CHAPTER 1

Getting to Know the Golden State

Still Changing After all These Years
You don’t have to look far to notice: as expected, the 6 years since our previous edition brought more frequent and dramatic changes to California. People and landscapes of California’s great urban centers may have experienced more rapid change compared to the relatively gradual changes that are shaping landscapes in the state’s more spacious bucolic and rural landscapes. This has helped separate and further divide the state’s land uses, economies, cultures, and political geography into two Californias. Still, change has been evident even in those sparsely populated landscapes where it is more apparent that people directly depend on nature’s cycles and ecosystem services that sustain their primary industries. Chapter 1 surveys each of our Golden State’s diverse remote, rural, and urban regions, the powerful trends and forces that continue shaping them, and the connections that stitch them together within the place we call California.

From Dreams to Reality: An Experiment Called California

California has always been a land of legendary extremes. Stories of its incredible natural beauty, its extravagant wealth adjoining abject poverty, its diversity of natural resources and landscapes, and its violent and destructive natural disasters make world news headlines each year. These stories have been repeated since the first Spanish explorers, and then settlers arrived here centuries ago. And, California’s people, both real and imagined, have always successfully competed with nature for the spotlight. Even its name originated from a mythical location.

Exploiting imaginations after the European “discovery” of America, the Spanish writer García Ordóñez de Montalvo first named a place called California in his Las Sergas de Esplandián (The Exploits of Espandián). Even in this first use of California in 1510, he fabricated an island paradise near the Indies where beautiful black Amazons were surrounded with riches such as gold and pearls.

The name California first appeared on Spanish maps labeling the Gulf of California and the Baja Peninsula in the 1560s. After the Spanish “discovered” California in 1542 and finally began moving and settling north in 1769, what is today known as California was often given the name Nueva (New) or Alta (Upper) California.

As those first Spanish explorers and settlers sent their actual impressions back to their homeland, they described a landscape hauntingly similar to today’s. They painted pictures of wildly different landscapes that ranged between a comfortable paradise and a harsh land where agonizingly hard work and plenty
of luck were required for survival. Similar expressions were recorded throughout the Spanish and Mexican Eras; such reports continued even after California became the thirty-first state in the United States in 1850. More recent writings continue to conflict as they portray a land of remarkable contrasts and contradictions.

Today, California’s unsettled population is always evolving, always moving on, creating repeated social upheavals that leave its past in the dust like a forgotten stranger. It is as if California’s people are trying to emulate the turbulent forces that shape its natural landscapes as the world looks on. The result is the most diverse population and economy on our planet. California is and will continue to be a celebrated culture hearth in the twenty-first century. Critics beyond its borders have tried to minimize the importance of

For the Student: Key Discoveries in Our Chapter 1 Journey

- This book is a systematic, topical survey of the modern geography of California. It is designed to provide useful information that can help us understand the state, examine modern issues, and solve problems.
- California’s diverse natural and human landscapes represent ideal laboratories; they provide a wealth of opportunities to make scientific/geographic discoveries and to research a variety of processes, cycles, and systems that are shaping landscapes on many scales.
- The five fundamental geographic themes and six essential elements of geography are common threads that tie together topics covered in this and other chapters of this book.
- Diversity, connections, and change are evident in all California landscapes and in the processes responsible for shaping them; consequently, they are common themes used in this chapter and this book.
- Critical to our understanding of California is recognition of some important geographic factors. They include its large area and elongated shape, its situation in relation to the rest of the world, and the human/environment interaction that has shaped its landscapes.
- Early California remained relatively isolated even after the Spanish, Russians, and other invaders discovered and began settling it. Strong ties to Latin America developed, continued during the Mexican Era, and have been recently renewed. Since the mid-1800s and the Gold Rush, growing populations and advanced technologies have strengthened connections with other cultures and nations, particularly on the Pacific Rim.
- The state can be divided into diverse physiographic regions, which are connected in profound ways and are experiencing different types and rates of change.
- The survey of the regional geography of California in this chapter introduces the state’s general landscapes and some of the processes that change them. In the survey, we sweep clockwise around the state from region to region. This information will serve as a foundation on which the more dynamic and scientific, systematic, and topical study of the state is constructed in later chapters.
- Though each physiographic region demonstrates unique and recognizable qualities, each also shares processes and landscapes with its neighbors. These differences and divisions and relationships and connections combine to shape modern California.
Geographers Study California

Some observers use a microscopic viewpoint to pick apart the very details that eventually come together to build California’s landscapes. Some of their precise observations and studies may pinpoint particular locations or focus on specific issues or problems, but investigators of detail must never forget the big picture. How are surrounding locations connected, and how are seemingly disparate events related? At the other end of the spectrum are those who would use a telescope to view California. They see the major trends and paint the state and its people with sweeping generalizations. Though this may be an easy method, it can provide an unrealistic picture that denies the specific exceptions and the uniqueness within California’s landscapes and its people.

You might study a single grain of sand on the beach or the mountains, or the entire rivers and coastal systems where it was eroded, transported, and deposited. You might observe a street sign or homeless person on one city block or study the entire infrastructure of the metropolis where they are found. Alternating your scales of view helps strip away the film for a clearer vista.

Therefore, it is necessary to zigzag between these two approaches, going from the smallest to the largest scales and back again. A balance must be found between them in any meaningful study of California. This is a great challenge in a state that is so big and that has so many diverse landscapes with so many powerful stories to tell. It is also a challenge because most of California’s landscapes and its people fit somewhere between the extreme stereotypes that constantly bombard us from popular sources of information. The reality is that most Californians share the same basic values and dreams of many Americans and of people in other countries.

The big difference is that California landscapes and their people always seem a little closer to the edge. Although Californians’ dreams are lofty and spectacular and though they may have become more difficult to realize, they are still attainable. Likewise, Californians’ fears of impending failure and disaster may also be deeper than other Americans. Like California’s landscapes, its people seem a little more willing to participate in the next experiment. They are always evolving, but they are also waiting for that next surprise, that next unexpected drama, which must lie ahead in such a dynamic state.

Consequently, this state continues to be ripe for research, planning, and innovation by modern geographers, whether...
they are formally trained professionals or amateurs and volunteers just testing the waters. Like California, geography continues to evolve and experience a renaissance. Modern geography has become a more practical, more useful discipline. It is being used by all of us to assess the environments of places where we live, work, and visit. And it is being used to understand the situations (or surrounding environments) of those specific locations and the relationships and connections between them.

**Twenty-First-Century Geography in California**

Just as California continued to experience extraordinary change into the twenty-first century, geographers around the nation and the world organized to define and direct profound changes caused by the renaissance in their own discipline. In 1994, they identified and agreed on 18 National Geography Standards and organized them under six essential elements of geography. By 2012, geographers had refreshed, updated, and published a second edition, “Geography for Life,” with more emphasis on geospatial technologies, globalization, and global environmental change. These published standards were built on the five original and fundamental geographic themes, which focus on location, place, human/environment interaction, movement, and regions. These themes and standards are also among the common threads that stitch together this work on the geography of California.

How are essential geographic elements and standards addressed in this book? We will see California in spatial terms as we organize and analyze natural and human processes, systems, and landscapes. This requires the use of maps (both physical and mental) and other geographic tools and modern geospatial techniques. We will learn about the many places and regions that make up California. We will examine California’s physical (natural) landscapes and the processes that change them. We will also learn about the people and cultures of California, their human landscapes, and the processes that are changing them. Additionally, we will look at the connections and relationships between California’s natural environments and its people. Specifically, how has the physical environment affected human populations and landscapes? Then, how and why have humans modified California’s physical landscapes and used its natural resources? Finally, after interpreting California’s past, we will use geography to understand present landscapes and to plan ahead into the twenty-first century California.

Further response to the renaissance in geography came from the National Research Council with their 2010 report, “Understanding the Changing Planet: Strategic Directions for the Geographical Sciences.” Their 11 strategic questions/directions are designed “to focus research and leverage new technologies to harness the potential that the geographical sciences offer.” Again, we address these topics throughout this book that include our physical environment, biological diversity, climate change, human population, migration and health, effects of globalization, and how we do research and use maps to visualize and study the state.

Another way of looking at modern geography is to break it down into its basic subdisciplines. Physical geography focuses on natural landscapes and the processes responsible for them. Geomorphologists, climatologists, biogeographers, and hydrologists are among the many physical geographers. Human geographers study human landscapes and the people who shape them. They may have more specific interests, such as population, migration, cultures, economies, and rural or urban landscapes. Finally, modern geographic (geospatial) techniques are being used by all geographers. Computer cartography, Global Positioning Systems (GPS), air photo interpretation and other remote sensing methods, and widespread applications of geographic information systems (GIS) are tools of the twenty-first century geographer as they consistently rank near the top of job-creating industries. Regional geographers who study specific geographic regions must incorporate each of these subdisciplines and methods into their research.

Regardless of the specific method of study, it is obvious that California’s natural history and landscapes and its human history, its people and their landscapes are more than dynamic and diverse; they are connected and related in profound ways. They offer hidden secrets yet to be discovered, and they offer astounding surprises yet to be experienced. This is why modern geographers—and all Californians—must play key roles in the understanding of California’s natural and human landscapes and the people who inhabit them. They must also help drive California in a direction that will improve the living environments of all its people. If geography and geographers are left out of the critical decision making that will shape the future of our state, it will be unfortunate for geographers and a lost opportunity for all Californians.

Our knowledge of geography will enable us to better understand our state and direct it toward a more promising future.
on California’s southwest corner just north of 32 degrees, 30’N on the coast, and follows a line running slightly north of east, until it ends at the Arizona border (the most southeast corner of California).

The eastern border with Nevada follows the 120 degree line of longitude south—from the state’s northeast corner on the Oregon border—to Lake Tahoe. From here, another straight line then trends southeast, still marking the California/Nevada border, and slices across lines of latitude and longitude until it ends at a point shared with the Nevada and Arizona borders in the Colorado River. From here, the border with Arizona follows the Colorado River south until it reaches Mexico at the far southeast corner of California. This eastern border and the Colorado River meander east almost making it to the 114 degrees W line of longitude, just east of the Whipple Mountains.

California’s coast veers from just past 117 degrees W at the Mexican border, toward the northwest, far west of the 124 degree longitude at Cape Mendocino (the westernmost extension of California’s coastline). The coastline’s enormous range of longitude might surprise those who consider this a north–south trending state. San Diego’s longitude is the same as parts of Death Valley and central Nevada, up to 650 km (400 miles) of longitude east of Cape Mendocino!

Consequently, this northwest–southeast trending, elongated state covers about 9½ degrees of latitude and more than 10 degrees of longitude on our earth. (Since lines of longitude merge closer toward the poles, you can see that a length of a degree of longitude is shorter than a degree of latitude through California. Then, you can see that the east–west distance, even when measuring through the full range of longitude, is shorter than the north–south distance through the state.)

Size and Shape Help Define California

So much of California is about being big. With approximately 411,013 sq km (158,693 square miles) or 101,563,520 acres, it is the third largest state, ranking behind Alaska and Texas. It is larger than Japan, Great Britain, Italy, or Norway. As previously noted, it is much longer than it is wide. A straight line from northwest to southeast along its coast runs about 1,220 km (nearly 760 miles), but there are at least

Where is the geographic center of this strangely-shaped state? This geographic trivia has been debated for decades in California. Though it may have no practical significance, various communities have tried to claim it and even measure it. You can get an approximation by using a solid cutout map of the state and trying to balance it on a pen or pencil. You will notice that it balances around Madera County more than 20 miles northeast of Fresno. But that leaves plenty of spatial error to exploit. For instance, in the past years, residents of the Sierra Nevada foothills community of O’Neils cited historical markers that placed the center somewhere near their Spring Valley School. Using the latest technologies, more recent measuring surveys by geography students and others have finally zeroed in on what seems to be the accepted location a little farther up North Fork Road near North Fork.

According to surveys completed by volunteers from Fresno State University (including an official state surveyor) and the National Forest Service and the USGS, this is the confirmed geographic center of California as of 2017: latitude 37°09’58”N, longitude 119°26’58”W or (depending on how your GPS reads) 37.16611°N, 119.44944°W. The residents of North Fork have maintained a sign next to their road declaring their town as the center. Local organizations that include the North Fork History Group dedicated a plaque at the verified site a few miles southeast of North Fork along Road 225. By 2017, it had been replaced by a new plaque at the end of some stairs where you may also find a “CAL CENTER” marker. It is fittingly surrounded by an iconic California Sierra Nevada foothills woodland that includes oak and buckeye, but don’t expect to find much human activity there.

Therefore, if you find yourself around 37 degrees N and 119 degrees, 30 degrees W, you are near California’s geographic center. Our review of California’s odd shape and borders may seem to diminish the importance of such detail (see Figure 1-3).
2,027 km (1,260 miles) of entire jagged coastline. California’s entire tidal shorelines—including inlets into bays and rivers and the outer coast and offshore islands—total far more than 5,000 km (more than 3,000 miles long). In contrast, California is barely more than 240 km (150 miles) wide from San Francisco to Lake Tahoe. At its widest, it is barely more than 400 km (250 miles) from Point Arguello to the Nevada border.

Diverse Natural Landscapes

This large area and long shape have contributed to the state’s number-one ranking in so many categories within...
its natural and human landscapes. Its Death Valley has the lowest point in North America at 86 m (282 feet) below sea level. There are other desert valleys all the way to the Mexican border that drop below sea level. California has the highest mountain peak in the United States outside Alaska—Mount Whitney, at 4,421 m (~14,505 feet). There are numerous other peaks higher than 14,000 feet, and they are all in the Sierra Nevada except White Mountain Peak (~14,250 feet) and majestic Mount Shasta (~14,170 feet). The variety of high mountains and deep valleys are a result of the many different geologic processes and landscapes contained in such a large state situated along active tectonic plate boundaries. California also has some of the most varied and abundant earth resources on our planet. These geologic processes and landscapes are reviewed in Chapters 2 and 3.

Across such diverse topography and nearly 9½ degrees of latitude, there must also be a wide variation of climates. From near Death Valley to the northwest coast, mean annual precipitation ranges from less than 5 cm (2 inches) to more than 250 cm (100 inches). Each year, temperatures in the state will range above 49°C (120°F) in the southern deserts to well below −18°C (0°F) on numerous occasions in the northern highlands. (The hottest temperature ever recorded in North America was 57°C (134°F) in Death Valley.) These changing climates are explored in Chapter 4.

A splendid assortment of plants and animals have adapted to these variations in climate and other physical conditions. The tallest living things in the world—coast redwoods (Sequoia sempervirens)—grow on California’s northwest coast. The largest living trees in the world—Sequoia redwoods (Sequoiadendron giganteum)—grow in the western Sierra Nevada. The oldest individual living trees in the world—bristlecone pines (Pinus longaeva)—grow in eastern California’s White Mountains. The oldest living plants in the world—creosote bushes (Larrea tridentata)—grow as rings of clones in the southeast deserts. As this list of records grows, these “firsts” serve only as examples of caught in the middle of this philosophical tug-of-war. They may despise Southern California attitudes and lifestyles, but they also see themselves as more cosmopolitan and more on the cultural and economic cutting edge than their rural neighbors to the north. Some claim this calls for a third state—a Central or Middle California.

