state boundary) were generated from U.S. Geological Survey shapefiles and obtained from the U.S. Department of the Interior (<http://www.nationalatlas.gov>). California national park unit boundaries were acquired from a shapefile available through the NPS GIS program in August 2009 (http://www.nps.gov/gis/data_info/).

Production – Indicator data for the atlas were compiled in Microsoft Excel. These were linked to shapefiles using ESRI ArcMap GIS. The GIS files were imported into Adobe Illustrator for final map design. Final atlas layout was compiled using Adobe InDesign.

Text Sources – Additional web resources used to prepare regional description are:

- “California Geography,” “California History,” “California Economy.” *The Columbia Electronic Encyclopedia*, 6th ed. ©2007 on Infoplease. 13 January 2010 <<http://www.infoplease.com/ce6/us/A0857125.html>>.
- “California Geography, A Brief Overview of the Geography of the Golden State.” 13 January 2010 <<http://www.learncalifornia.org/doc.asp?ID=222>>.
- “The Geography of California.” 13 January 2010 <http://www.netstate.com/states/geography/ca_geography.htm>.
- “Five Views: An Ethnic Historic Site Survey for California.” National Park Service, <http://www.nps.gov/history/history/online_books/5views/5views1a.htm>
- “History of California Economy.” California Department of Finance, 14 January 2010 <http://www.dof.ca.gov/HTML/FS_DATA/HistoryCAEconomy/>.
- Healy, M.C., M.D. Dettinger, and R.B. Norgaard, eds. 2008. *The State of Bay-Delta Science 2008*. Sacramento, CA: CALFED Science Program. 174 pp. 26 February 2009 <http://www.science.calwater.ca.gov/science_index.html>.

Appendix 3: Technical Notes on Measurement of Selected Indicators

¹ Persons enumerated in the census were counted as inhabitants of their usual place of residence, which generally means the place where a person lives and sleeps most of the time. This place is not necessarily the same as the legal residence, voting residence, or domicile. In the vast majority of cases, the use of these different bases of classification would produce substantially the same statistics, although appreciable differences may exist for a few areas. Population data reported during intercensal years (e.g., after 2000) are estimates.

² Woods & Poole Economics, Inc. is an independent firm that specializes in long-term county economic and demographic projections. Woods & Poole has been making county projections since 1983. An explanation of Woods & Poole's projection methods is available in the Woods and Poole Technical Documentation manual (<http://www.woodsandpoole.com>). The full text of the manual/methods cannot be reproduced here.

³ **Population density** is measured as the average number of people per square mile of land. This number is calculated by dividing the total number of people in 2008 by the total land area per county. In counties with significant federal land, excluding these areas from the calculation of population density would result in a higher population density.

⁴ See note above on **Population Density**.

⁵ **Urban population** is measured as the percentage of the total population living in urban areas. An urban area includes all territory, population, and housing units in urbanized areas and in places of 2,500 or more persons outside urbanized areas. An urbanized area has a population concentration of at least 50,000 inhabitants, and generally consists of a central city and the surrounding, closely settled, contiguous territory having a density of at least 1,000 persons per square mile. The complete criteria are available from the U.S. Census website at <http://factfinder.census.gov/servlet/>

[MetadataBrowserServlet?type=subject&id=URSF1&dss_pName=DEC_2000_SF1&back=update&_lang=en](#).

⁶ Economic activity can be categorized as belonging to one of four **industrial categories**: agriculture and natural resources, construction and manufacturing, sales and services, and government. Individual workers, regardless of their specific job responsibilities, are classified according to the category their overall company or organization belongs to. Thus, while accounting is considered a “service” activity, an accountant for a mining company would be counted as working in “agriculture/natural resources.” “Government” includes all federal government workers and all state/local employees, such as teachers, police, firefighters, etc. Even though government jobs may involve construction, natural resource management, or provision of services, they are still counted as belonging to the “government” category.

⁷ See note above on **industrial categories**.

⁸ **Poverty** is measured as the percentage of the total population living below the poverty level. Poverty thresholds vary according to the size of the family and number of children. For example, in 2007 an income of \$21,386 was the poverty threshold for a family of four people (no children). Poverty thresholds are applied on a national basis and are not adjusted for regional, state, or local variations in the cost of living.

