CHAPTER 7.
Outdoor Recreation in a Shifting Societal Landscape

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KEY FINDINGS

Population

- The South grew considerably faster (32.5 percent) in total population in the 18 years between 1990 and 2008 than the Nation as a whole (22.2 percent). The region has just over half of the country's non-Hispanic African American population (18.9 million) and is a close second to the Rocky Mountains in both the size and rate of increase of the American Indian population. Since 1990, the South (heavily influenced by Texas and Florida) surpassed the Pacific Coast (strongly influenced by California) in Hispanic population to lead the Nation, with growth especially high in North Carolina and Georgia.
- In the South, the baby boomer generation age groups (44-64 years old) have dominated all others in percent growth since 1990. The South and the Rocky Mountains were the only regions to outpace the national growth rate for every single age group.
- The greatest current density of population for the South is in Florida, in the Piedmont areas of North Carolina to Georgia, and in eastern Texas. Other high-density areas of the South include many of the coastal counties, both on the Gulf of Mexico and along the Atlantic Ocean.
- The highest growth in density of population (persons per square mile) has occurred down the Piedmont and Southern Appalachians from North Carolina to Alabama, along the coasts of Florida, and around the major cities of Texas. Some of this growth was substantial and exceeded the U.S. Census Bureau definition of an urban area, 500 persons per square mile. In areas like eastern Texas, higher concentrations of people in places near public lands and bodies of water are likely to put increasing pressures on these limited resources.
- With moderate growth, the population of the United States is projected to exceed 447 million people by 2060, an increase of more than 47 percent. For the same period, projected growth for the South is nearly 60 percent. The Atlantic States area in the South ranks second among its nine U.S. counterparts, at 68 percent forecast increase in population, followed by the Pacific Northwest with 63 percent. Of the 13 Southern States, Florida, Virginia, and Texas are projected to grow faster than the South-wide rate of 59 percent.

Recreation Demand

- One overriding recreation trend seems clear—what people now choose to do for outdoor recreation is different from choices made by and available to previous generations. Fishing and hunting, often considered widely popular and among the more traditional of outdoor activities, are still somewhat popular but are being replaced by other activities such as wildlife or bird watching and photography.
- For the South, the rate of growth for both the total number of outdoor recreation participants and total annual activity participation days exceeded those of the Nation. In the last decade, participants 16 years old and older increased about 11 percent, from about 68 million to 75 million, with their number of annual participation days increased by 41 percent. Average activity participation days per person across the full list of 60 activities rose from about 310 days per year to 393 days, a 27-percent increase. Some of the faster gains can be attributed to a slightly higher population growth rate than the Nation between 2000 and 2008. The number of people 16 years old and older increased from just fewer than 70 million to around 79 million, a 13-percent gain. In the United States, age 16+ population grew just under 10 percent, from 214 million to about 235 million.
- Of the most popular activities in the South (which has more than 30 million recreation activity participants), the top six activities were walking for pleasure, family gatherings outdoors, gardening or landscaping, viewing/photographing natural scenery, sightseeing, and visiting outdoor nature centers. Other popular growth activities included driving for pleasure, viewing/photographing flowers and trees, viewing/photographing wildlife (besides birds and fish), swimming in an outdoor pool, and picnicking. Activities oriented toward viewing and photographing nature (scenery, flowers/trees, and wildlife) have been among the fastest growing in popularity.

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- For moderately popular activities (10–30 million participants), the most popular were viewing or photographing birds, bicycling, gathering mushrooms/berries, warmwater fishing, visiting a wilderness, visiting a farm or agricultural setting, viewing and photographing fish, and day hiking. Growth has been especially strong for off-highway vehicle driving, gathering mushrooms and berries, and visiting farms or agricultural settings.
- Among activities having fewer than 10 million participants, camping at primitive sites, big game hunting, waterskiing, using personal watercraft, and equestrian activities were at the top and showed some growth. Kayaking was the fastest growing of these activities by a wide margin, followed by other water-based activities such as waterskiing and canoeing. Some activities posted declines during this decade.

Recreation Resources

- Less than 5 percent of Federal land, about 30.5 million acres, is in the South, 44 percent of which is managed by the Forest Service, U.S. Department of Agriculture. More than 92 percent of Federal land is located in the Western United States.
- While Federal acreage changes little over time, population changes greatly. In the South, Federal acres per 1,000 persons declined slightly faster than the national rate, with a 15.4 percent decrease in acres per 1,000 people since 1995.
- The South accounts for just 2.5 percent of the area of the National Wilderness Preservation System (NWPS), about 2.7 million of the over 109 million acres. Due to population growth, the South's per capita acreage of NWPS land has declined nearly 16 percent since 1995.
- National Wild and Scenic Rivers and National Recreation Trails are two specially designated Federal protected resource systems. Only 810 miles of National Wild and Scenic River miles are in the South (about 6 percent of all designated river miles), but the 31 percent increase in protected Southern river miles since 2000 trailed only the Rocky Mountains region.
- There are more than 6,500 National Recreation Trail System miles in the South, almost 33 percent of the system nationally. Further, the South led all regions with 84 percent growth in designated trail mileage since 2004, adding nearly 3,000 new trail miles.
- The South has just over 12 Federal recreation facilities per million people, or about 1 facility per 83,000 people, according to the Recreation Information Database maintained by the U. S. Department of the Interior. The South is fairly well represented in the number of Federal recreation sites with boating facilities.
- State park systems throughout the country have faced difficult budgetary pressures as a result of the economic recession of the late 2000s. Two of the most affected State park systems—Alabama and Georgia—are in the South.
- State park system areas total more than 2.2 million acres in the South. Throughout much of the region, especially in Florida and South Carolina, State park resources are situated within an hour's drive of most people.
- Nationwide, more than 8,800 local governments provide recreation and park services. Just under 29 percent of these services (2,552 local units) were in the South. The number of local parks and recreation departments per million people was up almost 18 percent in the South since 1997, higher than the national growth rate of 13 percent. Another indicator of local government recreation and park resources is conservation funding, which is tracked through ballot measures in all 50 States by the Trust For Public Land's LandVote database. Since 2000 in the South, more than 80 percent of 226 such measures passed to fund $5 billion worth of county and municipal government parks and recreation-related development, improvements, and land protection.
- Among nine outdoor recreation business categories tracked, five showed a decline in the number of establishments per million people from 1998 to 2007. Amusement/theme parks, recreational/vacation camps, and golf courses posted the largest declines in the South. Private-sector historical sites, nature parks, and zoos/botanical gardens showed the greatest gains. Private forest land, both family forests and that controlled by other private owners, is a significant outdoor recreation resource in the South. Each State has a recreational use statute that limits the liability of private landowners to open their land to public use, but the interpretation of what constitutes a recreational user varies by State. Recreation leases, particularly for hunting, are a common method of allowing public access to private forest land with mutual benefit to both land owners and lessees.
- Residents of most counties in the South have access to fewer than 1.5 acres of public land per person within 75 miles of their home county, except for relatively more accessibility in the Ozark Highlands and Virginia mountains. Within the 75-mile recreation day trip zone, the greatest water (non-ocean) area per capita is in counties along the Atlantic Ocean and the Gulf of Mexico.
- The pattern of non-Federal forest across counties shows that much of the South has abundant forest land area. But when expressed on a per capita basis, some of the metropolitan areas are found to have relatively little forest land close by. Parts of Arkansas, Louisiana, Mississippi, Alabama, and Georgia have relatively abundant per capita non-Federal forest land within 75 miles of residents' counties.

Projected Futures

- Federal and State park land area is expected to remain relatively constant over time. Currently in the South, 5 percent of the total area is Federal or State park land, less than 0.3 acres per person. By 2060, the Federal or State park land area per person is projected to decrease to 0.17 acres, about 63 percent of the 2008 level. Because of population growth, the projected decline is greater for the South than the Nation.
- Total non-Federal forest land area is expected to change with continuing conversions from forests and farmlands to cities and suburbs. Currently, more than 30 percent of total land area in the South is non-Federal forest, or 1.66 acres per person. By 2060, per capita non-Federal forest is predicted to decline to 0.95 acres per person, or 57 percent of the 2010 level. The projected decline is greater for the South than the Nation due to both population growth and increased development.
- Like Federal and State park land, total water area is expected to stay mostly constant. Currently, water area in the South is slightly more than 5 percent of the region's total surface area, or 0.28 acres per person. By 2060, per capita water area is predicted to decline to 0.18 acres per person, or 63 percent of the 2008 level. Similar to the other resources, the projected decline in water resources per capita is greater for the South than the Nation.

INTRODUCTION

During the scoping phase of the Southern Forest Futures Project (chapter 1), input from a cross-section of forest owners, forest users, and forestry professionals was analyzed to identify issues relating to the socioeconomic aspects of forest policy and management. The issues addressed in this chapter include:

- How are population and demographics changing?
- Where and how do population growth, changing demographics, changing land ownership, and other factors affect supply and demand for different types of outdoor recreation?

Described are recent trends, forecasts of population numbers, population demographic makeup, recreation participation of the population, and resources available in the South. The materials presented are adapted from the data, analyses, and reporting developed for the Forest Service 2010 Renewable Resources Planning Act Assessment (Cordell 2012). The Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 mandates a periodic RPA assessment of the Nation's renewable resources on all public and private ownerships. Each RPA Assessment provides a snapshot of current U.S. forest and rangeland conditions and trends, identifies drivers of change, and projects 50 years into the future through analyses of recreation, water, timber, wildlife (biodiversity), and urban forest and range resources. As well, land-use and climate change are included. The 2010 RPA Assessment stresses the importance of climate change and has adapted three socioeconomic scenarios based on the framework for the fourth world assessment of climate change done by the Intergovernmental Panel for Climate Change (IPCC).