Such divisions are enhanced by geographic distance. How does a resident of San Diego relate to events in San Francisco or the state capital of Sacramento, with a travel distance more than 800 km (500 miles) to the north, much less to someone in Crescent City or Alturas, more than 1,300 km (800 miles) north? And how can an effective and efficient state government operate across such disparate landscapes? It becomes apparent that California’s very strengths—its size, the diversity of natural and human landscapes, and the various forces shaping them—can be construed as liabilities by those who would divide the state. More profound differences have recently emerged between inland and far northern California’s relatively traditional and conservative communities versus the more progressive powerhouse coastal cities from the Bay Area to the Mexican Border.

Proponents of division may not realize how California’s seemingly separate regions and people depend on one another and are connected in profound ways. Just watch as the north’s abundant natural resources flow south and the political and economic clout of the southern cities help balance and stabilize an otherwise isolated north. On the occasions when this enormous state recognizes its diverse economies and cultures as assets, the usual result is long-term stability, balance, and prosperity. When we ignore these unique assets, we struggle.
the fascinating variety of plants and animals surveyed in Chapter 5.

All of these natural factors have combined with humans to produce diverse waterscapes scattered throughout California. Humans have now exploited these water resources by building some of the largest water projects in the world. This hydrology and efforts to build a sustainable water supply future are the subjects of Chapter 6.

Diverse Human Landscapes
The assorted human invaders and settlers were just as diverse as the landscapes into which they moved (topics of Chapter 7). Their human landscapes have evolved to reflect California’s impressive size. By 2018, California’s population (according to the U.S. Census Bureau and the California Department of Finance) grew to about 40 million. It not only has the largest population of any state, it is also the most diverse. California contains the greatest populations in the world of several ethnic groups living outside their countries of origin, and it has the greatest number of people speaking the greatest variety of languages compared to any other state. These are topics of Chapters 7 and 8.

California also has, by far, the largest and most powerful economy in the United States, and it now ranks fifth in the world, blazing ahead of Great Britain and still ahead of France, India, Italy, Canada, and Russia. Southern California alone would be near 15th in a worldwide list. California is the standout leader in agriculture, where it leads in the production of several crops. It is also near the top of timber, mining, and fishing industry states. These are the topics of Chapter 9.

The state’s powerful primary industries are only surpassed by its modern, advanced industrial powerhouses. The trade, high-tech, finance, entertainment, and service industries in California have not only exploded past traditional industries, they are overshadowing developments in other states and nations. Perhaps this helps explain why Los Angeles/Long Beach is the number-one port in the country. These are the topics of Chapter 10. Chapter 11 highlights some of the greatest urban landscapes in the world, including the Bay Area, southern California’s coastal plains, and the relatively smaller inland cities. In Chapter 12, we apply geographic concepts and methods to understand current issues, solve problems, and look to the future.

Yes, Californians have built an assortment of fascinating and unrivaled rural and urban landscapes.

California’s Situation
California’s situation (its regional position in relation to other locations) has also had a profound impact on its evolution, history, and settlement patterns.

Situation and Physical Geography
The state is situated along tectonic plate boundaries, where dynamic geologic processes continue to shape a variety of landforms such as its giant mountain ranges bordered by deep valleys. You will find more details on geologic processes in Chapters 2 and 3. California’s middle latitude climates are influenced by the Hawaiian (East Pacific) Subtropical High Pressure System, which causes summer drought.
Then, the Aleutian Low slips south during winter, ushering in storms to provide much-needed precipitation to the state. California is not far enough south to experience tropical climates; its location on the west coast and east side of the Hawaiian High ensures a cool ocean current (known as the California current) that moderates any tropical air masses moving toward the state. You will find specific definitions and details on weather and climate in Chapter 4.

California’s plants and animals have adapted to the middle latitude Mediterranean climates that dominate west of the major mountain ridges. Meanwhile, desert life forms must endure prolonged drought and temperature extremes common on the leeward sides of the very mountain ranges that were shaped by the geologic processes previously mentioned. For more on the state’s biogeography and hydrology, refer to Chapters 5 and 6.

Situation and Human History

Isolation

Most modern anthropologists agree that California’s first people were descendants of those who crossed over the “land bridge” into North America from Asia. Previously, the greatest ocean in the world had separated these otherwise mobile people from California. Today’s anthropologists continue to examine evidence (such as mastodon fossils and possible tools) that may confirm or challenge established theories. Today’s anthropologists continue to examine evidence (such as mastodon fossils and possible tools) that may confirm or challenge established theories. (Some California Indians have very different traditional stories and explanations of their origins.) Their populations eventually swelled to more than 300,000 before the Spanish arrived. Many Native Americans in California were often isolated by deserts and major topographic barriers, not only from other North American Indians but also from groups prospering in other California regions. Later, these same barriers would help keep California isolated from the westward expansions of Anglo-Americans through the early 1800s. The Rocky Mountains, great southwestern deserts, and the Sierra Nevada combined to represent formidable barriers to overland parties that may have otherwise considered California.

Consequently, the first European explorers and settlers of California almost always arrived by boat. The Spanish sea expedition from the south headed by Juan Rodriguez Cabrillo was apparently the first to “discover” California for the Europeans in 1542. A number of Spanish and other European powers explored the California coast after him, including Sir Francis Drake, who claimed parts of California for England as early as 1579. The still isolated and distant regions of California would wait until 1769 before Europeans made any serious attempt at settlement. This is when Father Junípero Serra and Captain Gaspar de Portolá established the first settlement at San Diego. They continued north as Spain took formal possession of “Alta California.”

Even after 1769, California’s continued isolation contributed to slow growth and expansion of the early Spanish settlements. This left the door open to other invaders from the sea. These were the Russians from the north, who hunted sea otters down the northwest coast of California into the mid-1800s until the otters were nearly extinct. They met little resistance in this wild land and established and settled Fort Ross between 1812 and 1841. California’s Russian River and other geographic features took names from these people and their distant homeland.

The Latin American Connection

By the early 1800s, the Spanish had already gained control of much of California. After those first Spanish settlements in 1769, they spread their presidio–mission–pueblo plan to settle across California’s coastal valleys. They finally established solid land routes from New Spain (Mexico) north to “Alta California.” This introduced another major locational factor in California’s history and development: its strong ties to the people and cultures of the south—first Spanish, then Mexican (after 1822)—have had enormous influence on California’s human landscapes. This involves much more than the Spanish names of California’s streets, towns,
and cities. It involves a Latino population and culture that has always played and will increasingly play a major role in California. It is a Latino population with roots that often extend far to the south of Mexico, into Central and South America. It is a Latino population that makes up the majority in many California schools, and it is expected to become the statewide majority in the twenty-first century. Connections to Latin America were rejuvenated by the late 1900s, and they will continue to strengthen in modern California.

Isolation Ends, New Connections Emerge
During the mid-1800s, some of these connections to the south temporarily waned after the discovery of gold brought masses of people into California. This trend especially started with the ’49ers. The Mexican government had already lost its grip on California as Anglo-Americans and people from all over the globe rushed in to find their fortunes. California’s isolation was broken forever, but the gold rush was just the first of many major developments that would gain the world’s attention. By 1850, California was already a U.S. state. California’s growth was accelerated by major developments in transportation and communication that strengthened its links to the rest of the world.

With these new technologies, the isolation that once thwarted California’s growth and development became an asset. As the population and economies of California cities such as San Francisco and Los Angeles (L.A.) soared in the beginning of the twentieth century, there were few other competitors in nearby states. California was certainly the focus of activity for a radius of more than 2,000 km (1250 miles). San Francisco became the financial center of the west from the mid-1800s through the early 1900s, and Los Angeles has held a commanding lead ever since. Throughout the twentieth century California’s situation has increasingly encouraged growth of historical proportions.

By the mid-1900s, the state’s population and economy were number one in the nation, and Los Angeles’ only rival city in the United States was New York, more than 4,000 km (2,500 miles) away. The painful recession that hit in 2008 slowed population and economic growth for years. More recent growth and innovations leave this state perfectly positioned to reap the greatest economic benefit from the advanced technologies on the horizon. This brings the third major situational factor into focus.

Advantages of California’s Modern Situation
Today’s Pacific Rim (referring to trading nations facing the Pacific Ocean) has become such an economic and cultural catchword, it is almost cliché. This is because many Pacific Rim locations have become modern economic, political, and cultural powerhouses. They include such giants as Japan, Korea, and China. California looks directly west to many of these economies and cultures, just as they look directly across the Pacific to California, both literally and figuratively. Additionally, the developing economies of growing Latin American countries ring the Pacific to the south. As highly sophisticated technologies, trade, finance, entertainment, tourism, and services have fueled California’s economy, the state is in a perfect geographic position to gain from the new world economies.

The connections are dramatic. There are not only more Asians in California than any other state, but Asian populations are growing faster than any other major ethnic group in California except for Latinos. Such changes are evident from the Little Saigons in Westminster and San Jose to Los Angeles’ Little Tokyo and Koreatown. From Monterey Park east of Los Angeles through the western San Gabriel Valley and in San Francisco’s Chinatown and Japanese Cultural Center, the economic and cultural ripples are profound. These ripples are now extending into every California community. Examples include the growing Asian communities along San Francisco’s outer districts, such as the Richmond and Sunset districts, in Millbrae, and throughout the Bay Area, especially from San Francisco to San Jose.

California’s situation on this planet has certainly shaped its history and influenced its modern landscapes. And thanks to modern communication, transportation, and other advanced technologies, the state is poised to exploit its advantageous situation in even more profound ways. These connections to the rest of the world—particularly to the Pacific Rim—will certainly have significant impacts on California’s future landscapes.

Human/Environment Interaction

Obvious connections between California’s natural and human landscapes are evident throughout the state. Natural processes and cycles have done more than create California’s physical landscapes; they have impacted and often controlled how humans settle and live on the land. And humans have often done their best to modify and exploit these same natural landscapes.

People Controlled by Nature
An overlay showing the state’s topography and densest human populations reveals quite a match. With a few exceptions, the most populous regions of the state have always been in flatter valleys and basins. These were, at first, usually locations with more abundant water (especially groundwater) that had drained down from surrounding watersheds and into the most fertile farmland. These lowlands were also easier to build on than surrounding steeper slopes, and they presented fewer topographic obstacles. Obvious exceptions include parts of San Francisco and the early gold rush towns established in the foothills of the Sierra Nevada during the mid- to late-1800s. San Francisco had exceptional advantages, including its convenient location where ships must enter the bay through the Golden Gate. The miners had to live near the gold, so their towns grew up around foothill and mountain mines.
As California’s soaring populations filled most of its coastal valleys and flatlands during the 1900s, people first began to settle at the foot of adjacent slopes. Those who could afford the extra costs of construction and access crept into the very mountainous terrain that had once confined them. Examples are scattered throughout the state, from San Diego County to the rim of the Los Angeles Basin, from the hills surrounding the San Francisco Bay Area to recent invasions of former flatlanders into Sierra Nevada foothills.

The price of a better view and distance from the urban basins is often higher than expected. Summer and fall wildfires and the winter mudflows that usually follow have devastated growing hill and mountain settlements from the Laguna Hills to Malibu, from the Oakland Hills to the Sierra Nevada and beyond. Great battles have erupted between the powerful forces of nature, which have always ruled on the slopes and in the canyons, and the pressures from encroaching urban settlers who try to control nature. Though these settlers risk paying the ultimate price by losing their dreams, other California residents are often forced to help protect them and then subsidize their losses when disaster strikes.

A host of other natural factors led to the concentration of early urban growth in the state’s coastal valleys and basins (the lowlands of cismontane California). Cismontane is a convenient term used in this book to describe more moist regions and landscapes on the Pacific Ocean side of major mountain barriers. In contrast, transmontane describes drier regions and landscapes on the inland or continental sides of the state’s largest mountain ranges. It was the cismontane coastal climates—mild compared to nearly every region that was a source of great migrations to California—that made for ideal living and working environments. From Hollywood films to aerospace to silicon chips, climate was and is a major drawing card for industry and people in the state’s coastal valleys. The coastline itself has more to offer than just a mild climate. Fishing, trade, and recreation draw even more people to the coast.

It is, therefore, no surprise that California’s largest metropolitan areas are, in order, housed within the Los Angeles Basin, the San Francisco Bay Area, and western San Diego County. The top four California cities in population well into the second decade of the twenty-first century all had oceanfront property, except San Jose, which is on the southern end of San Francisco Bay. The top four within city limit boundaries are Los Angeles (4,042,000), San Diego (1,410,000), San Jose (1,046,000), and San Francisco (875,000). These are rounded estimates for 2017 based on U.S. Census and state sources. Each city’s population continues to grow in the twenty-first century.

Technology versus Environmental Constraints: Nature Controlled by People

Numerous other natural factors that were once critical no longer play major roles in concentrating human populations in California. The Native Americans once established their densest settlements where there were abundant water resources and native plants and animals. (The water-wise Spanish did the same, but focused on farmable lands.) Later, the location of certain minerals and other earth resources first broke California from its isolation and led to huge mining camps and towns in the Mother Lode. Especially within northern California forests, from the 1800s and well into the 1900s, towns grew to support the timber industry. And where the richest soils were deposited, agricultural service towns erupted to support productive farms. Today, less than 20% of California’s modern population is even indirectly involved in these original primary industries or living in what we now consider rural landscapes. Timber, mining, and agricultural activities and populations, although important to the state, are not even in the same league with California’s great urban population centers and modern economies.

By the late 1900s and into the new century, as the prime coastal locations filled, the great urban areas quickly spread east away from traditional coastal conveniences and into the inland valleys with hotter, smoggier summers. In southern
California, Riverside grew to about 327,000 by 2017. The urban growth more recently spilled farther inland into even harsher environments, through mountain passes and into the high desert (including the Antelope Valley) and into the lower desert (including the Coachella and Imperial valleys).

In central and northern California, the people have recently poured into rapidly expanding urban areas of the Central Valley, and they have even crept up many Sierra Nevada slopes. The perception is that many of the prime coastal locations may still be attractive, but they are already discovered, overcrowded, and too expensive. Californians were and are now forced to move farther and farther inland to find their dreams. Fresno (526,000) and Sacramento (493,000) were the fifth and sixth most populated cities in California by 2017, while Bakersfield ranked 9th.
(384,000) and even Stockton (321,000) ranked 13th. And because these inland valley communities were the fastest growing just before the housing industry collapsed in 2008, they were the most devastated by the recession that followed, and last to recover.

Most modern Californians in these urban fringe areas are rarely forced to consider confronting their natural environments, except for the occasional wildfire or flood, a mountain lion or bear, or the construction-stopping endangered species that may interrupt their perceptions of order and tranquility.

The trend away from our dependence on the natural environment is especially noticeable when it comes to water. Just as the Indians settled along water courses, so the Spanish were careful to locate almost every mission, presidio, or pueblo near a reliable source of water. California’s early settled were also near water sources. However, by the 1900s, Californians were proving that they could live and farm almost anywhere if they could import enough water. The irrigated farmlands of the San Joaquin and Imperial Valleys grew almost as fast as the urban populations of California. This was made possible by building the greatest water projects on the planet to divert water away from the water-rich but population-poor north, and toward the demanding populations, economies, and political powerhouses of the south. Reliance on more efficient air conditioning and heating systems also encouraged growth on to more affordable land with harsher climates into the twenty-first century.