⁹ **Racial diversity** is defined for this measure as the percentage of the population classified as being non-White. Diversity by this definition does not necessarily measure the degree of “variety” in the population. For example, a hypothetical county with a 90% Asian population would be considered more “diverse” than a county in which each of five major race groups constituted 10% of the population (in the latter case, diversity would be measured as 50%). The Hispanic origin category was not included in this measure. Hispanic origin is considered an ethnicity, not a race. Hispanics may be of any race (including White).

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¹⁰ **Racial composition** is based upon self-identification by people responding to the U.S. Census. Census respondents are asked to classify themselves according to the race with which they most closely identify. Specific responses such as “Polish,” “Haitian,” “Thai,” or “Lakota” were coded more generally as belonging to one of six general categories (White, Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, and Some Other Race). Respondents to Census 2000 could indicate more than one race, and these respondents are grouped together in the category Two or More Races. Persons of Hispanic or Latino origin may be of any race. People of Hispanic origin who are not White were counted in the Hispanic group and were also counted in the Black, American Indian and Alaska Native, Asian, or Native Hawaiian or Other Pacific Islander race group they indicated.

Note: The original race categories from Census 2000 are modified to eliminate the “some other race” category. This modification is used for all Census Bureau estimates products (interscensal years) and is explained in the document “Modified Race Data Summary File Technical Documentation and ASCII Layout” that is available at <http://www.census.gov/popest/archives/files/MRSF-01-US1.html>.

¹¹ For Census 2000, persons are classified according to the highest level of school completed or the highest degree received.

¹² Household language is based upon self-identification by people responding to the U.S. Census. Census respondents were asked to indicate whether they sometimes or always spoke a language other than English at home, and then to print the name of the non-English language spoken at home. These write in responses were coded into categories. Four classifications were used for languages spoken at home in Census 2000 (if not English). Spanish includes all Spanish and Spanish Creole. Other Indo-European languages include 20 sub-classifications, such as

French, Hindi, Italian, Portuguese, Russian, and Serbo-Croatian. Asian and Pacific Island languages include 11 sub-classifications, such as Chinese, Japanese, Korean, Thai, and Tagalog. Other languages include seven sub-classifications, such as Arabic, African Languages, Hebrew, Hungarian, and Native American languages. In households where one or more people (5 years old and over) speak a language other than English, the household language assigned to all household members is the non-English language spoken by the first person with a non-English language in the following order: householder, spouse, parent, sibling, child, grandchild, in-laws, other relatives, stepchild, unmarried partner, housemate or roommate, and other nonrelatives.

¹³ **Recreation and tourism** is composed of the arts, entertainment, and recreation sector and the accommodation and food services sector, both a part of the North American Industry Classification System (NAICS). The arts, entertainment, and recreation sector includes museums, historical sites, gambling and recreation industries, golf courses and country clubs, fitness and recreational sports centers, and all other amusement industries. The accommodation and food services sector is composed of establishments including hotels, motels, bed and breakfasts, RV parks, recreational camps, and vacation camps. For a complete definition of these NAICS categories please consult <http://www.census.gov/epcd/www/naics.html>.

¹⁴ See note above on **recreation and tourism**. Additionally, the number of employees was reported as a range for some counties. For these cases, the midpoint value of the range was used for calculations.

¹⁵ See note above on **recreation and tourism**. Additionally, specific values were not reported for seven industries at the county level. The “total” for calculations could not include these categories. Counties with partial information were included with calculations based on available data.

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¹⁶ A housing unit is a house, apartment, mobile home or trailer, group of rooms, or single room occupied or, if vacant, intended for occupancy as separate living quarters. Seasonal, recreational, or occasional use refers to vacant units used, or intended for use, only in certain seasons or for weekend or other occasional use throughout the year.

¹⁷ **Federal expenditures** include expenditures, or obligation for, direct payments for individuals, procurement, grants, salaries and wages, direct loans, and guaranteed loans and insurance. Grant awards are reported by county of the initial recipient; thus if the initial recipient is the state government, the county in which the state capital is located is reported as having “received” that “pass-through” grant, even though the monies are subsequently distributed to other local governments.

¹⁸ **Federal grants** generally represent obligations (not expenditures or outlays), and include grants to nongovernmental recipients, in addition to payments to state and local governments. For federal grants administered through state governments, the recipient county is the county where the state capital is located.