Historical Context

The agrarian way of life up through the middle of the 20th century meant that the majority of people in the United States worked out-of-doors and had little desire for leisure outdoors. After the Great Depression and World War II, however, Americans in large numbers shifted to manufacturing and other forms of livelihood. With shifting work lives, Americans took to the open road to see and experience "the great outdoors." This led to mounting pressures on recreation facilities and most public lands. Consequently, major efforts ensued beginning in the 1960s to study and understand Americans' growing pursuit of outdoor recreation.

The interest in better understanding trends in outdoor recreation continues into the 21st century (Cordell 2008). In our earlier publication, Outdoor Recreation for 21st Century America, we reported that Americans' participation in outdoor activities, including nature-based recreation activities, had been rising up through the early part of the first decade of this century (Cordell and others 2004). Overall, since the first nationwide assessment of outdoor recreation trends conducted by the Outdoor Recreation Resources Review Commission 1962, almost all forms of outdoor activity and public land visitation have been observed to be growing. Cordell (2008) observed as well that there were signs of shifts in Americans' outdoor recreation:

> "Both the NSRE (National Survey on Recreation and the Environment) and the National Survey on Fishing, Hunting, and Wildlife-Associated Recreation show that participation in some nature-based activities has declined. However, for many other activities there seems to be growing popularity. Some outdoor recreation activities have even demonstrated rather strong popularity growth. One such activity is visiting wilderness and other primitive areas (Cordell, Betz, and Green 2008)."

Because trends in nature-based and other outdoor recreation have far reaching implications, a close look at those trends and projected futures for the South is important.

Outdoor Recreation Defined

Outdoor recreation is recreation activity done out-of-doors, which can, of course, take many forms. Those many forms occur with different activities, settings, types of social engagements, equipment, and times which are chosen by the recreation participant. Recreation can be physically active or sedentary. Nature-based recreation participation as reported in this chapter and summarized for the South includes:

- **Visiting recreation and historic sites:** Visiting the beach, prehistoric sites, and historic sites; developed camping; swimming in lakes, ponds, and other bodies of water; visiting watersides besides beaches
- **Viewing/photographing nature:** Viewing or photographing birds, other wildlife, fish, natural scenery, and wildflowers, trees, and other plants; visiting "nature center" type facilities; sightseeing; gathering mushrooms, berries, and other plants; taking boat tours or excursions
- **Backcountry activities:** Backpacking, day hiking, horseback riding on trails, mountain climbing, visiting a wilderness or primitive area, primitive camping, mountain biking, caving, rock climbing, orienteering
- **Motorized activities:** Motorboating, off-highway vehicle driving, snowmobiling, using personal watercraft, waterskiing
- **Hunting and fishing:** Anadromous fishing (salt-to-fresh-water migratory fish, for example salmon, which does not occur in the South but does draw some participants from the region), coldwater fishing, warmwater fishing, saltwater fishing, big game hunting, small game hunting, and migratory bird hunting
- **Non-motorized boating and diving:** Canoeing, kayaking, rafting, rowing, sailing, surfing, windsurfing, snorkeling, scuba diving
- **Snow skiing and other winter activities:** Cross-country skiing, downhill skiing, snowboarding, snowshoeing, ice fishing

METHODS AND DATA SOURCES

Population and Demographic Trends and Futures for the South

U.S. Census Bureau historical data from the 1990 Decennial Census through the 2008 national population estimates from Census were analyzed to examine recent trends in population and demographic makeup. National and regional population totals and proportions are presented as tables. As well, maps are presented showing the distribution of the population among counties. Included in this chapter are data on population by race/ethnicity, population by age groups, current population density (persons per square mile), population density change since 1990, percent change in Hispanic population, percent change in non-Hispanic White population, and projected changes in population density from 2008 to 2060. For comparison with the South, selected statistics are also shown for the Northern, Rocky Mountain/Great Plains, and Pacific Coast regions. The Southern Region consists of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. The Census Bureau provides updated annual population estimates for States and counties each year between the decennial population censuses. Based on these updates, maps at county scale were produced for this chapter reporting on change in Hispanic and other segments of the South's population. Data consulted included:

- U.S. Census Bureau (2008a), SC-EST2008-alldata6: Annual State Resident Population Estimates for 6 Race Groups (5 Race Alone Groups and One Group with Two or more Race Groups) by Age, Sex, and Hispanic Origin: April 1, 2000, to July 1, 2008 (http://www.census.gov/popest/states/asrh/files/SC-EST2008-alldata6-ALL.csv)

- U.S. Census Bureau (2008b), CC-EST2008-ALLDATA-[ST-FIPS]: Annual County Resident Population Estimates by Age, Sex, Race, and Hispanic Origin: April 1, 2000, to July 1, 2008 (http://www.census.gov/popest/counties/asrh/CC-EST2008-alldata.html)

- State and county population from the 1990 Census were derived from Woods and Poole Economics, Inc. (2009).

Working from Census Bureau estimates, county-scale forecasts of population change were developed for three of the future scenarios defined by the IPCC's fourth climate change assessment. These three IPCC scenarios were adapted for use in both the national RPA Assessment and as Cornerstones for the Southern Forest Futures Project (chapter 2). They provided a useful framework for evaluating the sensitivity of forest and other resource trends to a range of feasible population growth futures. The IPCC scenario designations were labeled A1B, A2, and B2. County-level population growth projections were developed for each of these three scenarios for the 2010 RPA Assessment and are used for this Southern Forest Futures chapter (Zarnoch and others 2010). Percent change over the 50-year assessment period is shown only for the A1B moderate-level scenario. Under this scenario, total population in the United States is projected to exceed 447 million people by 2060, a growth of more than 47 percent.

Recreation Activity Trends

The primary source of data for recreation activity trends for this chapter is the National Survey on Recreation and the Environment (NSRE). NSRE is a general-population

random sample telephone survey that asks Americans age 16 and older about their participation in outdoor recreation activities. The data presented in this chapter are from surveys conducted continuously from 1999 to 2009, with a brief interruption during 2004.

This chapter updates earlier estimates of trends in outdoor recreation overall (Cordell and others 2008) and in nature-based outdoor recreation in particular (Cordell 2008). Period trends are reported for 2000 (the midpoint year for the 1999–2001 data used) and 2008 (the midpoint year for the 2005–09 data). A general picture of Americans' participation in outdoor recreation was constructed by defining a "participant" as any person who engaged in at least one of 60 outdoor recreation activities being tracked one or more times during the 12 months prior to the date they were interviewed. A binary variable was created with a "yes" value assigned to respondents if they reported participation in one or more of these 60 activities. A similar indicator was used to determine nature-based activity participation using a shorter list of 50 activities typically occurring in natural settings. Previous estimates from the 1994-to-1995 period are included to indicate overall trends across two decades.

Recreation Resources

Federal resources—Federal outdoor recreation resources in the South are described in this chapter based on the latest available data from Federal land managing agencies. Nearly all Federal land in the South is open for public recreation. The four largest Federal land-managing agencies—the Forest Service (U.S. Department of Agriculture), the Bureau of Land Management (U.S. Department of the Interior), the U.S. Fish and Wildlife Service (U.S. Department of the Interior), and the National Park Service (U.S. Department of the Interior)—have real estate offices that maintain real property records on the size, location, and boundaries of agency holdings. The three Federal water management agencies—the U.S. Army Corps of Engineers, the Bureau of Reclamation (U.S. Department of the Interior), and the Tennessee Valley Authority—have much smaller land holdings.

Specially designated Federal land systems that are described in this chapter include the NWPS, the National Wild and Scenic River System, and the National Trails System. Current and past data from each of these systems was examined for trends in per capita availability.

Federal recreation sites and facilities are cataloged in an online database called the Recreation Information Database, better known through its portal as Rec.gov. An interagency coalition coordinated by the U.S. Department of the Interior gathers information on Federal recreation sites and/or facilities across all agencies. A standardized list of 22 separate recreation activities or attractions with binary (yes/no) availability appears on Rec.gov. Trend data are not available for the database because it is fairly new, originating around 2002. Moreover, it is an evolving source of information, which is populated by the various Federal agencies with varying levels of completeness and comprehensiveness.

State resources—State park system data that appear in this chapter are from two sources. The first source is the National Association of State Park Directors Annual Information Exchange survey which collects land, facilities, visitation, and other data from all 50 State park systems (parks, recreation areas, natural areas, historical areas, environmental education areas, scientific areas, forests, wildlife and fish areas, and other miscellaneous areas) and assesses the status of each State park system's resources, operations, and visits. The Exchange does not have individual State park unit information, such as size and location, but rather State summaries, with information about parks and recreation area classes tending to be the most consistent over time.

The second source is a State park database developed from printed and online sources (available from the lead author of this chapter), and includes acreage data and latitude/longitude geo-locations. The database focuses on the three most common types of State park system areas: parks, recreation areas, and historic sites.

Local government resources—Tracking these resources is complicated by the sheer number and variety of local jurisdictions that provide park and recreation services. The emphasis of many local agencies is as much on providing indoor leisure programs and services, as it is on outdoor recreation resources. For this chapter, it is assumed that all local government agencies listed as providing recreation services include management of outdoor recreation resources. The data source is the Census of Governments done every 5 years by the Census Bureau. This census classifies governments by the type of governmental unit and by services provided. Another data source for local government resources is the Trust For Public Land's LandVote database, which monitors conservation and parks-related funding nationwide via ballot measures and initiatives, particularly at the municipal and county levels of government.

Private recreation businesses and land—The Census Bureau's County Business Patterns (part of the Economic Census) provides data on the number of recreation business establishments (in addition to data on payroll and number of employees) for the full range of businesses as described in the North American Industry Classification System. Nine of these business classes are related to outdoor recreation

and are summarized in this chapter. Number of business establishments per capita with percent change from the previous 1998 survey to their most recent survey of 2007 are provided.

The 2006 National Woodland Owner Survey, conducted by the Northern Research Station of the Forest Service, provides the most recent data on family forest owners in the United States. The survey assessed landowners' objectives, practices, and reason for owning their private forest land. Another Forest Service data source is the NSRE, sponsored by the Southern Research Station. The NSRE, a general population household telephone survey, included a section which asked respondents about their participation in several nature-based recreation activities and the number of days annually that were spent on private forest lands.