Examples of how we are controlled by nature and how we are now controlling nature appear throughout this book. Although occasional earthquakes, landslides, floods, or droughts are reminders of nature’s power, Californians are increasingly learning how to impact, control, and exploit nature as they make more obvious human imprints on the landscape. Some knowledge of these issues is necessary to understand how the state’s natural and human landscapes have evolved and to predict how they will continue to change.

Still, we must pause to acquaint ourselves with the places that are featured throughout this book. This is why the remainder of this chapter is designed to introduce the reader to the state and its diverse regions. Remember that these regions, and many of the more specific locations within them, will be referred to in the chapters that follow (see Figure 1-7). In the remaining pages of this chapter, we start with regions or places and consider the major topics required to understand them, their people, and their landscapes.

California’s major topographic features stand out. More than two-thirds of the state is considered mountainous by the most conservative estimates. These topographic features are often the major players in controlling temperature, precipitation, and prevailing wind patterns. The distribution of plants and animals, soils, and drainage patterns are also frequently controlled by topography. We’ve already considered the powerful controls these topographic features have placed on people and their settlements.

Consequently, geographers and other scientists have tried to divide California into landform divisions sometimes called natural provinces or physiographic regions. Regardless of the names or more specific divisions, each region is considered somewhat different from the others. Each region’s natural landscapes have often supported people and human landscapes that are also somehow different from other parts of California. Now, we will sweep clockwise around California from region to region, starting with the northwest and ending back at the Central Coast. We’ll look at that middle part of the clock—the Central Valley—last.

Get out your maps and prepare for this brief journey through each of California’s diverse regions. Counties and the largest incorporated cities are listed for individual regions. City populations are estimates based on data from the U.S. Census and the State of California around 2017. Any significant loss or gain in city populations during the approximately six years since our 3rd edition is followed by + or − signs.

**Getting to Know California: A Brief Survey of its Diverse Regions**

Most of this book was not designed to take the reader from region to region, simply describing each section of California. Instead, it is designed as a systematic approach to examining some of the more important and interesting topics, issues, and problems facing California today. Such a dynamic state—with so many related and connected forces and landscapes—deserves a modern, dynamic approach. A review of particular regions and more specific locations will be incorporated as those places relate to or offer examples of topics covered in each chapter.

**Northwestern California and the Klamath Mountains**

**Counties (north to south):** Del Norte, western Siskiyou, Humboldt, Trinity, northern Mendocino, southwest corner of Shasta, western edge of Tehama

**Largest Cities:** Eureka (27,100), Arcata (18,400+), Fortuna (12,000), Crescent City (6,400−)

Among the obvious features that dominate northwestern California landscapes from the northern end of the Coast Ranges through the Klamath Mountains Physiographic Region are the exceptionally steep, moist, heavily forested mountain slopes. The Klamaths extend nearly 250 km (150 miles) north–south and are about 160 km (100 miles)
Cultures and Economies of the Northwest

Throughout this book, there are more details about the natural history of this region that has the heaviest rainfall (more than 250 cm [100 inches] per year) and greatest runoff in California. Deep canyons and rugged terrain have contributed to the region’s cultural and economic isolation; residents of Southern California may be as unfamiliar with the people of northwestern California as they are with its natural environments. Likewise, some of these rugged northerners have felt so detached from the south that they tried to form their own state. It started with a peaceful rebellion in 1941 that would have merged the most northern counties of California with the most southern counties of Oregon into a state called Jefferson with its capital in Yreka. You might hear many locals still dreaming how this would bind their people and culture within one state they could call their own without all the outside interference.

Historically, primary industries ruled the economies here, but the region saw the peak of the timber industry come and go in the 1950s. As the timber industry worked overtime to cut the tallest stands of trees in the world, Redwood National Park and other reserves were created to protect some of the less than 10% of old-growth forest remaining in California. While the industry waited for its second- and third-growth forests to mature, it was also changing its methods of operation.

Timber jobs were lost as the industry began loading raw, unprocessed timber directly onto boats for processing overseas. Automation replaced many of the remaining jobs, and companies were finding timber at lower prices abroad. Jobs and towns in the region began to wither while environmentalists and industry management engaged in an ongoing controversy. Now, with less than 10% of California’s old-growth forests remaining, and much of that protected, these economies must rely on more efficient, sustained-yield timber production as they search for other sources of income.

By the 1970s and 1980s, illegal crops of marijuana had become so valuable to the region’s economy that marijuana wars broke out. To the embarrassment of some Californians living in the number-one agriculture state, marijuana was reported as the top cash crop in California; much of it was being grown in the northwestern region. These underground economies and cultures were repeatedly highlighted and sensationalized in the media until by 2012, a few researchers suggested the marijuana crops were worth more than the state’s total annual agricultural output. By 2018, their geographies of isolation threatened marijuana growers in the northwest as recent state laws had legalized the crop. Competitors were springing up out in the open spaces close to the urban populations demanding this product. The area’s still slumping economies are left to depend on small manufacturing, retail, trade, tourism, fishing, and a swelling retired population. Some communities have investigated bringing in government prisons or offshore oil drilling to create jobs. With few exceptions, such as the developments around Arcata Bay (including Eureka and Humboldt State University) and the connections made by Highway (Hwy.) 101, this land and its people (less than 1% of the state’s population) remain relatively isolated in some of the world’s most beautiful mountain and coastal scenery.

Similar heavily forested terrain south of the Klamaths—in the northern Coast Ranges—is cut by more regularly northwest-southeast trending streams. Throughout this north coast region, from the Oregon border into the northern Coast Ranges, are some of the state’s greatest rivers. Impressive discharges from the Smith, Klamath and Trinity, Mad and Eel, and other rivers and streams (reviewed in detail in Chapter 6) are common, especially during winter and spring. As the Coast Ranges trend farther south and away from this region, they generally become drier and less rugged. On some of the wettest coastal slopes, you will find the tallest trees in the world: “where the fog goes, the coast redwood grows.”

North/Central California with Its Southern Cascades

**Counties:** Siskiyou, Shasta

**Largest Cities:** Redding (90,700), Shasta Lake (10,400), Yreka (7,800), Mt. Shasta (3,400)

If not for its majestic composite volcanoes, this region would serve as a smoother transition from the Klamaths
Getting to Know California: A Brief Survey of its Diverse Regions

on the west to the **Modoc Plateau** on the east. However, standing on top of 3,189 m (~10,460 feet) Lassen Peak (the most southerly of the major Cascade volcanoes), you can look south out of the Cascades and into the northern Sierra Nevada. Looking north from Lassen, you can see the ominous Mount Shasta in the distance. At ~4,320 m (~14,170 feet), it is the second largest volcano in the north–south trending Cascade Range. (Only Washington’s Mount Rainier is higher.) It rises directly up from Shasta Valley for nearly 3,355 m (11,000 feet). A few active glaciers still creep down its slopes. There are several smaller volcanoes lined up within California’s southern Cascades. Some are still active with fumaroles and vents. Lassen erupted from 1914 to 1917.

This relatively long, slender physiographic region is cut into north and far south sections by the Pit River, which flows west out of the Modoc Plateau and into Shasta Lake. The region is bounded by the edge of Shasta Valley and the Klamaths to the west, Modoc Plateau to the east, and the Central Valley and northern Sierra Nevada to the south. Tucked behind the Klamaths (on the rainshadow side), California’s Cascade valleys are drier than valleys draining the slopes facing the Pacific Ocean; but precipitation, vegetation, and forest densities increase toward the higher, cooler, wetter slopes. Winters are colder and summers warmer than on Pacific-facing slopes; continental air masses are more common here. Likewise, cultures and economic activities may change from those within the wetter higher ranges (such as timber production) to those more common to drier valleys and plateaus (such as ranching).

**The Northeast and Modoc Plateau**

**Counties**  Modoc, Lassen, north tip of Plumas

**Largest Cities**  Susanville (15,000-), Alturas (2,700)

Moving east from the majestic Cascades, the volcanic peaks are smaller and the broad, flat basaltic lava flows of the Modoc Plateau dominate the landscape. Surfaces of these thick lava flows average more than 1,350 m (about 4,500 feet) above sea level and may represent the southwestern extension of the Columbia Plateau. There are occasional interruptions by volcanic cones rising between 300 and 1,050 m (1,000–3,500 feet) above the plateau.

Even farther east, the Modoc Plateau breaks up into a series of dramatic fault-block valleys and mountains more characteristic (and actually a part of) the Basin and Range Physiographic Province. Examples include the lofty Warner Mountains in California’s northeast corner, which even support impressive stands of cool, damp aspen forest. The inland Alkali Lakes (in Surprise Valley east of the Warners) and Goose Lake to the west are examples of water accumulating in down-faulted basins. Another finger of the Basin and Range Province extends in from Nevada farther south, around Honey Lake. This region is bordered by the Sierra Nevada on the south.

The Pit River represents the only major water source in this region; it drains from northeast to southwest, bisecting...
People and Economies of North/Central California

Since I-5 follows the western edge of this region, travelers are rewarded with views of impressive mountains on both sides of the interstate—the Klamaths to the west and the Cascades to the east. This major transportation corridor links Pacific coast cities in California with Oregon and Washington; it also breaks the isolation of regions to its west and east. Without it, California north of Sacramento would be even less recognized, with even a smaller population and economy. All of the major towns of California’s Cascades, which also serve the ranching and timber industry so important to the region, are located along I-5. It even slices through Shasta Valley, where cattle pastures are interrupted by some farming on the richer soils formed on sediments carried from the surrounding mountains. The farther you wander away from this northern California corridor, the more things have remained unchanged; there has been little population or economic growth beyond it. I-5 extends a similar influential ribbon well to the south, into the Sacramento Valley.

For those traveling north, just up from the Sacramento Valley, Redding welcomes visitors to the southern edge of the Cascades. This is the largest city in the north end of the state, and it represents the antithesis of the state’s three northern regions. (It could also be considered a part of the northern edge of the Sacramento Valley.) The city’s past aggressive development strategies have resulted in a series of generic malls and businesses, neighborhoods, and urban scenes reminiscent of larger population centers to the south.

While moving to Redding to escape the city, many people brought it with them. This is especially evident on the east side of the Sacramento River, which slices through the city. Today’s condominiums and apartment complexes rest on bluffs overlooking the Sacramento River, and they overshadow an older town center with a rich history. Redding’s influential fingers stretch out for several miles into more extensively populated neighborhoods on the suburban/rural fringe and into nearby small towns.

The string of towns along I-5 north to the Oregon border is more characteristic of the region. Many serve as economic and population centers, although occasionally, residents may have to travel north into Oregon or south back to Redding for goods or services.

Isolated Cultures and Economies of the Northeast

Like people in the northwest, residents of northeast California are isolated. Due to drier climates, timber is less important and ranching rules most of the economies. Grazing cattle and farmland stretch across almost every Modoc valley during summer, while events such as the annual squirrel roundup or Modoc Fair and rodeo in Surprise Valley’s Cedarville evoke the culture of a land unfamiliar to many Californians. There is also some hunting, fishing, and tourism in this mostly culturally conservative region. Local unemployment can rise to 20% during the long, cold winters. In 1996, the Pit River Indians started a casino to attract revenue. A 2005 addition doubled its size and by 2017, they had remodeled and were advertising their occasional events and extended hours. The Desert Rose Casino was more centrally located in the Modoc. These were relatively small local businesses. The region does not tend to attract industry, business, or people because of its isolation and lack of economic development.

Susanville, near Honey Lake, is an exception. First, it is the largest town in the northeast. Second, it lies on the
edge of the Basin and Range landforms more common to the east. Finally, it has stronger economic and cultural ties to the east in Reno and Nevada than to California because of easy access along Hwy. 395. Farther north, where Hwy. 395 crosses the Pit River, is the second largest town, Alturas. This is mostly an agricultural service town and is more typical of the northeast. Both Susanville and Alturas have their own tribal casinos that have managed to redistribute considerable energy and capital within already struggling communities.

How will the high-tech communication and computer revolution affect these northern California towns and their economies? It may still be too early to tell. However, as more people in higher income groups use technology to do more work at home, they are also able to move farther out from the urban fringe. There may be interesting long-term consequences for all California regions that have remained relatively isolated and undeveloped until now. By the second decade of the twenty-first century, the peace and quiet offered by these bucolic rural outposts had not yet pulled great populations away from their urban cultures and conveniences. Locals have been known to give new arrivals 2 years to adjust to this lonely country before they welcome them as settled residents.

**Basin and Range**

_Counties:_ Mono, Inyo

_Largest Cities:_ Bishop (4,000), Mammoth Lakes (8,000, within the eastern Sierra Nevada but services northern heart of Basin and Range)

The heart of the Basin and Range Physiographic Province extends east of the Sierra Nevada and throughout Nevada. It is sometimes referred to as the “Trans-Sierra” to help separate it from the local fault blocks of valleys and mountains that encroach into northeastern California and are actually a part of this province. It is bordered by the Sierra Nevada on the west, and it ends at the Garlock Fault and Mojave Desert to the south. Unlike the Mojave, its ranges are lofty and they trend north–south—parallel to its deep, long valleys—in such regular patterns that the ranges have been likened to caterpillars crawling north.

These uplifted blocks, called _horsts_, are the highest just east of the Sierra Nevada. They include the White, Inyo, Coso, and Argus mountains, which form a north–south spine more than 250 km (160 miles) long and culminate at the ~4,344m (~14,250 feet) White Mountain Peak. To the southeast, the Panamint Mountains are capped by the ~3,368m (~11,046 feet) Telescope Peak, which looks directly down into the lowest basin in North America (Death Valley at 86 m [282 feet] below sea level). Death Valley is an exaggerated version of the many elongated, down-dropped basins sometimes called _grabens_ (actually, it is a pull-apart basin) that separate the ranges. These basins represent base level for the interior drainage they catch. When underground and surface water evaporates, it leaves the characteristic white salty playas with their borax, potash, soda ash, and other salts.

Volcanic activity, often found along many of these faults and fissures in the thin crust, is reviewed in Chapter 3. Mostly around and north of the Owens Valley are hot springs, craters, cones, lava flows, and other volcanic landscapes.

In the rainshadow of the Sierra Nevada, these ranges are relatively dry with much sparser vegetation than their big brother to the west. Their unusual plant communities include bristlecone pines, the oldest individual living trees in the world, and their more protected valleys rank among some of the hottest and driest places on earth. The climates of some nearby valleys are almost as severe as Death Valley,
where the mean annual precipitation is only 5 cm (2 inches) per year, and the hottest temperature in North America was recorded at nearly 57°C (134°F). Even the common desert scrub vegetation struggles to survive in these conditions.

Streams flowing out of the eastern Sierra Nevada toward the Owens Valley once represented the only major source of water for the **Basin and Range**. Then, starting in the early 1900s, even this water was diverted to Los Angeles, drying first the Owens River and Valley and then impacting Mono Lake and Basin to the north. The resulting struggles over water between locals around the Owens Valley and distant Los Angeles continue today.