¹⁹ **Federal lands** include all tax-exempt federal lands administered by the Bureau of Land Management, the National Park Service, the U.S. Fish and Wildlife Service, the U.S. Forest Service, federal water projects, and some military installations (tribal lands are not included). The U.S. Department of the Interior calculates the amount of federal land within counties in order to administer the federal government’s payments-in-lieu-of-taxes (PILT) program.

²⁰ The U.S. Department of the Interior produces the **federal lands and Indian reservations** map layer. This map layer does not include any federal land or federal Indian reservation land that has an areal extent smaller than 640 acres. More information and metadata are available from the National Atlas:

<http://www.nationalatlas.gov/mld/indlanp.html>
<http://www.nationalatlas.gov/mld/fedlanp.html>.

²¹ **Farmland** consists primarily of agricultural land used for crops, pasture, or grazing. Also included is woodland and wasteland not actually under cultivation or used for pasture or grazing, provided it was part of the farm operator’s total operation. Farmland includes acres in the Conservation Reserve, Wetlands Reserve Programs, or other governmental programs. Farmland includes land owned and operated as well as land rented from others. Land used rent-free is included as land rented from others. All grazing land, except land used under government permits on a per-head basis, is included as farmland provided it was part of a farm or ranch. Land under the exclusive use of a grazing association is reported by the grazing association and included as farmland. All land in American Indian reservations used for growing crops or grazing livestock is included as farmland. Land in reservations not reported by individual American Indians or non-Native Americans is reported in the name of the cooperative group that used the land.

²² **Watersheds** are delineated by the U.S. Geological Survey using a nationwide system based on surface hydrologic features. This system divides the country into 21 regions, 222 subregions, 352 accounting units, and 2,262 cataloging units. A hierarchical hydrologic code (HUC), consisting of 2 digits for each level in the hydrologic unit system, is used to identify any hydrologic area. The 6-digit accounting units and 8-digit cataloging units are generally referred to as basin and sub-basin (see <http://water.usgs.gov/GIS/huc.html>). The watershed map in this atlas shows the 6-digit accounting units (basins) in the California region.

²³ **Metropolitan Areas** are defined by the federal Office of Management and Budget as “core based statistical areas” with metropolitan and micropolitan areas. A metropolitan area has at least one population center of 50,000 people or more; a micropolitan area has a core population center of at least 10,000 people. Each metro

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or micro area includes one or more counties containing the core population center, and adjacent counties that have close economic and social integration with the population center(s). For a complete description of core-based statistical areas, please consult: http://www.census.gov/geo/www/cob/mmsa_meta.html.

²⁴ For 2005, the U.S. Geological Survey reports **water use** in eight categories, including “domestic” and “public supply”. “Domestic water use” is water used for indoor and outdoor household purposes and is either self-supplied or provided by public suppliers. Self-supplied domestic water use is usually withdrawn from a private source, such as a well, or captured as rainwater in a cistern. Domestic deliveries are provided to homes by public suppliers. Public-supply water is also delivered to users for commercial, and industrial purposes, and used for public services and system losses. Data for deliveries from public supply specifically for domestic use were not reported in 2000.

²⁵ **Irrigation water use** is another category reported by the U.S. Geological Survey. It is water that is applied by an irrigation system to assist in the growing of crops and pastures or to maintain vegetative growth in recreational lands such as parks and golf courses. It also includes water that is applied for pre-irrigation, frost protection, chemical application, weed control, field preparation, crop cooling, harvesting, dust suppression, the leaching of salts from the root zone, and water lost in conveyance.

²⁶ The Economic Research Service classifies counties according to their level of urbanization. The classification consists of twelve mutually-exclusive codes:

METROPOLITAN COUNTIES

- 1) In large metro area of greater than 1 million residents
- 2) In small metro area of less than 1 million residents

NONMETROPOLITAN COUNTIES

- 3) Micropolitan adjacent to large metro
- 4) Noncore adjacent to large metro

- 5) Micropolitan adjacent to small metro
- 6) Noncore adjacent to small metro with own town
- 7) Noncore adjacent to small metro, no own town
- 8) Micropolitan not adjacent to a metro area
- 9) Noncore adjacent to micro with own town
- 10) Noncore adjacent to micro with no own town
- 11) Noncore not adjacent to metro or micro with own town
- 12) Noncore not adjacent to metro or micro with no own town

For more information, contact:

Dr. Jean McKendry
Principal Scientist
College of Natural Resources
University of Idaho
P.O. Box 441133
Moscow, ID 83844-1133
jeanm@uidaho.edu