County Pattern Maps

Also included in this chapter are county-level maps for 2008 that depict patterns of recreation resource availability per capita across counties in the South and as well the Nation. Shown are the recreation resources per capita within a 75-mile radius of each county. The 75-mile zone includes a home county plus all surrounding counties whose centroids (geographic centers) are within a 75-mile straight-line distance from the home county centroid (roughly the equivalent of a recreation day trip). The three basic recreation resources summarized in this chapter are combined Federal and State-park land area, non-Federal forest land, and water area (from Census Tiger geographic data).

Projected Futures

The future change measure used in this chapter is the ratio of per capita acres predicted for 2060 relative to the per capita acres in 2008. This statistic indicates the proportion of the area existing in 2008 that is forecast to remain by 2060. The per capita resources forecast (Federal and State park land area, non-Federal forest land, and water) are summarized by region and for the Nation as a whole. Also reported is the percentage of total surface area in each region represented by the resource.

RESULTS

Current Population Trends for the South

Based on official Census Bureau population data, the race and ethnic composition by region, along with the percent change trend from 1990 to 2008, are summarized in table 7.1. Race and ethnicity are important determinants of what people choose as outdoor recreation activities and the settings they use for those activities (Cordell and others 2004).

The race and ethnic makeup of the U.S. population changed dramatically in the 18 years since the 1990 Census. Although all races have been growing in number, generally, Asian or Pacific Islander and Hispanic components have been growing fastest. Non-Hispanic Whites have been growing much slower than the other groups. The highest growth for the total population has been in the Rocky Mountains, and lowest has been in the North. Highest percentage growth of any group has been the Asian or Pacific Islanders in the Rocky Mountains and South. Non-Hispanic Whites experienced population losses in the North and Pacific Coast.

The population of the South grew considerably faster (32.5 percent) than the Nation as a whole (22.2 percent). The Rocky Mountains and South are the only regions that outpaced the national rate for all race/ethnic groups. The lowest percentage increase in the South by a large margin was for Non-Hispanic Whites. But the 14 percent growth rate of this group still was more than double the national rate. Although the rate of increase (35.4 percent) for African Americans in the South was slightly more than half that of the Rocky Mountains, this population of almost 19 million was nearly 20 times larger than the Rocky Mountain population and more than half of the national total (37.2 million).

The South is a close second to the Rocky Mountains in both the size and rate of increase for American Indians. Although Asian or Pacific Islander population is much smaller than it is in the North and the Pacific Coast, the growth rate of this group in the South was considerably larger than it was in either of those regions. Since 1990, the South (heavily influenced by Texas and Florida) surpassed the Pacific Coast (strongly influenced by California) in Hispanic population to lead the Nation. Just over a third of all Hispanics now live in the South. The South's 143 percent growth in Hispanic population trails only the Rocky Mountains, but the South outnumbers the other region by nearly 3-to-1 in total Hispanic population. Growth of the Hispanic population was especially high in North Carolina and Georgia.

Age distribution—Age also has a strong effect on recreation activity choices (Cordell and others 2004). Similar to other demographic aspects, the age distribution of the U.S. population has been changing over time, as table 7.2 shows. Nationally, the fastest growing age group since 1990 (in percentage terms) has been the 44-54 age bracket followed by the 55-64 bracket. Next fastest growing is age 65 or older. Age 44 to 54 is the fastest growing group in all regions. The 25-34 age group has declined nationally, led by steep declines in the North and to a lesser extent in the Pacific Coast. The 10-and-under age group has declined in the North, but has experienced its fastest growth in the Rocky Mountains.

Table 7.1—Population (thousands) in 2008 by race/ethnicity and region with percent change since the 1990 Census

Race/ ethnicity	North	Percent change	South	Percent change	Rocky Mountain	Percent change	Pacific Coast	Percent change	United States	Percent change
White	92,246.8	-0.2	63,478.5	14.0	19,479.6	25.3	24,286.6	-1.4	199,491.5	5.9
African American	14,780.5	18.7	18,866.8	35.4	952.9	69.4	2,571.6	8.9	37,171.8	26.8
American Indian	416.7	23.2	704.0	36.4	768.9	38.3	439.3	13.7	2,329.0	29.6
Asian or Pacific Islander	4,670.3	116.4	2,481.3	170.6	690.5	171.1	5,830.2	59.0	13,672.3	95.4
Two or more races[a]	1,492.0	–	1,261.5	–	426.6	–	1,271.6	–	4,451.7	–
Hispanic[b]	10,761.7	94.6	16,013.4	143.2	5,497.2	157.8	14,671.3	80.4	46,943.6	109.8
Total	**124,368.0**	**10.1**	**102,805.6**	**32.5**	**27,815.7**	**46.0**	**49,070.4**	**25.2**	**304,059.7**	**22.2**

[a]Percent change for two or more races is missing because U.S. citizens could not select more than one race until the 2000 Census.
[b]Hispanics may be of any race, but are included in the Hispanic category only.
Source: U.S. Census Bureau 1990, 2008a.

Table 7.2—Population (thousands) in 2008 by age group and region with percent change since 1990

Age group	North	Percent change	South	Percent change	Rocky Mountains	Percent change	Pacific Coast	Percent change	United States	Percent change
Under 6	9,503.9	-3.0	8,825.9	27.1	2,555.8	37.7	4,196.7	10.4	25,082.3	12.0
6 to 10	7,793.1	-1.2	6,939.6	21.7	1,941.7	24.1	3,222.9	11.4	19,897.3	10.2
11 to 15	8,206.8	10.9	6,864.0	27.6	1,897.9	34.5	3,377.4	31.9	20,346.1	21.5
16 to 24	15,645.9	3.7	12,740.3	19.2	3,544.3	41.8	6,442.8	18.6	38,373.4	13.8
25 to 34	15,928.0	-17.6	14,037.8	5.6	3,965.7	22.7	7,000.0	-4.3	40,931.6	-5.2
35 to 44	17,416.9	2.7	14,349.8	25.2	3,679.9	28.7	7,054.5	14.4	42,501.1	13.5
45 to 54	18,933.9	63.2	14,586.3	86.8	3,861.1	111.2	6,990.7	82.6	44,372.1	77.0
55 to 64	14,246.1	42.1	11,307.9	71.4	2,989.5	96.1	5,142.7	73.3	33,686.2	59.5
65+	16,693.5	12.4	13,153.9	35.2	3,379.6	48.6	5,642.7	33.6	38,869.7	25.0
Total	**124,368.0**	**10.1**	**102,805.0**	**32.5**	**27,815.7**	**46.0**	**49,070.4**	**25.2**	**304,059.0**	**22.2**

Source: U.S. Census Bureau 1990, 2008a.

Similar to the Nation, in the South, the baby boomer generation age groups (44-64) dominated all other age groups in percent growth. In fact, the nearly 87 percent growth rate for 44-54 age group was higher than any other in any region or in the Nation as a whole. As with race and ethnicity, the South and the Rocky Mountains were the only regions to outpace the national growth rate for every single age group. Two related trends stand out. The South and Rocky Mountains grew much faster than the North and Pacific Coast in the 10-and-under age group and in the 25-44 prime childbearing age group. Because these increases cannot be attributed to natural birth-over-death rate increases alone, they are likely related to the large number of younger families migrating into these regions. The South's 25-34 age group was the only group not to experience double-digit growth, but its 5.6 percent increase still outpaced overall national losses.

Population density—Figure 7.1 shows the distribution of the U.S. population density (persons per square mile) across counties. The greatest density of population is in Florida, in the Piedmont areas of North Carolina to Georgia, along the coast of the northern Atlantic States, in the Great Lakes, in eastern Texas, in the Denver-Front Range area, and in scattered areas along the Pacific Coast and into Arizona. Greatest density in Alaska (not shown) is in the Anchorage area.

The South's other high-density areas include many coastal counties, both on the Gulf of Mexico and the Atlantic Ocean, especially near the metropolitan areas in Louisiana (New Orleans), Arkansas (Little Rock), Mississippi (Jackson), Oklahoma (Oklahoma City), Alabama (Birmingham, Montgomery, and Huntsville), South Carolina (Columbia), and Tennessee (Nashville, Knoxville, and Memphis). With the exception of a handful of counties scattered throughout the Eastern United States, most of the lowest-density counties are in the Plains area of western Texas.

Figure 7.2 shows that much of the overall growth in concentration of population (growth in persons per square mile) has occurred along the northern Atlantic coast, down the Piedmont and Southern Appalachians from North Carolina to Alabama, along both Florida coasts, and around the major cities of Texas. Elsewhere in the United States, growth occurred in the Chicago and Minneapolis/St. Paul areas, in the Denver and Salt Lake City areas, in the southwest and coastal California areas, and in the Portland and Seattle areas. Growth in some areas like eastern Texas and the greater Los Angeles area is substantial—in amounts exceeding 500 persons per square mile, which is the Census Bureau definition of an urban area. Greater concentrations of people in places near public lands and bodies of water are likely to put increasing pressures on these limited resources. In the South, population density increased throughout nearly all of Florida and is notable in northern Virginia and the metropolitan areas of Tennessee, and in a band of counties that follows the I-85 corridor through the Piedmont in the States of Georgia, South Carolina, and North Carolina.

Hispanics—Figure 7.3 shows the distribution of percentage growth of the Hispanic population of the United States from 1990 to 2008. Much of the fastest growth has been in the States bordering the Atlantic Ocean and Mississippi River. High rates of growth have also occurred through the upper Midwest and through southern Nevada, Arizona, Utah, and Wyoming. Substantial percentage growth can also be seen in coastal Oregon and Washington counties. The rate of Hispanic growth throughout much of the South has been high. North Carolina stands out, with growth exceeding 376 percent in all but a handful of its 100 counties. Hispanic populations more than tripled in large portions of Georgia, South Carolina, Alabama, Arkansas, and Mississippi. Because most Texas counties already had a substantial Hispanic population base in 1990, their growth of Hispanic populations did not reach the high rates of many other southern counties. In Florida, the largest increases were concentrated in central Florida, which includes the Orlando and Tampa-St. Petersburg metropolitan areas.