Consequently, recreation (including fishing), tourism, and service industries have long since replaced many of the formerly important primary industries, even in the Owens Valley. In contrast to northwestern and northeastern California, the Basin and Range is home to very popular destinations, and it is closer and more accessible to the southern California masses. Visitors crowd Hwy. 395 to Mammoth (one of the greatest ski resorts in the world) during the ski season. They meander on the roads to those eastern Sierra Nevada fishing holes and retreats or to visit Death Valley, Mono Lake, and other natural attractions in these open landscapes. Familiar small settlements in the Owens Valley along Hwy. 395—such as Little Lake, Lone Pine, Independence, and Big Pine—are dwarfed by Bishop, which is becoming more than just a tourist stop. You can eavesdrop on some of those rural western cultures by tuning in to one of their small town radio stations, though their laid-back DJs are well aware of the many visitors from distant cities who may also be listening.

**Sierra Nevada**

*Counties (north to south):* Plumas, Sierra, eastern edges of Butte and Yuba, Nevada, eastern Placer, El Dorado, Amador, Alpine, Calaveras, Tuolumne, Mariposa, eastern portions of Madera, Fresno, and Tulare, northeastern Kern, western fringes of Mono and Inyo

*Largest Cities* Paradise (25,800), South Lake Tahoe (21,000), Truckee (15,900), Auburn (14,100+), Grass Valley (12,900)

Whether it is considered a physiographic province, region, or major landform, the Sierra Nevada competes with the Central Valley as the largest in California. It is nearly 650 km (about 400 miles) long and approximately 110 km (70 miles) wide. Its ridges trend northwest–southeast and several peaks rise well above 4,270 m (14,000 feet). The tallest peak in the United States outside Alaska is Mount Whitney at ~4,421 m (~14,505 feet), and there are others not far behind. Sierra Nevada’s sawtooth ridgelines split in two to cough the Tahoe Basin in the north, and they are also split by the Kern River to the south. Most of the vertical faulting responsible for lifting the range is evident on the magnificently steep eastern wall, where the view from Lone Pine on Hwy. 395 (elevation 1,130 m [3,700 feet]) is directly up to Mount Whitney, which is only several miles away.

In contrast, the western slopes of this mighty range gradually rise above the Central Valley until they reach the top as far as 80 km (50 miles) to the east. This elongate region is bound by the Central Valley on the west, the Cascades on the north, the Basin and Range on the east, and the Mojave Desert and narrower Tehachapis to the south. This orientation makes the Sierra Nevada an almost perfect barrier to catch orographic precipitation from the winter storms that sweep from west to east across California from the Pacific. Tremendous winter snowfalls are common at higher elevations. When the snow melts, water pours into streams, rivers, and reservoirs toward the Central Valley, where it is used for farming or diverted to thirsty cities. Even greater snow packs accumulated during the Ice Age to build glaciers that carved spectacular scenery in the high country and in major canyons. Yosemite and Kings Canyon serve as outstanding examples of these landscapes. Numerous conspicuous glacial moraines (remnants of Ice Age glacial advances) were deposited at the eastern base of the range, pouring out from the deeper canyons.

The varied climates—from drier foothills up to towering peaks—have also produced life zones or belts of vegetation containing a fascinating assemblage of plants and animals that have been studied by biologists and biogeographers. They include the only stands of the largest (in bulk) living trees in the world, the Giant Sierra Redwood, or Giant Sequoia, *Sequoiadendron giganteum*.

The granitic rocks so common in the Sierra Nevada are similar to those forming the cores of almost every other major California mountain range. Gold was discovered along the contact zones between these great granitic batholiths and older, mostly metamorphic rocks as some of the gold weathered out and into the streams. The discovery of gold in 1848 in the western Sierra Nevada foothills changed
California forever. Thousands flocked from all over the world to the Mother Lode, and many of the gold rush towns they built are still there. Today, powerful human forces are molding new landscapes.

Explorer and naturalist John Muir properly named the Sierra Nevada “The Range of Light.” Many Californians still think of the Sierra Nevada as a place where spectacular scenery and rich natural history is protected by the expansive national forests and parks that make it world famous. It has been a barrier to air masses, water, plant and animal species, and people (such as the Donner Party). It contains one of the largest areas without roads in the United States outside Alaska. South of Tioga Pass, only two highways and one railroad cut through the range. During winter through at least early spring, the region becomes more inaccessible; snow typically closes the roads from Walker Pass in the south to the central Sierra Nevada north of Yosemite.

People Invade the Sierra Nevada

Today, the old mining towns that became agricultural and timber service towns are bulging with tourists, retirees, and even commuters! From Grass Valley and Nevada City to Sonora and beyond, housing developments and suburbs are spreading uphill from the Central Valley. In many cases, the escaping urbanites have brought their freeways, generic shopping malls, and other service-oriented landscapes. And though the higher elevations (such as in Alpine County) are more distant and have escaped this encroachment, there are local exceptions. Residents of Lake Tahoe (with bustling casinos across the state line) and Mammoth Lakes are fighting over how to control the growth of their crowded ski resorts and housing developments.

Public lands and parks are also feeling the pinch as Yosemite received more than 5 million visitors in 2016 alone. Daytime visitors from the Central Valley and weekend visitors escaping California’s great urban centers crowd resorts such as Lake Isabella and the lower Kern River at the Sierra Nevada’s southern end.

As many Sierra Nevada towns compete for more growth, jobs, and industry, the regional debate rages: Will tomorrow’s Sierra Nevada be set aside in parks and wild lands for recreation or will it serve as just another California suburb? As we debated this question, the region’s population increased more than 400% from 1960 to 2010. There is extensive discussion about the Sierra Nevada’s natural and human landscapes in this book.

Southern California Deserts
(Transmontane Southern California): About 20% of the State

Mojave Desert

*Counties:* southeastern corner of Kern, northeastern corner of Los Angeles, nearly all of San Bernardino leeward of coastal mountains, much of Riverside leeward of coastal mountains

*Largest Cities:* Palmdale (158,600+), Lancaster (157,800), Victorville (124,000+), Hesperia (94,200+), Apple Valley (75,000+)

The Mojave Desert begins just south of the Garlock Fault at the southern end of the Basin and Range and Sierra Nevada regions. Mountain ranges of the Mojave are not as commonplace or impressive as in the Basin and Range. Many of the Mojave ranges are older and weathered; they have crumbled into and filled the surrounding desert plains with much debris, especially in the western Mojave. Higher ranges of the eastern Mojave soar above 2,150 m (7,050 feet), including the Kingston, Clark, New York, and Providence Mountains. Throughout the Mojave, at the base of the steeper mountains, are the gently sloping alluvial fans and bajadas, depositional features common to California’s desert terrain.

Although the Mojave generally makes up what is often known as the northern deserts, or the high desert, it is punctuated by deep valleys and desert playas (usually dry salty lake beds). Just as in the Basin and Range, mineral-laden water may accumulate in these basins and evaporate to leave white, crusty salts on the surface. These lower basins are also home to some of the driest climates and hottest summers in North America. Soda Dry Lake and Silver Dry Lake basins near Baker and I-15 are examples. Like the Basin and Range, there are only a few locations where sand has been blown into dunes. The Devil’s Playground and Kelso Dunes are stellar examples southeast of Baker between I-15 and I-40.

The western corner of the Mojave begins east of Frazier Mountain and Tejon Pass (see Figure 1-7). This is a narrow wedge where the Sierra Nevada has tapered off into the Tehachapis and where these ranges intersect the Transverse Ranges at an acute angle. On the rainshadow side of these intersecting ranges, the wedge opens up into the desert basin toward the east, known as the Antelope Valley. The Mojave continues to widen toward the east until it represents an enormous expanse of diverse desert topography all the way into Nevada and northwestern Arizona. Just as the Garlock Fault separates the Mojave from the Basin and Range, Sierra Nevada, and Tehachapis to the north, so do the San Andreas Fault and other structures separate the Mojave from the Transverse Ranges on its southwestern border. The generally lower Colorado Desert Physiographic Province lies to the southeast of the Mojave.

Since so much of the Mojave Desert is higher terrain than its low desert neighbor to the southeast, it is generally cooler and wetter than California’s hottest deserts. A few winter storms commonly produce snowfall each year. The thicker desert scrub and Joshua trees of the high desert may even give way to pinyon, juniper, and sparse forest at the highest elevations. These life forms and their surrounding landscapes are spotlighted in Joshua Tree National Park, Mojave National Preserve, and Mojave Trails National Monument.
Multiple Uses for Open Spaces in the Mojave

Substantial military and mining operations and limited grazing fueled the economies of the tiny settlements in the Mojave during the twentieth century, but the military presence was most noticeable. The Marine Corps Training Center north of Twentynine Palms, Antelope Valley’s Edwards Air Force Base, Fort Irwin north of Barstow, and China Lake Naval Weapons Center are good examples. Military activities required plenty of remote open space, and the Mojave had it. Expansive San Bernardino County—the largest U.S. county and most of it U.S. government land—offered ideal settings for many of these military operations.

Transportation has always been vital to survival in this harsh, wide-open country. This is why most of the few people and economies of the Mojave Desert once clung to the services provided along its major transportation corridors. One example is Barstow, where train tracks and Hwy. 58 meet I-15 and I-40 and where the celebrated Route 66 once made the town famous. The traffic between Barstow and Las Vegas along I-15 and the trickle of sightseers to Death Valley kept little Baker’s pulse going. Trains, truckers, and travelers also converged on the little town of Mojave. Later, a huge storage facility for mothballed jet airliners was built in Mojave. Tehachapis’ wind farms decorate desert slopes above Mojave. Way out on I-40, near the Colorado River, the little town of Needles once gained fame as the largest settlement near a proposed nuclear waste site in Ward Valley, but it is most famous as the desert stop between Arizona and California. Mass migrations of people from the coastal side of the mountains during recent decades has transformed these economies and landscapes, especially of the western Mojave and Antelope Valley. Some newcomers are retired, and some have found work in the high desert. Many moved their families to this harsher climate for more space and cheap housing, but the price they pay is a commute to and from the L.A. Basin that may total several hours each day. A heavy toll has been placed not only on the breadwinners and their families, but also on the very desert environments that once represented an escape from urban life.

Giant malls, congestion, pollution, violence, and other urban problems are now commonplace in Palmdale, Lancaster, and Victorville. Even that charming little Apple Valley of the 1960s—once just a wide spot on Hwy. 18 where a trailer park and hamburger stand were major landmarks—has a population over 75,000. The Joshua trees have come down, and the housing developments have gone up. Far to the southeast of Antelope Valley’s city lights are the strip of blossoming towns along the north edge of Joshua Tree National Park; landscapes from Twentynine Palms to Joshua Tree to Yucca Valley and Morongo Valley are gaining new populations. Some of this chaotic growth is spreading far into the Mojave, where you can find major malls and occasional traffic jams outside of Barstow.

Population growth in southern California desert counties averaged nearly 40% per decade from the 1960s into the twenty-first century. Since many of those new homes were funded with risky loans, the mortgage crisis hit them especially hard in 2008. The resulting foreclosures and recession devastated these generic high desert neighborhoods and many were slowest to recover. Others (such as around Joshua Tree) have exploited their relative remoteness and unique desert characters to become popular tourist attractions into 2018.

The Colorado Desert

**Counties:** Imperial, southern and eastern portions of Riverside, far eastern edge of San Diego

**Largest Cities:** Indio (89,000+), Cathedral City (55,000+), Palm Desert (51,000+), Palm Springs (47,500+), El Centro (46,000+), Coachella (46,000+), Calexico (41,000+)

Southeast of the Mojave, extending into the Salton Trough and Mexico and then along a strip of the Colorado River Valley, is the **Colorado Desert.** Often called the southern
deserts, or the **low desert**, it includes the farmlands and developments of the Coachella and Imperial Valleys. This region is tucked away on the rainshadow side of the **Peninsular Ranges** to its west and the Transverse Ranges to its northwest. It is generally hotter and drier than the higher Mojave, and it probably has more in common with the deserts of southern Arizona and northern Mexico than it does with the deserts of California.

In contrast to the higher Mojave, the Colorado Desert’s annual precipitation is below 13 cm (5 inches) per year; daytime highs frequently break 43°C (110°F) and overnight lows may not drop below 27°C (80°F) during mid-summer. Desert scrub dominated by the ubiquitous creosote bush is common in both regions, but the Colorado Desert lacks Joshua trees, which grow to the north in the Mojave. More common in Arizona and northern Mexico are the iconic saguaro cacti, which only grow naturally in California near a thin strip of the Colorado River but are imported into human landscapes of the Imperial and Coachella Valleys. However, several other species of cactus are common in the cactus scrub of the Colorado Desert’s lower desert terrain, and in some desert canyons, you will find the state’s only native palms. They are beautifully displayed in Anza Borrego (California’s largest state park) and at Thousand Palms Oasis.

The Salton Trough is being stretched and dropped in relation to the surrounding mountains, especially the Peninsular Ranges, which are being pulled away from it by tectonic forces reviewed in Chapters 2 and 3. The Palm Springs Tramway lifts travelers over some of these faults on the trip from this desert floor up to the cool forests of the Peninsulars’ San Jacinto Mountains. Farther south, the Salton Sea was a mistake created and filled by overflow from the rampaging Colorado River in the early 1900s. It has since served as a sump for agricultural runoff from Coachella and Imperial Valley farms that are irrigated with the river’s diversions to produce valuable crops year round. Recent changes in water distribution and farming (as outlined in Chapter 6) have left the future of this shallow water body in question.

People and Their Landscapes Pour into Low Desert Valleys

As the inland valleys west of the mountains fill with people, growth spills through Banning (San Gorgonio) Pass, into the Coachella and Imperial Valleys, and even up parts of the Colorado River Valley. Even Blythe, once just a small agricultural service community and pit stop where I-10 crosses the Colorado River, has blossomed to substantial town status. Such population and economic growth has brought division to the Coachella and Imperial Valleys.

Parts of cities such as Palm Springs, Rancho Mirage, and Palm Desert still offer the resort atmosphere that once attracted Hollywood stars, the rich, and the famous. In contrast to these traditionally wealthy visitors, there are now a large number of lower-income workers in the service industries that support the resort economy. As we move south, through Indio and into the farming communities where the farm workers live, poverty and unemployment become more visible. Imperial County, with a majority Latino population, now competes as the poorest county in Southern California. Because agribusiness is the only major industry in the area and because there is a large pool of potential farm workers in Mexicali, just across the Mexican border, the future looks bleak for the Imperial Valley’s working masses.

The long growing season and irrigation water from the Colorado River made the fertile farms of the Salton Trough possible. The region produces as great a variety and quantity of valuable crops as any area its size. Just a glance across this valley with its lettuce fields, grape vines, citrus groves, and towering date trees will serve as testimony to its productivity. Unfortunately, these advantages are barely translating into a subsistence-level income for much of the Coachella and Imperial Valleys’ working class. A visit to some of the Imperial Valley’s little towns provides testimony to this disparity. (Ironically, many Imperial Valley farmers supported a recent plan to take some fields out of cultivation and sell excess water to thirsty San Diego.)

While economic disparity is the rule in this region, many Coachella Valley cities, such as Cathedral City, are somewhere in the middle, still searching to find their roles. They often find some answers when the snowbirds arrive to escape northern winters and crowd the Coachella Valley from November through April. This clean revenue source often evaporates in summer’s sizzling sun when the streets, stores, and restaurants turn quiet again. Some residents and businesses look toward attractions such as the world-class golf events, Palm Springs Air Museum, the annual Date Festival’ or Coachella Valley Music and Arts Festival to pump more energy into their economies.

**Southern California’s Coast and Mountains (Cismontane Southern California)**

The dividing line between the Peninsular Ranges and Transverse Ranges Physiographic Provinces is clear near Banning in San Gorgonio Pass along the San Andreas Fault Zone. The San Bernardino Mountains of the Transverse Ranges tower above on the northern side, while to the south, the spectacular San Jacinto Mountains loom as the northern edge of the Peninsular Ranges. However, west of the pass, the coastal and inland valleys of Riverside, San Bernardino, Orange, and Los Angeles Counties begin to blend together both physically and culturally. Elsewhere, it is often difficult to tell where the natural and human landscapes of the Peninsular Ranges to the south yield to those of the Transverse Ranges to the north. One could argue that these coastal valleys should be clumped together as one large region on the map. Therefore, we will discuss these two landform provinces separately, but under the same Southern California Coast and Mountains heading.
The Peninsular Ranges and South Coast

The Peninsular Ranges have much in common with the Sierra Nevada. First, the core is primarily granitic rock that cooled to form a huge batholith after it contacted older, mostly metamorphic rock. Second, active faulting has lifted the block at steep angles above the desert floor on the east side; slopes drop down more gradually toward the coastal plains on the west side. Finally, because of this orientation, the Peninsular Ranges catch considerable orographic precipitation, which accumulates and flows along major streams toward the west, mostly down the gentle western slopes toward the very ocean it came from.

However, there remain major differences between the Peninsular Ranges and the Sierra Nevada. First, they are not as tall or as massive as the Sierra Nevada. The highest peak is San Jacinto at ~3,302 m (~10,834 feet) at the northern tip of the Peninsular Ranges. They trend lower toward the south; the next range south of the San Jacintos is the 1,830 m (6,000 feet) average crest of the Santa Rosas. Second, they are farther south. Not only are they farther away from winter’s major storm tracks, which makes them much drier, but they trend for nearly 1,300 km (about 800 miles) out of California and all the way down to southern Baja California.

Finally, the Peninsular Ranges are really a series of ranges interrupted by valleys (some substantial and deep) and parallel faults, many of which are still active. One example is the San Jacinto Plain, which sits between the San Jacinto Fault and Mountains to its east and the Elsinore Fault and Santa Ana Mountains to its west. More noticeable, however, is how the entire Peninsular Ranges are pulling away from the Salton Trough and the Gulf of California. They also include the Laguna Mountains, Palomar Mountain, and the islands trending parallel to them just offshore. They are bordered by the Salton Trough on the east, while the Transverse Ranges cut them off on the north.

Starting at the coast, a patchwork of coastal sage scrub yields to grasslands in the inland valleys and to chaparral on inland mountain slopes. In higher elevations of the Peninsular Ranges, oak woodlands and then yellow pine forests become dominant. Isolated patches of cooler, wetter forests grow even higher in the San Jacintos and near a few of the highest peaks to the south. Among the few mountain resorts within these cooler forests are Idyllwild, between Hemet and Palm Springs, and Julian, in the mountains east of San Diego. The Palomar Mountain Observatory, east of Oceanside, has ranked as one of the world’s premier astronomical observation sites. It also looks down on some of the many inland valleys that interrupt these ranges.

Interesting coastal landforms include the mesas that gradually drop down from the range to marine terraces along the San Diego County coast. As these terraces overlook the ocean, they are occasionally sliced through by the westward flowing streams. These numerous narrow canyons eventually point toward the beaches as they break up the mesas. Their floors are lined with shady riparian woodlands, ribbons of nature that can represent obstacles to developments. The result can be seen in a drive along I-5, mostly on the flat, raised terraces, until there is the occasional drop into a deep stream canyon or valley and a view of the characteristic lagoon or estuary that has formed near the shoreline.

San Diego County

Counties: San Diego

Largest Cities: San Diego (1,410,000+), Chula Vista (268,000+), Oceanside (176,500+), Escondido (152,000+).

During the mid-twentieth century, San Diego County built an economy based on such staples as the military, retirement, tourism, and construction. However, this county with one of the mildest climates in the world became the fastest growing county in the state by the 1980s. It grew so fast that nervous residents began rallying around groups with names such as “Not yet L.A.” In spite of this reluctance, San Diego’s growth—at the expense of its fields of flowers and its citrus and avocado groves—was undeniable, and growth often occurred without plans or controls. The region’s history and quaint Spanish atmosphere and architecture were being swept away by a host of developments including generic housing tracts, new urban developments, development along Hotel Circle and the rest of Mission Valley, tourist attractions such as Sea World, a redeveloped downtown, and an enlarged freeway system.

A good place to view the results of these changes is at Cabrillo National Monument, which looks down on San Diego from atop Point Loma. (The monument was named after the Portuguese soldier of fortune who discovered California for Spain in 1542. San Diego was finally claimed and settled for Spain by Portolá and Serra in 1769.)

From Coronado to Mission Bay and Beach, from Old Town to Horton Plaza, from the Gaslamp Quarter and the convention center nearby, heroic efforts were made during the 1980s and 1990s to change San Diego for the better and sometimes to even preserve its charm. However, the city had become the second largest in California, and it was still growing. San Diego’s population sprawled up the coast through Del Mar and Encinitas and out toward San Diego Zoo’s Wild Animal Park. Even Oceanside experienced a burst in population and in construction to house all the newcomers. The masses then filled the gap between San Diego and Tijuana (Chula Vista is the county’s second largest city), and they have spread east into and around communities such as La Mesa and El Cajon and along I-15 to cities such as Escondido.

Like residents of San Francisco and its Bay Area, many who live in these extended communities often consider themselves a part of that larger domain known as San Diego. At the same time, they have also created their own more independent urban centers as San Diego County’s
economy is forced to diversify along with its cultures. The county’s historic economic dependence on the military and the “zoners” who come to escape southern Arizona’s searing summer heat is dwindling. High-tech manufacturing, biotech research, retail, and services have become economic staples. Meanwhile, the Latino population swelled to 34% by 2017 while Asians and Pacific Islanders (especially Filipino Americans) also play key roles in breaking the old stereotype of a traditionally white San Diego.

Today, residents can no longer blame traffic congestion, air pollution, crime, and economic bumps on Los Angeles. San Diego is a world class city now, and in the twenty-first century, it will continue to be linked with its close neighbor to the south, a bulging and bustling Tijuana. As San Diegans struggle to fund and build a more efficient infrastructure, how will this region evolve through this century?

Predictions of what will become of this great experiment range from exciting to frightening. Already, San Diego is beginning to meet head on the urban sprawl spilling south from southern Orange County, itself an outpost of the urban sprawl from Los Angeles even farther to the north. Only the open space of the U.S. Marine Corps’ Camp Pendleton prevents the merger of San Diego and greater Los Angeles. Will anything stop these cities from growing together into one coastal megalopolis that will eventually stretch from the San Fernando Valley or even the Ventura/Oxnard Plain well into Mexico? Has the slower growth that followed the mortgage crisis of 2008 and the recession that followed become a distant memory or a new trend? As usual in California, it depends on whether there is a connection to cutting-edge economies common to coastal cities or the struggling economies more common to less-educated working class communities. The concentrations of wealth in Coronado and Solano Beach stand out in contrast to the pockets of poverty in places such as El Cajon and National City.

Northern Fringes of the Peninsular Ranges
or Southern Fringes of the Transverse Ranges?

Inland Empire

- **Counties**: Southwest San Bernardino, western Riverside
- **Largest Cities**: Riverside (327,000+), San Bernardino (217,000+), Fontana (213,000+), Moreno Valley (206,800+)

This brings us to some of those eastern inland valley extensions of the Los Angeles Basin (known as the Inland Empire) and to the south part of the Basin itself. From the retirement communities that flooded the valley around Hemet, to the gradual growth and more diverse economy of historic Riverside, these inland valleys experienced soaring growth rates after Orange County had filled up. Corona, west of Riverside, caught the population overflow that spilled around the Santa Ana Mountains and through Santa Ana Canyon.

Few communities will ever match the explosive growth once seen in Moreno Valley, east of Riverside. During the 1980s, this little community grew from less than 10,000 to a city of over 100,000. Its population soared to over 150,000 in the early 2000s and well over 200,000 by 2017. The influx of commuters eager for inexpensive housing often resulted in a loss of the area’s citrus groves and dairy farms. The irony is that residents brought the city they sought to escape with them. Many still must commute through torturous hours of traffic into the cities deep within the Los Angeles Basin to make a living. Whether the valley smog and long commutes are worth the bigger houses and yards and lower rents and mortgages is a question pondered in Moreno Valley neighborhoods every day.

The story is similar in San Bernardino and other inland valleys farther to the north, technically on the edge of the Transverse Range Province. The difference is that more urban poor of all ethnicities have flocked to these suburbs, assembling in neighborhoods troubled by gang activity and
higher crime rates. Many locals and researchers extend the Inland Empire through the mountain passes and into many desert communities previously discussed, all on the opposite side of the mountains. It is true that these generally conservative suburbs sprawling away from the L.A. Basin are connected in powerful ways. Regardless of where you draw exact boundaries, the Inland Empire was one of the fastest-growing regions in California until the 2008 mortgage meltdown. The housing bust and recession that followed slowed growth for years as this region became an epicenter for foreclosures. By 2012, residents and leaders were still picking up the pieces, regrouping, and moving toward a less certain future. Even by 2018, whether these ripples of economic recovery could be called tsunami depended on the neighborhood. Soaring economies within islands of wealth stood in contrast to the more extensive working class neighborhoods left behind and the middle class landscapes that separated these extremes.

Orange County

Largest Cities: Anaheim (359,000+), Santa Ana (341,500+), Irvine (268,000+), Huntington Beach (198,000+), Garden Grove (176,300+)

If it is now difficult to believe that Riverside is where the first navel orange trees grew, a glance at the modern landscape makes it almost impossible to understand how the county and city of Orange got their names. The city of Orange was founded in 1873; the county was born in 1889. Even into the mid-1900s, fruit trees and strawberry fields were commonplace in Orange County. Orange County began growing as Los Angeles’ little sister just after the San Fernando Valley began to fill and long before those inland valleys to the east began to experience population growth. Newer communities to the east can learn some valuable lessons from the county of Orange.

Orange County first grew as a Los Angeles suburb. As agriculture gave way to land development and construction, an economic strip grew along the Santa Ana Freeway (I-5), the main link to Los Angeles. I-5 slices through inland Orange County, so it is not surprising that Disneyland grew up next to it, and Knott’s Berry Farm was not far away. Backed by history and the county seat, Santa Ana became the most populated city until recent years. Anaheim competed, building its convention center across from Disneyland and not far from Anaheim Stadium (“The Big A”), where major league baseball had arrived in the 1960s in the form of the California Angels. It’s now known as Angel Stadium of Anaheim, and the team name was changed in 2005 to Los Angeles Angels of Anaheim. Just as economic development increased where I-5 intersected with other new Orange County freeways, the focus of activity and growth shifted south.

By the 1970s, Orange County beaches had solid reputations; surfing, swimming, sunbathing, and the beach culture that supposedly personified Southern California were firmly established in the minds of visitors as typical of the Orange County coast. Laguna, Newport, and Huntington Beaches evolved to represent coastal playgrounds that were more convenient and less crowded than the long-established retreats on Santa Monica Bay to the north. This delighted city officials and developers because people, industry, and jobs flocked to southern Orange County. As this economic activity moved south, it affected communities near the beach and along the San Diego Freeway (I-405), such as Fountain Valley, Costa Mesa, and Irvine. Within about a decade, sprawling farms were converted to housing tracts and industrial sites, the inevitable result of rapid population growth.

Today’s economy continues to evolve, pushing high-tech and service industries into the limelight. Some observers make powerful arguments when they claim that the center of Orange County’s economy and culture is now somewhere around South Coast Plaza or even farther south. Farther inland, northern Orange County neighborhoods (in parts of Fullerton, Anaheim, and surrounding cities) and Santa Ana have become more ethnically diverse and similar to greater Los Angeles rather than the predominantly middle class, white, conservative enclaves they once were. Boasting the third largest and second densest county population in California, Orange County is now more than 34% Latino and more than 20% Asian.

Orange County’s wealthiest residents are concentrated along a huge check mark that extends from Huntington Harbor and Beach down through Newport and the Laguna coast. A leg of this area extends north and inland along the hills from the southern edge of Orange County and the San Juan Capistrano area, spilling around the Laguna and Irvine Hills. Evidence of a high-income population is occasionally seen along the western foothills of the Santa Ana Mountains and again in the Anaheim Hills and Santa Ana Canyon. We are now presented with an opportunity...
to identify trends and patterns of settlement and income distribution common to much of California. To better view and discuss this general pattern, we finally move north and work our way into the heart of Los Angeles and even farther into the Transverse Ranges.

Los Angeles Area

**Counties:** Los Angeles

**Largest Cities:** Los Angeles (4,042,000+), Long Beach (480,500+), Glendale (202,000+)

In this section, we will continue our review of human landscapes as they blend into Los Angeles (L.A.). We will later review the natural landscapes of the Transverse Ranges. This human and then natural landscapes’ survey is in reverse order compared to previous regions.

**Exaggerated Human Landscapes**

Population, economic, and cultural trends in L.A. are similar to those of its southern neighbors, with three major differences: L.A. is the largest city; L.A. has been the traditional leader in trends; and, if California is a land of extremes, L.A. is a singular place where both ends of social, economic, political, and environmental extremes coexist.

Where else can you find towering skyscrapers dwarfed by the backdrop of spectacular snowcapped mountains one day but obscured in a thick smog the next? The longest parade of Rolls Royce automobiles ever assembled in the world followed by 3 days of riots and civil unrest attributed to racial strife and charges of police brutality? People living in 30 room mansions on enormous estates that overlook a city where illegal immigrants making less than minimum wage are forced to work and live in sweatshops? The busiest and richest port, but the worst traffic jams in the country?

Many residents, city officials, and astonished onlookers may have stopped trying to make sense of L.A. and assume it to be an unmanageable chameleon. However, there are orderly patterns that repeat themselves around the City of Angels.

**Looking for Patterns in L.A.’s Chaos**

One pattern is true for almost all of California: Where the hills meet the water, wealth is present. From La Jolla and Del Mar to Laguna and Santa Barbara, there are numerous
examples in Southern California. Like so many other trends, this pattern is exaggerated in L.A. Wealthy neighborhoods of the Palos Verdes Peninsula look down toward those of racially diverse working classes (including the largest number of Pacific Islanders on the mainland) in Long Beach, Compton, Carson, and the South Bay. Even farther west in the Palos Verdes hills, expensive properties offer a view away from this city of contradictions and toward the ocean.