Non-Hispanic Whites—The non-Hispanic White population has been growing in metropolitan areas such as Atlanta, Washington, DC, Minneapolis/St. Paul/Duluth, Phoenix, Salt Lake City, and Albuquerque (fig. 7.4). It appears to be growing fastest in areas rich in natural amenities, such as the Rocky Mountains and Florida, Arizona, Colorado, Utah, and Nevada. In the South, the State of Florida and nearly every Atlantic coastal county experienced high rates of growth. Central and eastern Tennessee, northwestern Arkansas, and the metropolitan counties of eastern and southeastern Texas also were among the fastest-growing counties.

Population Projections for Three Levels of Change (2008 to 2060)

Similar to the historic trends in population growth and composition since 1990, the RPA regions likely to lead the Nation in future projected rate of change under the moderate growth scenario are the Rocky Mountains at 79 percent and the South at 59 percent (table 7.3). The Pacific Coast follows closely, at about 56 percent. The North trails the other regions by a wide margin, with just 27 percent expected growth. The Rocky Mountains' Intermountain area far exceeds all others with projected growth of 92 percent (nearly three times the rate of its Great Plains area of this region).

The Atlantic States area in the South ranks second among its nine RPA subregion counterparts, at a 68 percent forecast increase in population, followed by the Pacific Northwest with 63 percent. Of the Atlantic coastal States, Florida leads

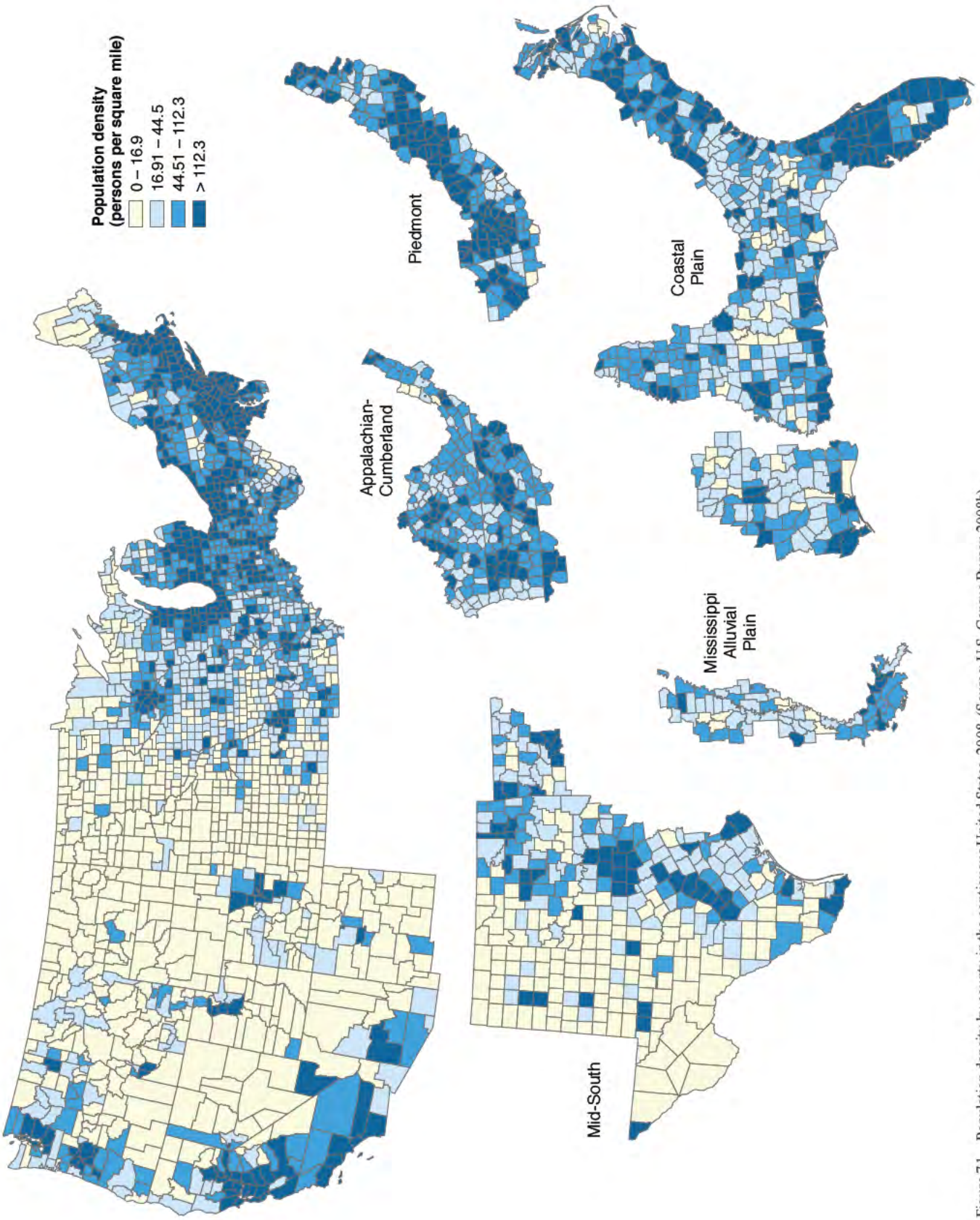

Figure 7.1—Population density by county in the contiguous United States, 2008. (Source: U.S. Census Bureau 2008b)

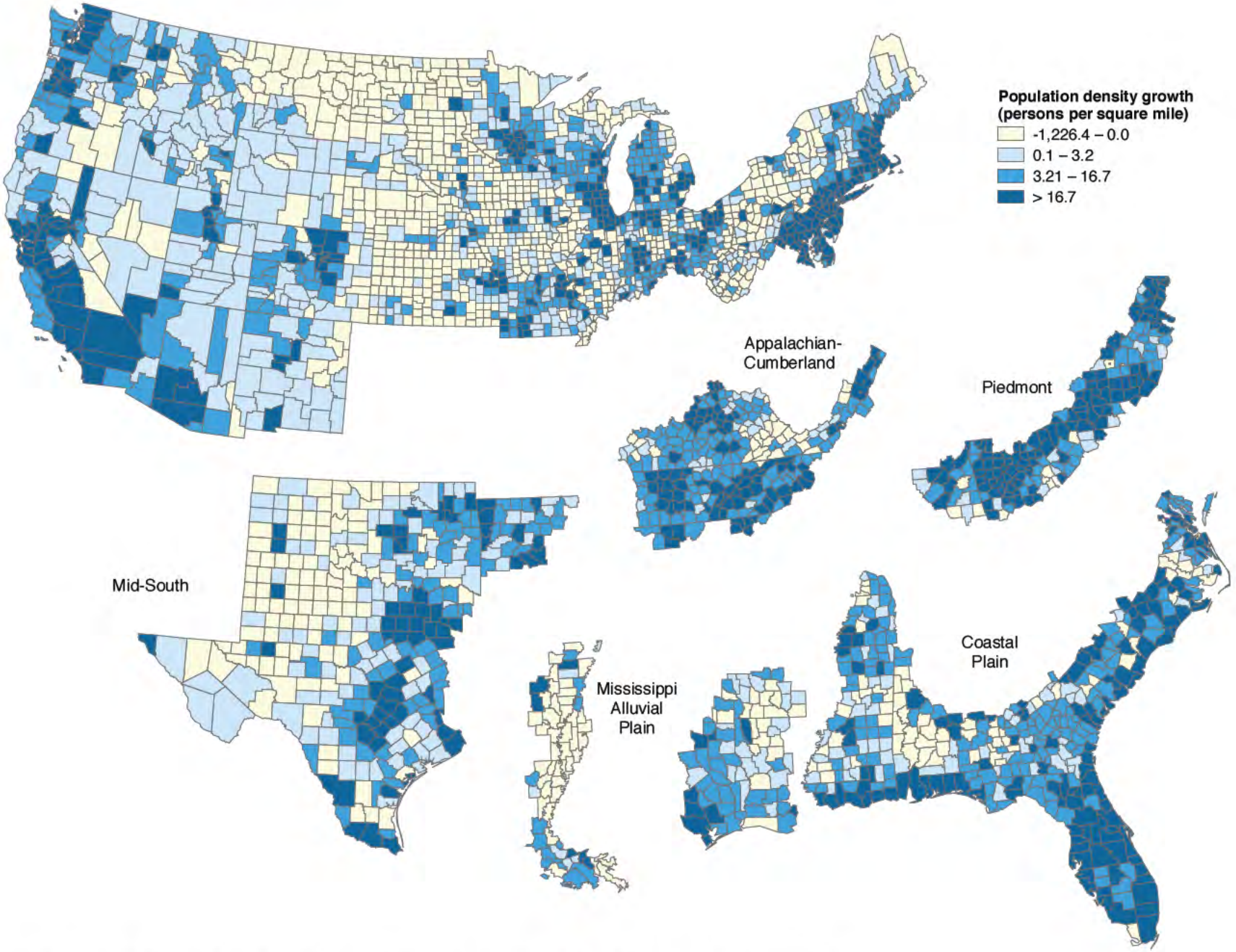

Figure 7.2—Change in population density by county in the contiguous United States, 1990 to 2008. (Source: U.S. Census Bureau 1990, 2008b)

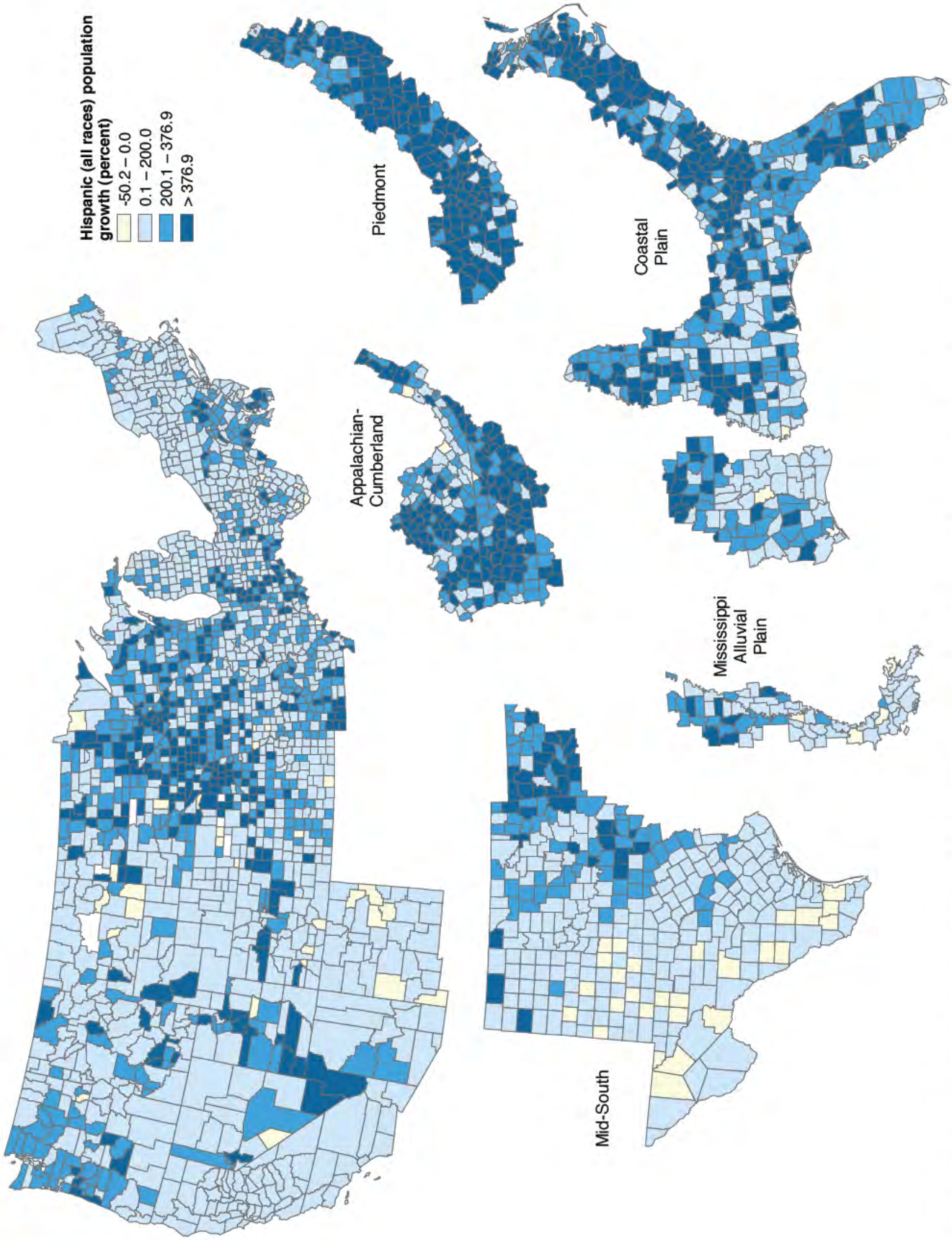

Figure 7.3—Percent change in Hispanic population by county in the contiguous United States, 1990 to 2008. (Source: U.S. Census Bureau 1990, 2008b)

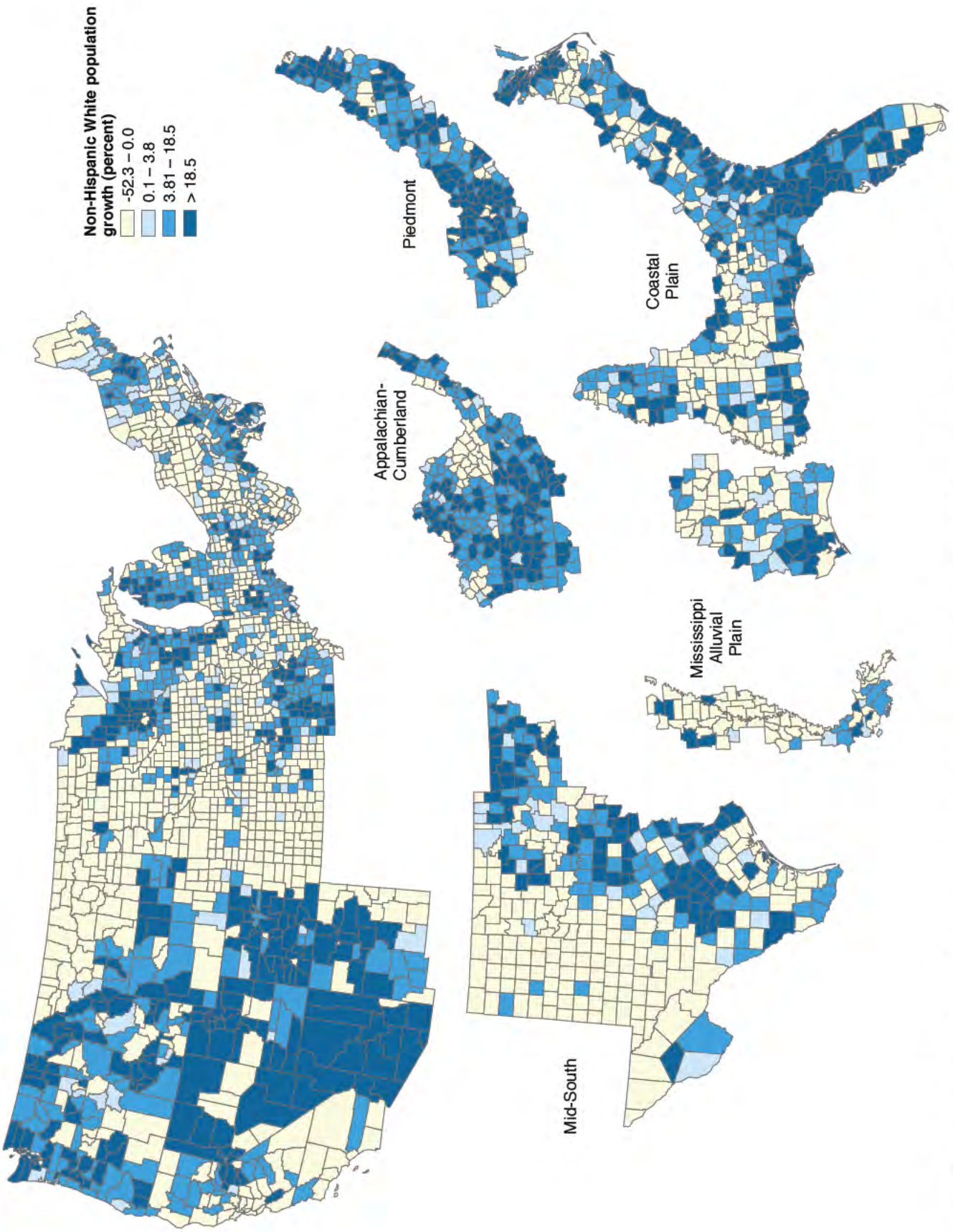

Figure 7.4—Percent change in non-Hispanic White population by county in the contiguous United States, 1990 to 2008. (Source: U.S. Census Bureau 1990, 2008b)

Table 7.3—Estimated population (thousands of people) for 2008, projections to 2060 by region and State for three levels of population growth, and percent change from 2008 to 2060 for the moderate growth projection

Region, State	Population estimate (2008)	Population growth projections (2060)			Percent change, moderate growth level
		Low	Moderate	High	
Southern States	102,805.6	145,360.3	163,673.8	184,909.9	59.2
Alabama	4,661.9	5,988.3	6,742.8	7,617.6	44.6
Arkansas	2,855.4	3,869.2	4,356.7	4,921.9	52.6
Florida	18,328.3	30,496.7	34,338.9	38,794.3	87.4
Georgia	9,685.7	13,156.1	14,813.6	16,735.6	52.9
Kentucky	4,269.2	5,131.1	5,777.5	6,527.1	35.3
Louisiana	4,410.8	5,269.1	5,932.9	6,702.7	34.5
Mississippi	2,938.6	3,773.1	4,248.5	4,799.7	44.6
North Carolina	9,222.4	12,723.6	14,326.7	16,185.5	55.3
Oklahoma	3,642.4	4,446.7	5,006.9	5,656.5	37.5
South Carolina	4,479.8	6,257.6	7,045.9	7,960.1	57.3
Tennessee	6,214.9	8,384.0	9,440.3	10,665.1	51.9
Texas	24,327.0	34,689.9	39,060.4	44,128.4	60.6
Virginia	7,769.1	11,174.8	12,582.7	14,215.3	62.0
Northern States	124,368.0	139,964.2	157,597.9	178,045.6	26.7
Rocky Mountains States	27,760.9	44,135.2	49,695.6	56,143.5	79.0
Pacific Coast States	49,070.4	67,798.9	76,340.6	86,245.5	55.6
U.S. total	**304,004.9**	**397,258.6**	**447,308.0**	**505,344.5**	**47.1**

Source: Cordell 2012; U.S. Census Bureau 2008a.

by a wide margin with 87 percent projected growth, followed by Virginia and Texas, each at more than 60 percent. These three are the only States projected to grow faster than the South-wide rate. Louisiana, Kentucky, and Oklahoma rank lowest among the Southern States, each with less than 40 percent projected growth.

Figures 7.5 through 7.7 show the geographic patterns of projected changes in population density by 2060—ranging from lowest density (fewer than two people per square mile) to the highest density (more than 190 persons per square mile). These projected changes are shown for the low (fig. 7.5), moderate (fig. 7.6), and high (fig. 7.7) population growth projection scenarios. For the purposes of this analysis, all counties are assumed to have constant land area between 2008 and 2060.