From the upscale Hollywood Hills to Beverly Hills, you can look down on the poverty embedded in L.A.’s city lights. But, as you move toward the “West Side,” the poverty of the lowlands yields to wealth; generally, real estate prices escalate for land closer to the ocean. Residents farther west in the Pacific Palisades or Malibu may find it difficult to believe that there was a poverty-stricken, 57-square-mile segment of the L.A. area (mostly south and east of downtown) where the majority of residents were not even citizens into the twenty-first century. That is an area larger than the entire city of San Francisco!

Income disparity and racial segregation were not in the original plan when the Spanish founded a little pueblo along the Los Angeles River in 1781. By the early 1900s, newspaper and railroad tycoons and land barons teamed up with William Mulholland to bring water to the swelling population of L.A. The quest for resources grew with the annexations of surrounding lands, the population increase, and the booming economy. The path was paved for the movie industry. By 1915, Hollywood (within the official city limits of L.A.) was already the movie capital of the world. The discovery of oil pulled great industries, such as in transportation and defense, to the L.A. area. This growing industrial base and the mild climate attracted increasing numbers of people. As a result, the service economy boomed, thus providing more jobs.

As we have seen in other regions of California, housing developments, construction, aircraft plants, and an impressive tourist industry replaced agriculture and oil wells. Freeways stretched the settlements even farther until they filled the San Fernando, San Gabriel, and more distant inland valleys. The settlements filled Orange County and the pressure finally squeezed them into the canyons. Like chain-reaction explosions, outlying cities erupted almost overnight, mostly along freeways and highways. More recently, they have spilled north toward Magic Mountain and into Canyon Country, creating the city of Santa Clarita with a population of more than 216,000, and even farther out along Hwy. 14 to the high desert and Palmdale and Lancaster. (Each of those cities has more than 150,000 people.) To the northwest, cities such as Simi Valley and Thousand Oaks (both with more than 125,000) are bridging the former gap between L.A. and the Ventura/Oxnard Plain’s urban landscapes.

Like the developments in southern Orange County, the spread northwest of L.A. later in the 1900s was mostly an extension of the flight of white residents, money, and jobs from the inner city that was common in previous decades. Later still, the spread represented a migration from closer to more outlying suburbs. However, in the Antelope Valley and many of those other outlying inland valleys, these patterns are changing. These momentum changes became more noticeable during the recession that followed the housing collapse in 2008 and during the years of remarkable but inequitable recovery that made history into 2017. This leads us to reassess some of the sweeping generalizations that are so often made about L.A. by those who see it as too complex to understand.
FINDING L.A.: DEFINING ITS BOUNDARIES

Part of the difficulty in discussing L.A.’s issues and problems is that few can figure out, much less agree on, where this great city begins and ends. Because we’ve already considered Orange County, the eastern inland valleys, and some high desert suburbs, we are focusing here on Los Angeles County until we later sweep northwest and follow the Transverse Ranges.

There are many individual and unique neighborhoods within the city limits such as Echo Park, Boyle Heights, Silver Lake, Hollywood, Van Nuys, Woodland Hills, Westwood, Century City, and Venice, whose residents often identify more with their particular communities than with the city of Los Angeles. In the early 1900s, L.A. annexed many of these locations—especially in the San Fernando Valley—to expand its water rights. By the 1990s, efforts to preserve identity and uniqueness reached a feverish pitch; some residents of the San Fernando Valley saw their communities as so distinct that they launched a movement to secede from L.A.

In contrast, there is the long list of cities that are frequently considered part of the city of L.A. but are actually separate, official cities. A few examples are Santa Monica, Culver City, Beverly Hills, West Hollywood, and Inglewood. Finally, there are the unincorporated communities within Los Angeles County. They don’t belong to any city, and they aren’t official cities at all! East L.A. and Marina del Rey remained as examples in 2018.

Each of these communities proudly displays its own specific cultures, lifestyles, and human landscapes, but all of them are a part of that sprawling abstract painting, that great experiment known as L.A.

L.A. Evolves

First, although many proclaim that L.A. never had a plan, much of the booming growth through most of the twentieth century was not only planned, but welcomed by the city and surrounding communities. Unlike San Francisco, most of L.A.’s growth was ushered in with the automobile. Also, L.A. once had a light rail system that was one of the best and most celebrated urban transportation systems in the world. Since people were able to live away from the urban center, along or at the end of rail car lines, communities sprang up all around L.A.’s periphery during the early 1900s. When this most efficient transportation system was dismantled, the freeways and their cars took its place during the mid-1900s.

The population spread was further encouraged by land developers who convinced so many families to buy the American dream—a California-style bungalow on a big lot in a new, clean neighborhood away from the city. The San Fernando Valley and other L.A. suburbs were products of those developers’ and homeowners’ dreams. The plan was to disperse the population and make L.A. an assemblage of individual, loosely connected communities. With more modest population density gradients, Angelenos would be spared the cramped conditions typical of the huddled masses in great European and eastern U.S. cities. Instead, they would have a piece of their own space to enjoy the year-round sunshine delivered by the mild, Mediterranean climate.

Second, it is true that, as in most American cities, institutional racial segregation forced African Americans and other ethnic groups into specific neighborhoods. It is also true that white flight and the subsequent drain of wealth out of the inner city began to transform L.A. after World War II and accelerated into the 1960s and 1970s. Downtown began to resemble a ghost town at night and on weekends as workers took their paychecks home to spend in suburban shopping malls. Minorities and the poor were generally left behind in the inner city. Meanwhile, the primarily white suburbs thrived as people and money poured in. However, things began to change in the 1980s.

A booming economy brought redevelopment and gentrification to parts of L.A. as some young professionals, tiring of their long commutes, trickled back toward the city’s core. They evicted the poor, fixed up some of the old Victorians and bungalows, converted former office buildings into lofts, and reclaimed several neighborhoods. This trend mixed the population pot again and contributed to a more complex and fascinating human landscape into the twenty-first century. (Similar trends were affecting the San Francisco area and, to a smaller extent, San Diego and a few of California’s smaller cities.) Some of the displaced working class found homes in nearby neighborhoods, and some were left homeless. Many of them moved out to the hinterland. Cities such as Palmdale, Lancaster, and San Bernardino have received an influx of these low-income families. Consequently, many distant suburbs have now also become complicated human landscapes with diverse assemblages of families who represent many ethnic groups, cultures, and income levels. They, too, have “escaped” the urban core.

Finally, too often, L.A.’s many rich and diverse communities have been improperly lumped together. It is tempting, especially while traveling through the Basin by freeway, to discredit L.A. as a bunch of generic housing projects that eventually grew into one another, emerging as a bland, expansive megalopolis. Such superficial observations are not only incorrect, they are unfair to the many dedicated residents who identify with and are active in their specific
Communities and neighborhoods. After all, we are talking about more than 4 million people within the city limits and a population of well more than 15 million in the Basin and its connected settlements.

Divided L.A.
Los Angeles still has an economic center that stretches from the central business district, west along the Wilshire Corridor’s concrete canyon, into Century City and Westwood. Otherwise, economies and jobs in the Basin are so spread out, freeways are often jammed with commuters going in both directions (to and from downtown) during morning and evening rush hours. Perhaps understanding these economies is just as difficult as understanding the complex cultures and neighborhoods that make up L.A. and California. Today, there are new, powerful economic forces exerting pressure on Californians in general and Angelinos in particular, coming from information technologies and the global marketplace.

Current economic trends in L.A., as in most other California cities, are toward an economy with two distinct and very distant levels. Middle class manufacturing jobs have been replaced by two very different employment extremes. One extreme is represented by the high-paying, high-tech, research and development jobs and their associated high-level services (finance, trade, professional, and information technologies). On the other end are the growing low-paying, low-tech manufacturing jobs, such as garment sweatshops, and low-level services jobs, such as the fast-food industry and domestic workers.

The growing disparity in incomes and in levels of education and skills is tightening the social vise, increasing tensions between and within these classes, and challenging officials who are trying to figure out how to cope with the situation. To witness the impact these trends have on L.A.’s and California’s human landscapes, you need to only walk through the streets of Pico-Union or South L.A. and then walk through the streets of Brentwood or Beverly Hills. And since most of the victims of the mortgage meltdown of 2008 were recent working and middle class homebuyers, the gap between rich and poor grew larger throughout L.A. and California during the years of recession that followed. By 2017, L.A. and the state had been enjoying one of the greatest economic recoveries and growth periods in history. Still, most of the rewards passed over the working classes and poured into households of the educated and skilled. Growing homeless populations provided more evidence of these trends impacting every landscape.

The increased economic competition is also raising tensions between lower-income groups. These tensions are evident in places such as South-Central L.A., where Latinos have recently displaced African Americans to become the majority ethnic group. Intricately entwined economic and cultural trends are producing some fast-changing human landscapes throughout L.A. and California; such trends earn more attention here since they are common to most of California’s major cities.

Transverse Ranges North of L.A.

Counties (west to east): Santa Barbara, Ventura, northern Los Angeles and higher mountains to the east
Largest Cities: Oxnard (208,000+), Santa Clarita (216,500+), Thousand Oaks (131,500+), Simi Valley (127,500+)

Moving Northwest, into Other Urban Centers in the Transverse Ranges
Farther northwest is Ventura County, where the Ventura/Oxnard Plain’s rich agricultural fields are being consumed by the same kinds of industrial parks, shopping malls, and housing projects that took the San Fernando Valley and other L.A. suburbs by storm decades ago. Similar activities blossoming along the strip of Ventura Freeway (such as in Thousand Oaks) and in places such as the spreading Simi Valley are strengthening the connections with L.A. Experiencing so many of the same economic trends as L.A., this was one of the fastest growing regions in California into the twentieth century. Oxnard outgrew its older neighbor San Buenaventura (Ventura) many years ago.

Still farther to the northwest is the beautiful and still relatively isolated strip of Santa Barbara coast. Past development has been mostly limited to that thin coastal plain with the ocean on one side and the steep Santa Ynez Mountains on the other. Limited water supplies should play less important roles in the future since many of these communities connected to the California Water Project and have recently added desalination to their portfolios.

In spite of tourists, the crowded downtown shops, a growing University of California, and development that encroached from surrounding communities, Santa Barbara retains much of its magic and charm and an atmosphere that is more reminiscent of old California. Perhaps this is because it was just far enough from the explosive growth of L.A. and, more recently, Ventura and Oxnard. Perhaps it is because land values and rents are very high, there are not many high-paying jobs, and it is too far to commute into L.A. Whatever the reason, when that dry sundowner wind blows through the imported palm trees, over the historic mission, and toward its scenic beaches, Santa Barbara can still shine like no other California city.

It could be said that the sprawling suburbs of Canyon Country and amalgamated communities of Santa Clarita represent the antithesis of Santa Barbara. They are strongly connected by commuters to greater L.A. Developments that gobbled up open land at historic rates and new residents are being surrounded with the same L.A.-style suburbs, traffic, and expensive real estate they thought they had escaped. Breaking away from these suburbs in the heart of the Transverse Ranges (far away from any beach)
will probably require the use of a car and freeway. Just as many residents were struggling to redefine their communities so that past mistakes were not repeated, home values plummeted into the recession following the mortgage crisis that hit in 2008. Some new homeowners farthest from the coast lost up to 50% of their investments, causing economic ripples through every inland community. By 2018, these communities had ridden an astounding economic recovery wave that pushed housing prices well beyond pre-recession levels. As in other California communities closer to the coast, homeowners celebrated their wealth by spending it, while many renters were priced out of owning a piece of the California dream.

The Transverse Ranges have gained much of their fame because of their proximity to the Los Angeles Basin. On clear days, they seem to erupt from the edge of the San Fernando Valley and especially the northern edge of the San Gabriel and northeastern San Bernardino Valleys. These boundaries offer classic illustrations of dramatic human interactions with nature. The contrast between the Basin (with its warm winter sunshine, citrus groves, and palm trees) and the brilliant snowcapped peaks in the background was displayed on magazine covers and promotional brochures for decades. Today’s Los Angeles skyscrapers have replaced the orange groves in a modern version of these breathtaking views. Residents of the Los Angeles Basin from the valleys to Orange County and Santa Monica Bay beaches will recognize these familiar landmarks looming toward the north and northeast.

The chaparral on these slopes yields to woodland and yellow pine and even cooler forests at higher elevations that receive more than 75 cm (30 inches) of precipitation per year. This serves as important watershed, since much of the water flows down into the basin after accumulating in channels flowing through deep canyons. When the water out of the San Gabriel River and other channels is ponded into spreading basins at the bottom of the mountain front, it recharges future groundwater supplies. However, during heavy winter storms, it can produce dangerous and destructive flooding. This is especially true after summer and fall wildfires (such as the historic Station Fire of 2009 that burned a large portion of the San Gabriel Mountains) expose the slopes.

The cool forests and wintersnows of the San Gabriels and San Bernardinos have also been magnets for millions of visitors willing to brave winding roads and the short drive to escape the city. Weekend traffic jams bring the crowds who fill every picnic table, campground and trail, or winter ski resort. Here, especially along Angeles Crest Highway, is another example of how so many Californians strain to find a little piece of that remaining wilderness and open space that once helped make Southern California famous.

The same problems plague the smaller Santa Monica Mountains, which are also peppered with developments.
The Transverse Ranges’ name comes from the way they cut east–west, across the more common trend of landforms, through California. They represent rocks and slices of crust caught, crumbled, and lifted up throughout a wide region near the big bend in the San Andreas Fault Zone. The Transverse Ranges trend all the way from Points Arguello and Conception and the Channel Islands National Park on the west into the little San Bernardino Mountains and Joshua Tree National Park on the east. They are bordered by the Coast Ranges and Central Valley to the northwest and the southern tail of the Sierra Nevada (and Tehachapis) and Mojave Physiographic Provinces to the northeast. The Peninsular Ranges make up their southern boundary, and the Coachella Valley is at their southeastern boundary.

The Transverse Ranges are typically quite rugged and especially lofty toward the east. The San Bernardino Mountains include the resorts of Lake Arrowhead and Big Bear and its popular ski slopes. San Gorgonio Mountain is the highest in southern California at ~3,505 m (~11,500 feet). Across Cajon Pass and trending west are the San Gabriel Mountains, with ~3,069 m (~10,066 feet) Mount San Antonio (Old Baldy) Peak towering above Wrightwood and its popular ski resort. The rugged topography trends farther west to ~1,740 m (~5,710 feet) Mount Wilson and its renowned observatory. After becoming one of the world’s premier astronomical observatories earlier in the 1900s, its importance faded in later decades, partly due to the explosion of city lights in the nearby L.A. Basin. Thanks to new technologies, it enjoyed a rebirth by the start of this century.

A Geographic Pivot Point

There is an outstanding geographic pivot point in California. It stands out because the bending San Andreas Fault meets the Garlock and other faults there. It stands out where the corners of five different physiographic regions intersect (the Coast Ranges, Central Valley, Sierra Nevada’s Tehachapi extension, the Mojave, and the Transverse Ranges). It stands near where three different and fast-growing mountain ranges and three large basins are wedged together with many different rock types. It marks the center for a major mountain barrier between air masses to the north and south. It displays an amazing mix of plants and animals that have crept in from cismontane and transmontane, central and southern California, from lower to higher elevations.