Immediately apparent in the low growth projection scenario (fig. 7.5) is the presence of numerous lower density counties distributed throughout the South, especially in western Texas, the Mississippi Alluvial Valley, and southern portions of Arkansas, Alabama, and Georgia. Counties with the highest projected growth under this low growth scenario, with projection of more than 190 persons per square mile, are mostly limited to suburban areas, both coasts of Florida, and a few other scattered coastal counties. The moderate growth projection scenario (fig. 7.6), which closely approximates the Census Bureau State projections, has fewer low growth counties as expected, and more counties in the intermediate ranges (between 1.8 and 190.7 additional persons per square mile). The highest-growth counties under the moderate growth scenario are mostly centered around the major metropolitan areas of Atlanta, Charlotte, Nashville, Dallas-Fort Worth, San Antonio, coastal South Carolina, and the Atlantic coast of central Florida.

Under the high growth scenario (fig. 7.7), more counties in the South shift by 2060 from the lowest to the two moderate population density growth categories. Also, more of the counties that are in metropolitan areas are expected to add significant population density of more than 190 persons per square mile, especially around greater Atlanta, Charlotte, and central Florida. Smaller metropolitan regions such as the Triangle and Triad areas of North Carolina, Knoxville, New Orleans, and the Florida Panhandle are also projected to grow significantly. Only most of western Texas, the Mississippi Alluvial Valley, and portions of southern Alabama and Georgia are expected to lose population or grow very slowly, resulting in lower or about the same population density by 2060.

Trends in Outdoor Recreation

Between 2000 and 2008 (midpoint data years for two data collection periods of 1999 to 2004, and 2005 to 2009), the number of people in the Nation who participated in one or more of 60 outdoor activities grew by 7.3 percent, from an estimated 208.5 million to 223.8 million (fig. 7.8). Included in the list of 60 was a wide range of activities from visiting beaches and visiting farms to rock climbing and backpacking. Across the 60 activities, the indexed number of annual activity days of participation (measured as the product of the average number of days per activity times the number of participants and then summed across all activities) increased 31 percent from 67.1 billion to 87.8 billion. Average annual days of participation per person increased about 21 percent, from roughly 322 to about 390 total activity days per year.

For the South, the rate of growth for both total number of outdoor recreation participants and total annual activity days exceeded the national rate. Participants increased about 11 percent, from about 68 million to 75 million people age 16 and older, but this was overshadowed by a 41 percent increase in their total number of annual days (the sum of all individual activity days, which assumes that more than one activity can occur during any single day). Average activity participation days per person across the full list of activities rose from about 310 per year to 393, a 27-percent increase. Some of these faster gains can be attributed to slightly higher population growth than the national rate. The number of people age 16 and older increased 13 percent in the South (from just under 70 to around 79 million) compared to just under 10 percent (from 214 million to about 235 million) for the United States as a whole.

Results from comparison of percentages of the national number of participants by region for seven activity groups with the regional percentages of the U.S. population are shown in table 7.4. Also listed is the participation rate (percent of the region's population participating) for the four regions. Observations about regional differences in the participation rates are noted below by activity group name.

Visiting recreation and historic sites—Generally, regional differences are modest with participation in activities at recreation and historic sites slightly greater in the North and slightly lower in the South. The South is the only region where participation is less than the 81 percent national rate (not shown), though only about two percentage points less.

Viewing and photographing nature—Participation rates are a few percentage points higher in the Rocky Mountains and Pacific Coast, and a few points lower in the South. The North participation rate of 75.6 percent is identical to the national rate.

Backcountry activities—The participation rate in backcountry activities is substantially higher in the Rocky Mountains and Pacific Coast than the national rate, and is

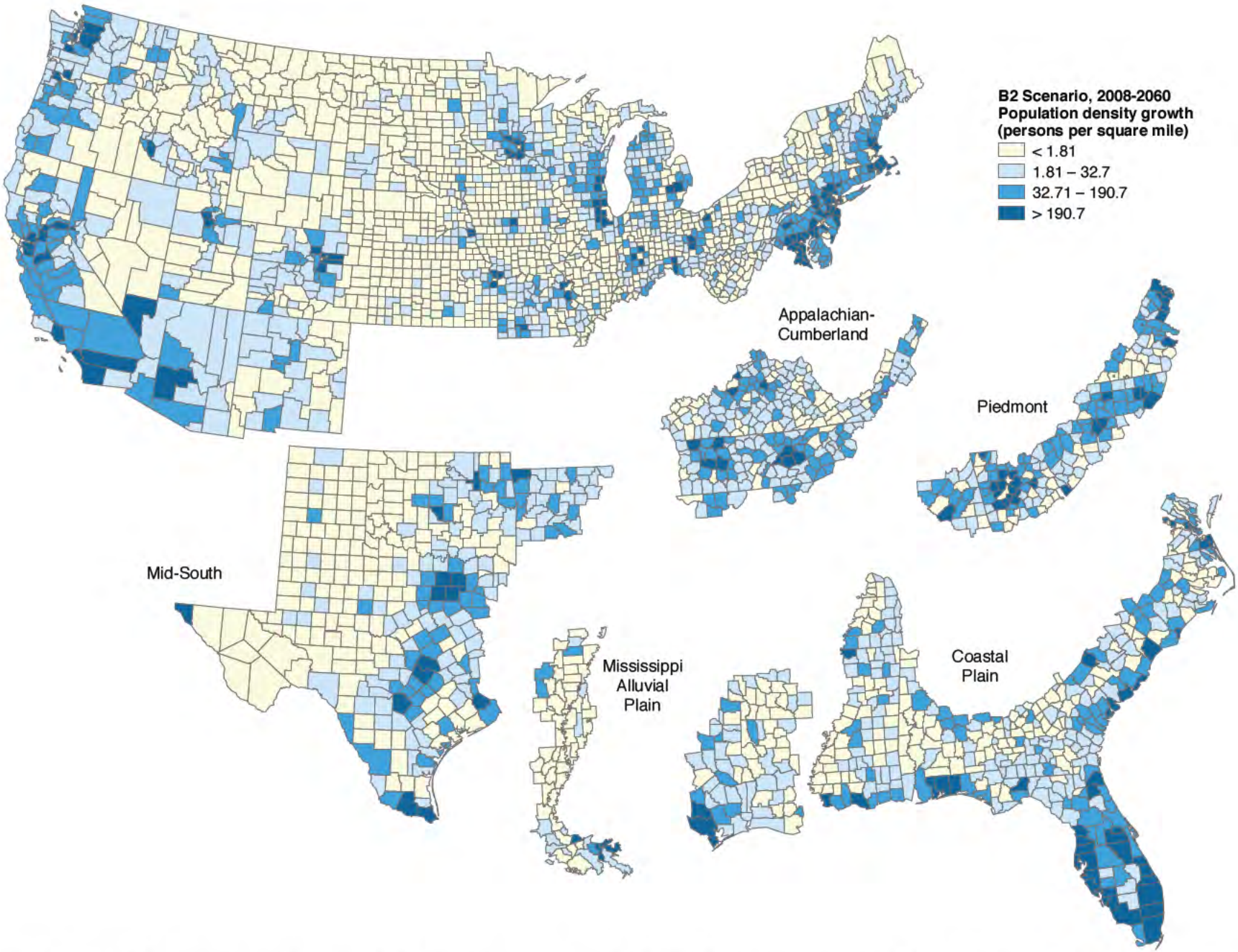

Figure 7.5—Change in persons per square mile by county in the contiguous United States, 2008 to 2060, for a low growth population projection. (Source: Cordell 2012; U.S. Census Bureau 2008b)

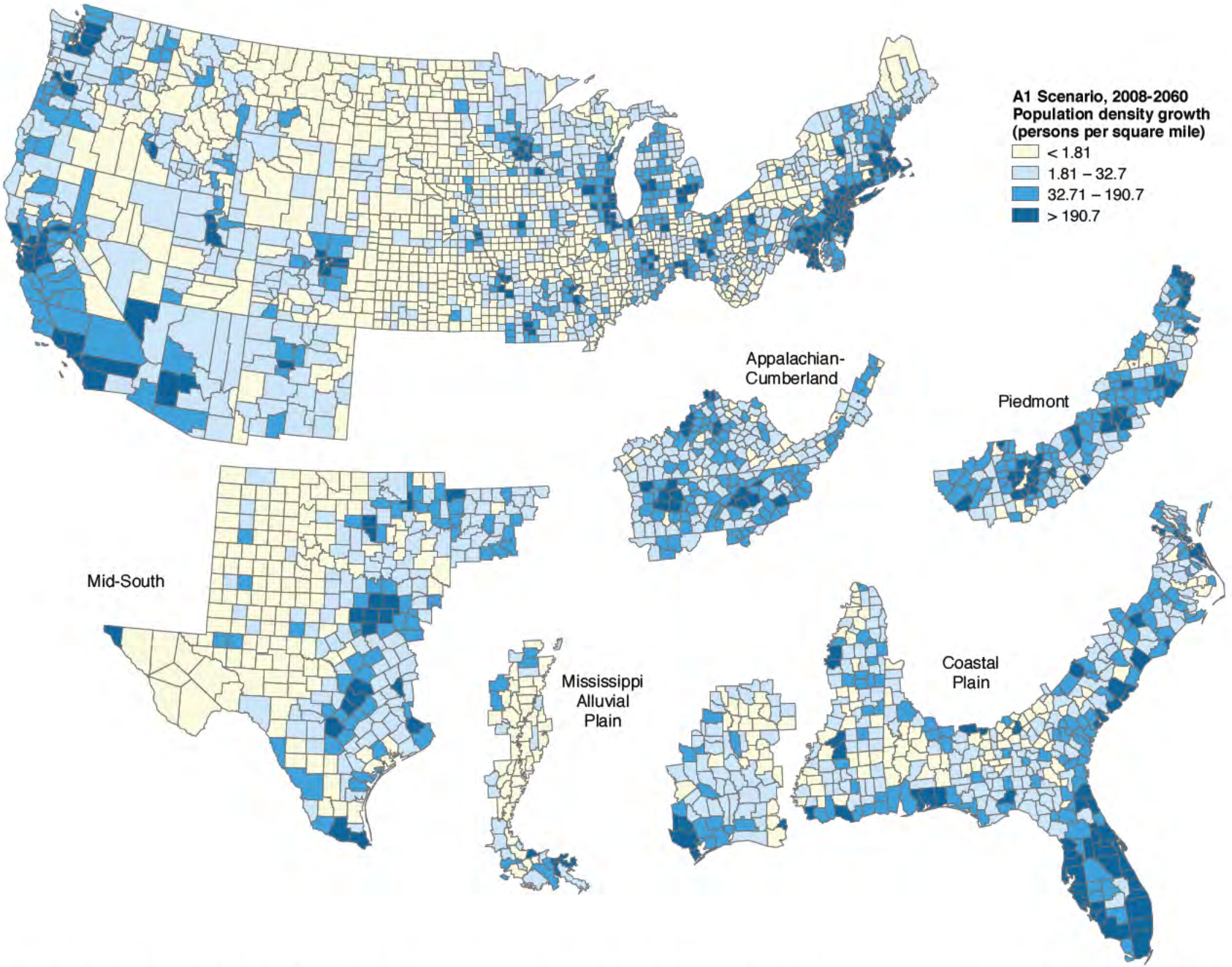

Figure 7.6—Change in persons per square mile by county in the contiguous United States, 2008 to 2060, for a moderate growth population projection. (Source: Cordell 2012; U.S. Census Bureau 2008b)

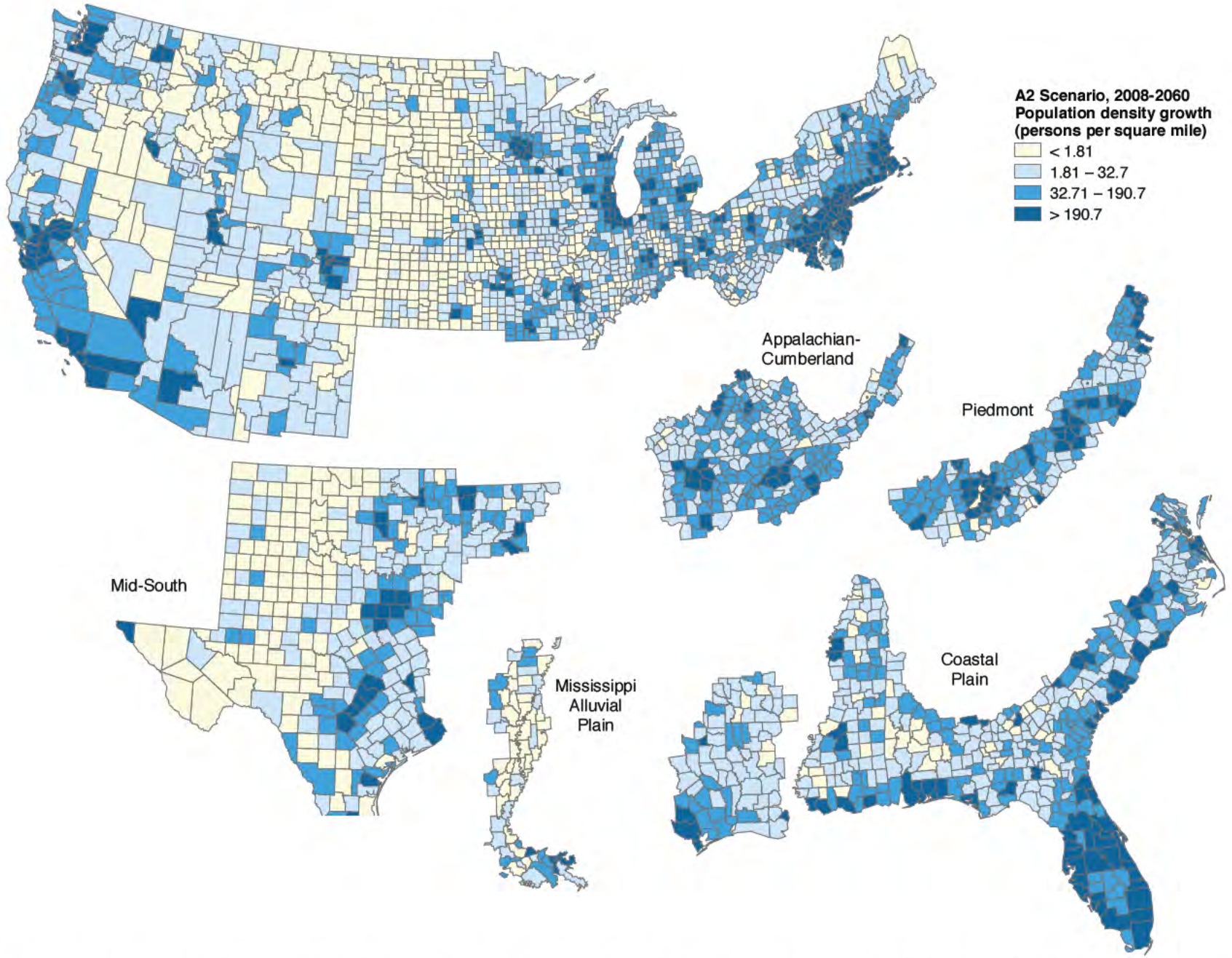

Figure 7.7—Change in persons per square mile by county in the contiguous United States, 2008 to 2060, for a high growth population projection. (Source: Cordell 2012; U.S. Census Bureau 2008b)

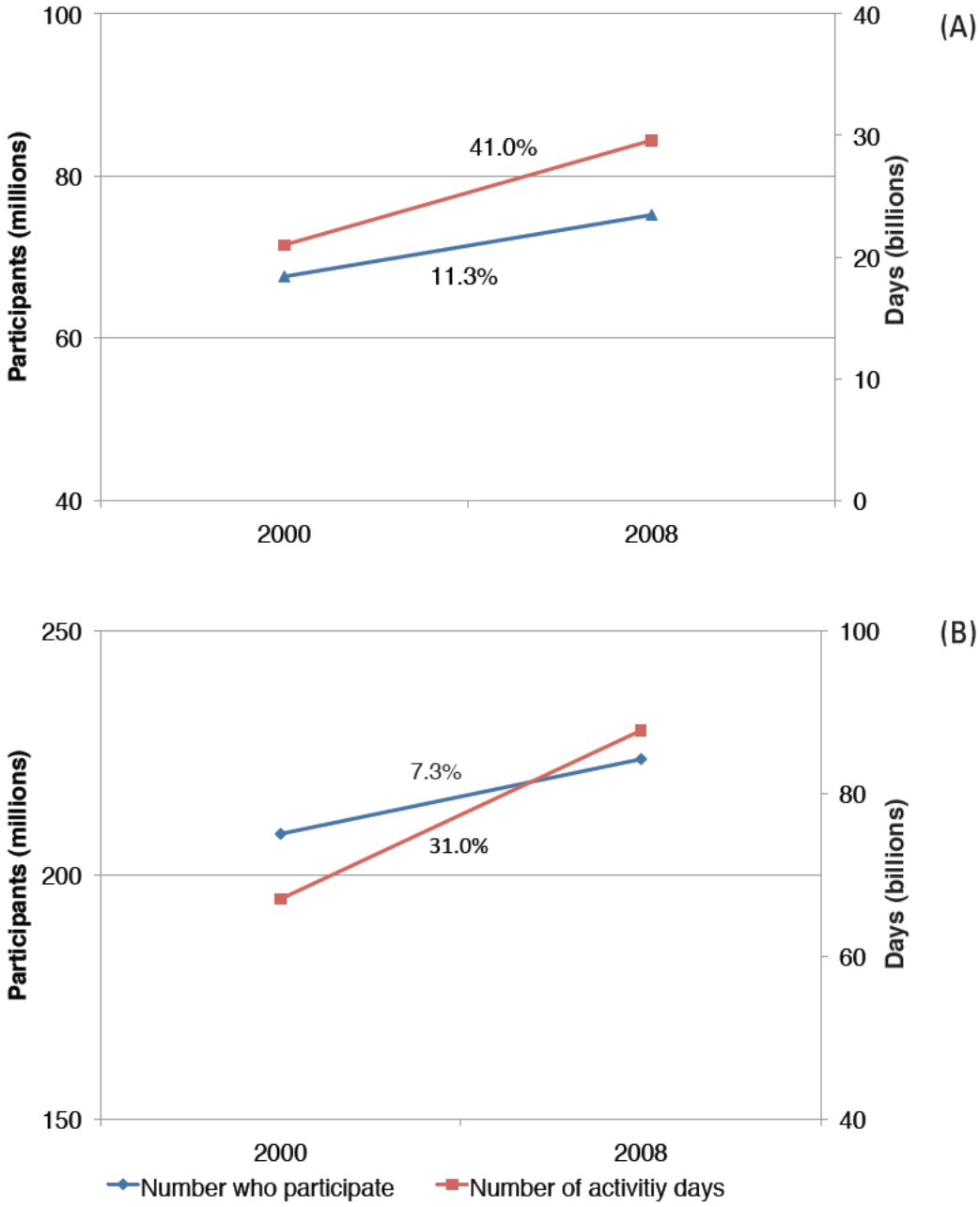

Figure 7.8—Growth in the number of people and the number of participation days in 60 outdoor recreation activities in (A) the South and (B) the United States, 2000 to 2008. (Source: U.S. Department of Agriculture Forest Service 2009a)