This pivot point sits on a definitive natural and cultural boundary between southern California and the rest of the state. Three counties (Ventura, Kern, and Los Angeles) intersect at this point near Frazier Peak and Tejon Pass. Even the cars, buses, and trucks on I-5 must strain to get over this barrier, as if some unknown force was trying to make them turn back before it was too late, to discourage them from entering that different world on the other side. All of these factors come together on the map and on the ground to create a unique landscape at this most unusual geographic pivot point. Perhaps this is why so many artists, photographers, and scientists have been attracted to these landscapes.

We are getting closer to the end of our clockwise sweep around the various regions of the Golden State. It’s time to head northwest from here, into the Coast Ranges. Returning to our usual order, we will first look at the physical geography of the entire region, and then its human geography, saving the human landscapes of the San Francisco Bay Area for last. We will finally complete our journey with a brief view of the Central Valley.

The Central Coast and Coast Ranges

Counts (south to north): far northern tip of Santa Barbara, San Luis Obispo, Monterey, San Benito, Santa Cruz, Santa Clara, San Mateo, Alameda, San Francisco, Contra Costa, western edges of several San Joaquin Valley counties, Marin, southwestern Solano, Sonoma, Napa, southern Mendocino, Lake, western edges of Glenn and Colusa

Largest Cities Well Beyond the Bay Area: Salinas (162,500+), Santa Maria (106,500+), Santa Cruz (65,100+), Watsonville (53,100+), San Luis Obispo (47,000+)

Here, we consider the Central Coast and Ranges west of the Central Valley. They trend northwest along the coast and the San Andreas Fault Zone from north of the Transverse Ranges and finally blend in with the northern Coast Ranges and the northwest coast somewhere in Mendocino.

FIGURE 1-21 Traffic strains along Interstate 5 to get up the Grapevine at Tejon Pass. We travel south and over the pass, the main entryway to southern California by car.
County. There is no clear northern boundary, but the northern Coast Ranges and Klamath Mountains tend to be higher, more rugged, and wetter.

Major mountain ridges and valleys of the Coast Ranges trend strikingly parallel to the northwest–southeast trending San Andreas and other splinter faults. They present formidable barriers to east–west travel throughout the range. San Francisco Bay is often used as the break between the north and south Coast Ranges and with good reason. First, the path from the Golden Gate into the Bay and Carquinez Strait and on into the Delta is the only major natural break slicing across the Coast Ranges. This gash not only serves as a conduit so that ocean air can flow into the Central Valley, but also as a channel for deep-water vessels into the valley. It is the path followed by both saltwater, when it encroaches inland during high tide and freshwater from the Delta that flushes the system during heavy runoff and low tide.

Ridges of the Coast Ranges tend to be lower in the south, ranging above 600–1,200 m (about 2,000–4,000 feet). Major ranges include the Santa Cruz Mountains down to Monterey Bay and the Santa Lucia Range down to Morro Bay. On the inland side are the Diablo Range east and south of the Bay Area and the Temblor Range farther to the southeast. Deep and sometimes broad valleys often parallel these ranges. The greatest is the Salinas. The Salinas River headwaters drain toward the northwest all the way from San Luis Obispo County. The river continues to flow northwest through the productive farmlands of a widening Salinas Valley, past King City and Soledad, and toward Salinas. Finally, the Valley and its river spill out into the Monterey Bay and its submarine canyon, bounded by Santa Cruz on the north and Monterey on the south. Farther north is the Santa Clara Valley; it trends southeast out of San Jose and the Bay Area and into Hollister.

North of San Francisco Bay, the Coast Range ridges eventually reach higher and are more remote. The northern ranges also receive considerably more rainfall. This generally results in more lush forests, especially on western slopes, compared to the southern ranges. “The Redwood Empire” was named with these forests in mind. In Lake County, Clear Lake is the largest freshwater lake totally contained within California’s boundaries. Even in the northern Coast Ranges, the inland valleys are hot and dry during the summer. Good examples include the Sonoma and Napa Valleys, which receive abundant rainfall in the winter but turn warm and dry during summer, providing perfect grape-growing climates. Even farther north of the Bay Area, the valleys and the coast tend to be more narrow strips.

These coasts north and south of the Bay Area are also some of the most picturesque, photographed, and famous landscapes in the world. From Morro Rock to the cliffs that erupt out of the sea at Big Sur, from Carmel and Monterey Bays, to Año Nuevo, Pescadero, and Half Moon Bay, spectacular rock formations combine with a patchwork of plant communities and misty fog for some unparalleled coastal scenery. North of San Francisco, equally accessible and splendid coastal landscapes are on display from Stinson Beach to Point Reyes National Seashore and from Bodega Bay all the way up the Sonoma and Mendocino coastlines. Several of nature’s attractions more inland and close to Bay Area populations include Big Basin Redwoods in the Santa Cruz Mountains, Muir Woods in Marin County, and, farther north, the Russian River summer resorts near Santa Rosa. (The Russian River also follows an inland valley, flowing southeast until it turns west just before Santa Rosa and slices through the Coast Ranges to Jenner and the Pacific.) As we move even farther northwest in the Coast Ranges, primary industries, ecotourism, and rural cultures dominate the bucolic landscapes.

![FIGURE 1-22](image1.png)

**FIGURE 1-22** Vineyards spread across bucolic landscapes of Central California’s southern Coast Ranges. The lone oak tree reminds us that our appetite for California’s fine wines has created an explosion of vineyards that are replacing some of California’s most scenic natural landscapes. Surviving oak woodlands may be seen farther up distant slopes, beyond the rows of grape vines.

![FIGURE 1-23](image2.png)

**FIGURE 1-23** McWay Falls is one of the most iconic sights on the Big Sur Coast. It is located in Julia Pfeiffer Burns State Park.
Human Landscapes of the Central Coast

Monterey Bay and the Salinas Valley probably have the richest history along this coast outside the Bay Area. There were once nearly 100 sardine-packing plants during the great fishing boom along Cannery Row in Monterey. The fishing boats can still be seen in Monterey, Morro Bay, and other Central Coast spots. However, none of these coastal communities rely on fishing to fuel their economies as they did many decades ago.

Today, from Monterey Bay Aquarium and Carmel-by-the-Sea to Big Sur, San Simeon, and Morro Bay, tourism is king, and it is enhanced by some impressive art communities. The Monterey Peninsula entertains more than 2 million tourists each year; the shops and other tourist attractions in Monterey and Carmel are testimony to this. To the north, Santa Cruz is a historical tourist destination, especially for working folks escaping the Central Valley’s summer heat or the Bay Area’s crowds. This tradition continues, but a more diverse economy now includes modern industries and the University of California, Santa Cruz.

More recently, the saturation of high-tech industries in the Silicon Valley has pushed people and money over the Santa Cruz Mountains, spilling along the Santa Cruz and Monterey Bay coast. The familiar victims in this rush to welcome upscale lifestyles and landscapes are working-class and even middle-class households forced to pay higher prices to crowd into smaller spaces.

Between Monterey and Santa Cruz, once booming communities grew in the shadow of Fort Ord, which helped fuel their economies. Since the military base closed, Seaside, Marina, and many other surrounding communities have looked toward other land uses and economic engines (such as Cal State University, Monterey Bay) to lead the way.

Meanwhile, nearby Salinas Valley communities have no identity crises. They continue to thrive in some of the most productive farmlands in the world, the same places John Steinbeck wrote about. Here also is that same disparity, income we have noted previously between those who plant and harvest the crops and those who run the farms; it would look very familiar to someone from the Imperial Valley. By the 2010 Census, about 75% of the Salinas population reported to be of Hispanic or Latino origin. To the south, Cal Poly, retirees, and transplants from Southern California help fuel the economy and increase land values in the San Luis Obispo area. Gone are the days when you could sell your modest home in L.A. and buy a small ranch in these rolling scenic hills. A piece of the California dream now comes with a big price tag even in the misty enclaves around Morro Bay.

Finally, way down on the southern tip of the Coast Ranges (or northern Transverse Ranges) along the Santa Maria River is little Santa Maria, which at more than 100,000 is no longer so little. Santa Maria is not a tourist town, though attempts are being made to diversify its economy. Unfortunately, since the end of the twentieth century, it has experienced some of the problems connected to rapid growth (as commuters found cheap land in its exurbs) even though it is not a suburb attached to any city. It stands in real contrast to the picturesque, gently rolling hills with grasslands and oak woodlands so common to other stretches of Hwy. 101. If there is a nostalgic landscape typical of California’s mission days, you may find it along or near Central California’s Hwy. 101, but not in Santa Maria, where suburban-style landscapes and lifestyles are common.

Human Landscapes of the San Francisco Bay Area

Largest Cities: San Jose (1,046,000+), San Francisco (875,000+), Oakland (426,500+), Fremont (232,000+), Santa Rosa (~175,000+), Hayward (161,500+), Sunnyvale (150,000+)

Although Bay Area residents may resist the idea, their human landscapes have much in common with Los Angeles. We can make a brief list of those common events that have had similar results in the Bay Area. First, as San Francisco, Oakland, and other traditional centers bulged during the middle to late 1900s, populations broke away to establish enormous outlying suburbs. Many went to the South Bay, others to the East Bay, and they more recently filled some open spaces north of the bay. Some even found inexpensive homes in more distant Central Valley exurbs only to participate in the tortuous commutes required to make a living. Second, like Los Angeles, portions of central San Francisco and Oakland experienced urban decay during and after the mid-1900s. Mainly white populations moved to the suburbs along with money and jobs while lower income families and minorities were left behind. This trend eventually impacted even San Jose’s downtown. Third, these problems were further exacerbated by redlining and the unwillingness of businesses to invest in some of these blighted communities.

Just as in Los Angeles, from the 1980s into the twenty-first century, urban redevelopment and gentrification attracted young professionals back to the city (especially San Francisco), and the poor were squeezed further, many to the outlying suburbs. The result is that some lower-income and minority families have populated a few of the suburbs far out on the urban fringe. As Bay Area suburbs grow, traffic jams, pollution, and crime may also grow. Today, public officials are straining to create efficient infrastructures that will serve the edges of what has evolved into a complicated megalopolis.

Finally, the economies of the Bay Area, like Los Angeles, have also evolved away from the traditional military and manufacturing emphasis to high-tech, trade, entertainment, and service industries. There is also a growing gap between the rich and poor, though it is less extreme than in Los Angeles. As in southern California’s Inland Empire, new homeowners of the working and middle classes (especially those who bought in new developments on the urban fringe at the start of the century) were most impacted when the real estate bubble burst by 2008. Thousands of these
families lost their homes and were thrown into the tempest and suffering of the recession that followed. This (and rising fuel prices) at least temporarily slowed the great migrations to distant suburbs. Years of remarkable and historic economic recovery that continued through 2017 transformed every lifestyle and landscape in the Bay Area. Though this latest renaissance may have first erupted in the high-tech urban centers of the Silicon Valley and San Francisco, its ripples have pushed through Oakland, Berkeley, and Fremont and into more distant suburbs to the north and east all the way to the Delta. The result is a striking polarization of households and landscapes ranging from those mired in poverty to those celebrating cutting-edge technologies and some of the greatest concentrations of wealth in world history. Sound familiar? These cycles continue shaping Bay Area landscapes.

The Bay Area is Unique
Perhaps to the delight of northern Californians, there are also some major differences between their Bay Area and the Los Angeles Basin. Though many southern Californians cherish their beaches and surrounding mountain playgrounds, dramatic human–nature interaction seems to call out more frequently from Bay Area landscapes. And though the Bay Area is not as famous for its warmer beach climates and cultures or its crippling traffic gridlock, its landscapes display more care and sensitivity to preserving their gifts of nature. You may be less comfortable jumping in the ocean without a wetsuit, but the Bay Area’s natural landscapes, treasures, and playgrounds seem more accessible to more of its people. You will find more frequent views of dramatic natural landscapes juxtaposed against dense human settlements. These settings continue to inspire

![San Francisco, built before the car, is still squashed together on its little peninsula. Cable cars in the foreground are reminders of The City’s celebrated history. The old Bay Bridge is seen in the distance, rising up from the bay, pecking through downtown skyscrapers. A large section of it has since been replaced by a more seismically sound structure.](image1)

![From the top of Mt. Tamalpais, we look down on Marin County and southeast toward San Francisco and the Bay. The old Bay Bridge and East Bay are seen in the distance to the left.](image2)
emotions, music, art, and books like this, only with a Bay Area focus. How did this happen?

First, San Francisco experienced most of its growth and development before the automobile. Its narrow, pedestrian-friendly streets and diverse neighborhoods are packed close together. In this respect, San Francisco more resembles Boston rather than a typical California city. Second, unlike L.A. or San Diego, San Francisco is a tiny city in area; once it filled its little end of the peninsula, it could not expand outward. It had to become denser and grow upward, while the overflow populations were sent to neighboring cities. This is why “The City” has often been called the city without a suburb, in contrast to Los Angeles, which was once considered a group of suburbs without a city.

Second, there are no great lowlands in the Bay Area to support the continuous interlocking developments common in the Los Angeles basin. Instead, spreading populations have always been detoured around the huge bays and then often confined between steep hills. When all these factors are considered, it is easy to understand why so much unlikely development has occurred on such steep slopes that would otherwise seem to prohibit settlement. However, the real barriers are the great bays.

San Francisco has one of the world’s largest natural harbors. San Francisco Bay spreads out south of San Francisco and Oakland. Some great cities are built on the flatlands surrounding it. They include Alameda, Hayward, San Mateo, Redwood City, Palo Alto, Fremont, Santa Clara, and San Jose to the south. North of the San Francisco–Oakland Bay Bridge are Berkeley, Richmond, and the Marin County settlements. The sprawling communities north of San Pablo Bay include Petaluma, Rohnert Park, huge Santa Rosa, and the growing communities up along the Napa and Sonoma Valleys. From Vallejo, cities have even grown near the shores of the Carquinez Strait and Suisun Bay and into the Delta. The Bay Bridge and the Richmond–San Rafael, San Mateo, and Dumbarton Bridges represent bold attempts to link these cities. But, that giant bay that separates the city lights continues to be the most conspicuous part of Bay Area landscapes.

Finally, the Bay Area population, at more than 6 million, is still less than half that of the Los Angeles area. This and the dividing effects of the bays have made this region a little more manageable and user-friendly. As proof of this, in the 1990s the region was temporarily taken off a federal list of urban areas with dangerously polluted air, and it has met many more air quality standards than L.A. ever since. Another example is how the Bay Area Rapid Transit (BART) system has combined with other transportation services to deliver relatively convenient, reliable, and popular public transportation. The compact city of San Francisco has the finest transportation system in California, with the most options for its riders. And while San Francisco and other Bay Area cities struggle to maintain and update their established public transportation, L.A. is engaged in frenzied and historic efforts to build out its network. This public transportation convenience also encourages tourism. “The City” is always near the top of urban tourist destinations in the United States.

San Francisco erupted as a Wild West city almost overnight during the Gold Rush. The City’s strategic position had and still has everything to do with the bay and the city’s perch atop the entrance to it (the Golden Gate). It quickly became the financial capital of the west and held that distinction from the mid-1800s to the mid-1900s, until Los Angeles took over. Its ability to attract people from so many ethnic groups, cultures, and lifestyles, often shunned by their homelands, has prevailed since its early and wild gold rush days. The African American population in the Fillmore and Bayview-Hunters Point, Latinos in the Mission, Italian Americans at North Beach, the gay and lesbian community in the Castro, and some of the greatest concentrations of Asians and Pacific Islanders in the country make it difficult to find another city of its size with such cultural diversity.

San Francisco quickly grew from the mid-1800s as a real city with a real skyline and a definite central core. Slicing through today’s towering downtown concrete canyons is Market Street; for a short distance, it easily triumphs over its southern counterpart—Los Angeles’ Wilshire Boulevard—as the city’s central strip. San Francisco’s central business district is still well defined as are most of its other districts and neighborhoods. It continues to evolve as a walkable, exciting, and entertaining urban center, but a serious housing crunch has been created by those who compete to live in The City. The growing populations were forced to other Bay Area cities. After World War II, Oakland was also developed and the masses spilled away from urban centers and settled south, east, and north around the bays and then, by the twenty-first century, into more distant suburbs previously discussed. Just as in the L.A. area, each community has a unique story to tell. So don’t let San Francisco’s well-earned history and fame cast shadows on other big Bay Area cities. San Jose, Oakland, Fremont, Hayward, Sunnyvale, and others could be dominating urban centers in most other states.

Moving Away from San Francisco and Oakland

Just to the south there is Daly City, a bedroom community suburb identified with a 1960s song about “ticky-tacky” little boxes on the hillsides. Across the bay lies Berkeley, famous for its experimental politics and as the location for the state’s first University of California. There’s quaint Point Richmond, with beautiful views across the bay on one side and Richmond on the other with its refinery, working class, and notable African American community. From here, across the Richmond–San Rafael Bridge and connected to San Francisco by the Golden Gate Bridge is Marin, one of the wealthiest counties in the United States. Marin County residents have staged some monumental and successful battles to keep out the developers who have filled surrounding lowlands. However, the string of swelling
suburbs in counties to the north of San Francisco along Hwy. 101 skipped all the way up to Petaluma, Rohnert Park, and Santa Rosa.

Almost as a mirror image with the north, the communities of the South Bay have experienced impressive, but earlier, growth as they culminate in California’s third-largest city, San Jose. When communities northwest of San Jose bathed in the industrial and technological riches brought by Stanford researchers and the computer industry during the 1970s, their lowland area took the name “Silicon Valley.” San Jose housed many of the workers in these new industries until it earned the reputation of a little L.A. without the culture. As its bedroom communities grew together, they drained San Jose’s downtown and created an enormous suburb, complete with malls, traffic jams, and smog.

Unlike San Francisco, San Jose had plenty of room to grow, so it surged ahead of The City in population later in the 1900s. The fingers of development have crept ever farther southeast and into the Santa Clara Valley communities of Morgan Hill and Gilroy. However, after high-tech industry slumps into the early 1990s, a magnificent boom in the late 1990s, followed by another downturn in the early 2000s and another boom by 2012–2017, the area’s cities are considering methods to diversify their economies. As San Jose continues to claim the title, “California’s City of the Future,” its residents and officials work hard to define what that future city should be.

All of this is similar to the massive developments in the East Bay’s inland valleys. Mount Diablo now looks down on the daily traffic jams and congestion created as Concord and Walnut Creek grow together. These inland valleys are shielded from direct sea breezes, so they are hotter and drier during the summer. The valleys, with their new developments, extend even farther east to Pleasanton and Livermore with its renowned research laboratories. The story is also too familiar as many of these East Bay communities are competing for high-tech and service industries to fuel their economies.

The developments have spread even farther east, into the Delta and Central Valley. Commuters are finding less expensive homes out there, but they are also spending long hours commuting toward Bay Area jobs. Although most residents claim they don’t want to create another Los Angeles, it is not difficult to visualize another megalopolis stretching from San Francisco north through Santa Rosa, south past San Jose, east through the East Bay, into the Central Valley, and all the way to Sacramento. Developments have already spilled into and filled these valleys with their views of Mount Diablo. These trends are familiar: the search for affordable land and space moves California growth farther inland. The collapse of the real estate market that rippled through and devastated some of these communities after 2008 is a reminder that past experiences may not always be the best predictors of future trends in the exurbs. By 2017, several years of historical economic growth poured wealth back into these communities, enlarging the gaps between rich and poor neighborhoods and their landscapes of contrasts and contradictions.

We have reached the Central Valley. This is the center of our clock and the end of our journey.

**Central Valley**

*Counts (north to south):* southern tip of Shasta, Tehama, eastern Glenn, western Butte, eastern Colusa, Sutter, western Yuba and Placer, Yolo, Sacramento, north-eastern Solano, San Joaquin, Stanislaus, Merced, southwestern Madera and Fresno and Tulare, Kings, western Kern

*Largest Cities:* Fresno (526,000+), Sacramento (493,500+), Bakersfield (384,000+), Stockton (321,000+), Modesto (215,500+)

**Natural Setting**

The **Central Valley (Great Valley)** competes with the Sierra Nevada as the largest province or landform in California. It stretches more than 640 km (400 miles) from southern Shasta County south to the Tehachapis and more than 80 km (50 miles) at its widest from the Coast Ranges to the Sierra Nevada. It is also bordered by the Klamaths and **Southern Cascades** to the north, while its southern end is near that geographic pivot point with four other physiographic provinces.

This extensive, mostly flat valley near sea level exhibits remarkable uniformity, especially for a California region. It is divided into two sections at the Delta. The Sacramento River and its tributaries drain the northern part of the valley (the Sacramento Valley) into the Delta. The San Joaquin River and its tributaries drain most of the San Joaquin Valley into the Delta, except for far southern portions, which exhibit inland drainage.

This elongate valley has been downwarped for millions of years between the Sierra Nevada and Coast Ranges. It has also been filling with thousands of feet of sediment during that time. Oil is extracted from some of the relatively older sediments in and around the San Joaquin Valley, while productive aquifers are also tapped for their valuable irrigation water. But the younger surface sediments are even more productive. The soils formed on them are some of the richest in the world.

The Central Valley receives scant precipitation compared to its surrounding mountains. However, for millions of years, rivers and streams flowing out of these mountains (especially off the western slopes of the Sierra Nevada) have delivered rich sediment and abundant water to this basin. Native grasslands once dominated the valley, and wide paths of riparian forests grew along its waterways. During heavy runoff, water frequently ponded to form huge lakes in the southern San Joaquin Valley, while the Sacramento and San Joaquin Rivers often flooded much of their valleys and their delta.
People Bring Changes to the Central Valley

The greatest water projects in the world have controlled annual floods and distributed the water more evenly throughout the year. These projects have also allowed ocean vessels to navigate along waterways to places such as the Port of Stockton and past Sacramento up the Sacramento River. They have also stored tremendous amounts of water for irrigation in what is the greatest and most productive agricultural valley in the world. The result was the early demise of those native grasslands. These topics are addressed in more detail later in this book.

Evidence of agricultural productivity can be witnessed while traveling along Hwy. 99 or I-5 during any summer when caravans of trucks are full of tomatoes, onions, cotton, and other crops. Great cattle yards, such as those along I-5, harbor thousands of cattle just before they become hamburgers for the fast-food restaurants that originated in California and now line those monotonous strips of Central Valley highways. (By 2015, the multi-billion-dollar dairy and beef industries were the first and fourth leading agricultural commodities in California.) Californians can thank the Central Valley for making the state number one in agriculture in the United States.

Even the weather contributes to this productivity. Sun rules during spring, summer, and fall and growing seasons are long, especially in the southern part of the valley. However, stagnant weather conditions that trap summer smog also allow winter’s dreaded cold tule fog to settle and thicken out in all directions within this lowland protected by barriers on all sides.

Human populations are now also settling into these massive lowlands, consuming some of the most productive farmlands in the Valley, and bringing the same issues and problems we have seen elsewhere: traffic congestion, pollution, inadequate infrastructure, crime, urban sprawl, the loss of open space, and how to diversify and modernize the economy. These dramas that have already been played out by so many California cities in milder climates closer to the coast are now being repeated in the Central Valley as its cities begin to grow and merge together into what could be California’s new and most surprising megalopolis of the twenty-first century. The difference in this region is the powerful grip agriculture has had even on many urban economies and cultures since people settled in the Valley. Evidence includes the myriad dealers displaying their latest tractors, other farm equipment, and repair services along the highways. These scenes stand out in contrast to the expanding urban landscapes gobbling up nearby farmland.

A Journey from South to North in the Central Valley

Bakersfield is the king of the southern San Joaquin Valley. This area has taken the nickname “Nashville West” because of country music’s popularity in the area. The honky-tonk sound was refined here in the cowboy beer joints and nightclubs as more than one country western performer and native son gained national fame. This city was built on the Kern River where wealth from rich agricultural land and nearby oil fields was enhanced by major transportation corridors that cut through the area.

Fresno combines with its smaller neighbors to the south (including Visalia, Tulare, and Porterville) to represent the focal point of the central San Joaquin Valley. It also straddles Hwy. 99, but it is near the entrance to celebrated Kings Canyon and Sequoia National Parks to the east. It once earned the title “Raisin Capital of the World,” a label that could only be attached to such an agricultural giant. (Nearby Selma has claimed that title more recently.)

The agribusiness that dominates throughout the Valley also rules here where the Valley’s ethnic diversity (including an especially large Latino population) stands out. Its economy has been diversified by such additions as a large Cal State University campus. On the western side of the Valley opposite Fresno, farms give way to more extensive cattle grazing on drier lands.

North of Fresno, smaller communities are strung out along Hwy. 99 and the major railroad lines that parallel it. They culminate with Modesto and even larger Stockton, with its deep-water port. Here is where the waters of the San Joaquin and Sacramento Rivers converge to flood their delta. The miles of Delta channels meander around belowsea-level islands that are protected by a complicated system of connected and aging levees, zigzagging across the landscape like so many elongated excavation mounds. Here is also where the East Bay’s urban sprawl is spilling farther east to meet Valley developments. Mount Diablo seems to

FIGURE 1-26 The State Capitol Building is surrounded by downtown Sacramento’s mix of parks, historical architecture, and modern office towers. Government services remain a vital part of Sacramento’s economy, but fast growth has brought many more diverse industries, while the city struggles to preserve its rich history.
punctuate the southwestern horizon of all of these Delta landscapes.

Moving north into the Sacramento Valley, there is Davis, a bicycler’s haven made famous by its UC campus with a traditional emphasis on agriculture. Finally, there is Sacramento, the modern state capitol and one of California’s fastest-growing urban areas where the meandering Sacramento and American Rivers meet. This was another Wild West product of the Gold Rush; it also erupted almost overnight in the mid-1800s. Until sediment from hydraulic mining clogged the Sacramento River and its tributaries, boats hauled people and cargo past Sacramento to the gold fields and towns and back to San Francisco. Ships returned decades later after the sediment had finally been flushed.

Sacramento and Beyond

Meanwhile, Sacramento’s location at the end of the transcontinental railroad kept the attention of business people, shipping industries, and land barons across the state. Agriculture ruled for decades, but its importance continues to wane within a more diversified economic environment. This includes a reduced military presence, the official state business for 40 million Californians, industrial parks, commercial districts, and a Cal State campus.

It is appropriate to complete our clockwise sweep of California here in Sacramento. It is the center of some of California’s most magnificent history. It is in the center of this enormous physiographic region spread along the state’s midsection. It is the center of the state’s political structure, and it is now experiencing the same profound changes and confronting the same problems and issues common to nearly every California city.

How can we deal with the rapid growth that so often destroys the identities of our cities and communities? What will happen to the open space and productive farmlands consumed by our seemingly insatiable appetites for continued growth? How will we attack the modern urban problems such as congestion, pollution, crime, and quality of life while we build the economies and infrastructures required to serve California’s people?

These and other questions continue to haunt Californians, partly because we fail to put aside our partisanship and self-serving agendas long enough to come to some productive compromises. Once again, this time as the Sacramento urban area expands and even begins to meet with developments expanding from the East Bay, we are becoming the victims of change instead of making change work for us. Will we manage to come together and create better living environments that will improve our quality of life? Some answers may be found in landscapes within Sacramento and throughout California.

Perhaps there are clues in the beautiful Victorian homes that have been preserved (some now housing small businesses) along the tree-lined streets and near the old Governor’s Mansion east of downtown Sacramento. Perhaps there are answers in the displays assembled by each California county in the hallways of the State Capitol building, which may represent attempts by residents and officials to define who they are and show where they are going. A walk down Capitol Avenue and onto the bridge over the Sacramento River, then back into refurbished Old Town reveals a mix of our past and current landscapes and leaves hints of possibilities for the future. Even the simple contrasts between the struggling Downtown Plaza (Downtown Commons) and the adjacent open K Street Mall (responding to similar challenges with its own redevelopments) suggest that we cannot decide which basic urban environment is best; perhaps it is actually a combination of diverse landscapes and choices that make us most comfortable.

These kinds of observations once again take on a grander scale as we move out of the downtown and into surrounding neighborhoods and outlying communities. How do we deal with the growing gap between rich and poor, the interaction between diverse cultures, and the human landscapes these trends inevitably produce? Look around for the changes and trends that leave their marks on every California town and city.

What is to become of the smaller agricultural service towns and the sweeping farmlands north of Sacramento? How are the larger settlements strung up through the Valley (such as Yuba City and Marysville, and Chico with its CSU campus) dealing with the quiet that returned after busy I-5 bypassed them far to the west years ago? As some of these historical agricultural towns deflated in the late 1900s, communities such as Chico reinvented themselves into the new century. You might notice this in Chico’s downtown music festivals and farmer’s markets that bring the more progressive college crowd together with a more traditional rural culture. How far will the Central Valley’s perfectly square roads and developments encroach up Sierra Nevada slopes after they are forced into the twisted patterns that match the more rugged topography above the Valley? What best represents Central Valley’s and California’s future: the real estate collapse and recession of 2008–2010 or the historic and uneven growth that followed through 2017? Perhaps we can try to imagine what it will be like to climb to the top of the conspicuous Sutter Buttes volcanoes for a view of Sacramento Valley landscapes 50 or 100 years from now.

As Californians debate so many of these issues, we see once again that California’s diverse natural and human landscapes and people are related in profound ways. And they are always changing.
Moving On to a Modern, Systematic Geography of California

Layered beneath the Central Valley are thousands of feet of sediments washed down from the surrounding mountains during millions of years of geologic history. These and other California rock formations reveal fascinating clues about some of California’s most distant past.

In the next chapters, we will begin with these ancient California landscapes and work our way to modern natural landscapes. In later chapters, we will review the various human patterns and landscapes scattered about the state. This begins our systematic study of the related topics that combine to make California geography so captivating and useful through this twenty-first century.

Some Key Terms and Topics

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Like the Golden Gate Bridge and the “Hollywood” sign, Yosemite Valley is a widely recognized symbol of California and the dramatic wonders to be found here.