Table 7.4—Participants for seven activity groups in four U.S. regions

Activity group (activities that comprise the group)	Region	Percent of participants[a]	Percent of population[a]	Percent participating
Visiting recreation and historic sites (Family gatherings, picnicking, visiting the beach, visiting historic or prehistoric sites, and camping)	North	42.0	40.7	82.7
	South	29.7	31.4	78.9
	Rocky Mountains	10.1	10.1	81.9
	Pacific Coast	18.2	17.8	81.4
Viewing/photographing nature (View/photograph birds, natural scenery, other wildlife besides birds, and wildflowers, trees, and other plants)	North	40.8	40.7	75.6
	South	30.7	31.4	73.2
	Rocky Mountains	10.5	10.1	78.1
	Pacific Coast	17.9	17.8	75.8
Backcountry activities (Backpacking, day hiking, horseback riding on trails, mountain climbing, and visiting a wilderness or primitive area)	North	40.1	40.7	43.1
	South	26.0	31.4	37.4
	Rocky Mountains	13.0	10.1	57.4
	Pacific Coast	20.9	17.8	51.4
Motorized activities (Motorboating, off-highway vehicle driving, snowmobiling, using personal watercraft, and waterskiing)	North	40.8	40.7	36.4
	South	31.1	31.4	37.1
	Rocky Mountains	10.7	10.1	39.1
	Pacific Coast	17.4	17.8	35.6
Hunting and fishing (Anadromous fishing, coldwater fishing, warmwater fishing, saltwater fishing, big game hunting, small game hunting, and migratory bird hunting)	North	38.6	40.7	32.4
	South	35.5	31.4	38.8
	Rocky Mountains	10.9	10.1	37.1
	Pacific Coast	15.0	17.8	28.8
Non-motorized boating (Canoeing, kayaking, rafting, rowing, and sailing)	North	45.6	40.7	23.0
	South	27.5	31.4	18.0
	Rocky Mountains	9.2	10.1	18.7
	Pacific Coast	17.7	17.8	20.4
Snow skiing and boarding (Cross-country skiing, downhill skiing, and snowboarding)	North	49.6	40.7	14.0
	South	14.5	31.4	5.5
	Rocky Mountains	12.6	10.1	14.7
	Pacific Coast	23.3	17.8	15.1

[a]Percentages sum down to 100 within the four regions of each activity group.
Source: U.S. Department of Agriculture Forest Service 2009a.

especially higher than the South. The South's participation in backcountry activities is about 7 percent lower than the national rate of 44.3 percent. Thus, Southerners are less likely to be backcountry activity participants than are residents of any other region.

Motorized activities—The South's participation rate is just slightly above the national rate (36.9 percent), but exceeds those of the North and the Pacific Coast. Participation in motorized activities is slightly higher in the Rocky Mountains than in any other of the three regions, and the Rocky Mountains is the only region more than a few percentage points higher than the national participation rate.

Hunting and fishing—The South leads all regions in hunting and fishing participation, followed by the Rocky Mountains. Both are higher than the national rate of 34.3 percent. Thus, hunting and fishing are somewhat more likely to occur in the South than they are in the other regions. Hunting and fishing participation is lowest in the Pacific Coast.

Non-motorized boating activities—Participation in non-motor boating is highest in the North and Pacific Coast, and lowest in the South. At 18 percent participation, the South trails the national rate of 20.8 percent.

Snow skiing and boarding—It is no surprise that snow skiing and boarding participation are by far the lowest by residents of the South. Participation is highest in the Pacific Coast and Rocky Mountains, followed by the North. Every region but the South exceeds the national participation rate of 11.6 percent. Participation in the South is less than half the national rate, and whereas the South has about 31 percent of the national population, it has less than 15 percent of its skiers and snow boarders.

The South's Participation in Nature-Based Activities

Tables 7.5–7.8 summarize the trends in activity participation (number of people and percent of population age 16 and older in the South) in nature-based activities, such as bird watching or camping, from the mid-1990s to the present time.

Activities that had 30 million or more people participating at least once during a single year are shown in table 7.5. Walking for pleasure, family gatherings outdoors, gardening or landscaping, viewing/photographing natural scenery, sightseeing, and visiting outdoor nature centers occupy the top six slots, each with over 40 million participants in the South. Between 30 million and 40 million participants are shown for the activities of driving for pleasure, viewing/photographing flowers and trees, viewing/photographing wildlife (besides birds and fish), swimming in an outdoor pool, picnicking, visiting historic sites, swimming outdoors (besides pools), and visiting a beach. With the exception of picnicking, which was essentially constant, all of these activities have shown growth. Activities oriented toward viewing and photographing nature (scenery, flowers/trees, and wildlife) have been among the fastest growing.

Sixteen activities have between 10 million and 30 million participants (table 7.6). The activities of viewing or photographing birds, bicycling, gathering mushroom/berries, warmwater fishing, visiting a wilderness, visiting a farm or agricultural setting, viewing and photographing fish, and day hiking all have more than 20 million participants. All of the 16 activities, with the exception of developed camping, showed growth in numbers of participants during this decade (1999 to 2009), though a few grew modestly, under 10 percent. Fastest growing between the 1999 to 2001 and 2005 to 2009 periods were off-highway vehicle driving, gathering mushrooms and berries, and visiting farms or agricultural settings.

There are 17 activities with 3 to 10 million participants (table 7.7). Camping at primitive sites, big game hunting, waterskiing, using personal watercraft, and equestrian activities top this list for the South. All of the activities in table 7.7 have shown growth, though many at less than 10 percent. Kayaking was the fastest growing activity by a wide margin, but it began with a small base of just 1.4 million people in the late 1990s. Other relatively fast growing activities were also water-based, such as waterskiing and canoeing.

Table 7.8 shows activities with fewer than 3 million participants. At the top, with 2 or more million participants, are anadromous fishing, sailing, rowing, and rock climbing. Snowboarding and orienteering have showed significant growth since the late 1990s. (Much if not most of some activity participation, for example anadromous fishing and snowboarding, undoubtedly occurs in other regions of the country.) However, many activities with fewer than 3 million participants posted declines over the past decade. Given their low participation rates, nearly all the activities in table 7.8 represent niche activities that appeal to small market segments. Many require substantial investments in time, equipment, and skill.

The data shown in tables 7.5–7.8 may not fully describe all dimensions of activity trends, some of which may reflect the rapid rise in gasoline prices from 2007 to 2008 and the recession that began in 2007 and continues to impact incomes as of the writing of this chapter. However, viewed overall, the data presented in these four tables clearly show that what people in the South choose as activities is changing

Table 7.5—For activities with more than 30 million participants (2005–2009), trends in the number and percentage of Southerners 16 years old and older participating in nature-based activities from 1994 to 2009

	1994 to 1995[a]	1999 to 2001[b]	2005 to 2009[c]		1999 to 2009
	Number of participants (millions)		Number of participants (millions)	Portion of population (percent)	Change (percent)
Activity					
Walk for pleasure	42.4	55.9	66.3	83.9	18.5
Gathering of family/friends	39.2	50.7	58.4	73.9	15.2
Gardening/landscaping for pleasure	–	45.9	54.8	69.3	19.2
View/photograph natural scenery	–	38.2	47.1	59.6	23.4
Sightseeing	35.9	35.2	41.8	52.8	18.8
Visit outdoor nature center/zoo	33.3	36.8	41.5	52.5	12.8
Driving for pleasure	–	34.5	39.7	50.3	15.1
View wildflowers/trees	–	28.9	39.1	49.5	35.3
View wildlife besides birds and fish	18.3	29.4	38.9	49.2	32.2
Outdoor pool swimming	32.2	29.0	35.1	44.5	21.0
Picnicking	32.0	34.7	35.0	44.3	0.8
Visit historic sites/monuments	28.5	29.4	33.4	42.3	13.6
Swimming (other than pools)	26.7	27.0	31.2	39.4	15.3
Visit a beach	39.9	26.2	31.0	39.3	18.5

– = Missing data indicate that participation was not asked during this time period.
[a]Based on 64.01 million people age 16 and older (Woods and Poole Economics, Inc. 2009).
[b]Based on 69.88 million people age 16 and older (U.S. Census Bureau 2008a).
[c]Based on 79.02 million people age 16 and older (U.S. Census Bureau 2008a).
Source: U.S Department of Agriculture Forest Service 2009a.

Table 7.6— For activities with 10 million to 30 million participants (2005–09), trends in the number and percentage of Southerners 16 years old and older participating in nature-based activities from 1994 to 2009

	1994 to 1995[a]	1999 to 2001[b]	2005 to 2009[c]		1999 to 2009
	Number of participants (millions)		Number of participants (millions)	Portion of population (percent)	Change (percent)
Activity					
Viewing or photographing birds	16.9	21.0	27.0	34.2	28.7
Bicycling for fun/exercise	21.1	23.3	26.1	33.1	12.3
Gathering mushrooms/berries	–	18.1	25.1	31.8	38.7
Warmwater fishing	19.2	19.6	23.6	29.9	20.3
Visiting a wilderness	–	19.4	23.6	29.9	21.4
Visiting a farm/agricultural setting	–	17.7	23.1	29.2	30.4
Viewing salt/freshwater fish	8.8	17.9	22.9	28.9	27.9
Day hiking	13.0	17.8	20.0	25.2	12.4
Motor boating	20.1	16.8	19.1	24.2	13.4
Visiting waterside besides beach	–	17.4	18.3	23.1	5.0
Off-highway vehicle driving	11.9	11.8	16.8	21.3	42.1
Camping at developed sites	12.3	15.3	15.3	19.4	-0.2
Visiting archaeological sites	10.6	13.4	15.1	19.1	12.5
Boat touring or excursions	–	12.4	14.8	18.8	19.6
Saltwater fishing	10.3	9.7	12.1	15.3	24.3
Bicycling (mountain/hybrid bike)	–	10.9	11.6	14.7	7.3

– = Missing data indicate that participation was not asked during this time period.
[a]Based on 64.01 million people age 16 and older (Woods and Poole Economics, Inc. 2009).
[b]Based on 69.88 million people age 16 and older (U.S. Census Bureau 2008a).
[c]Based on 79.02 million people age 16 and older (U.S. Census Bureau 2008a).
Source: U.S Department of Agriculture Forest Service 2009a.

Table 7.7— For activities with 3 million to 10 million participants (2005–09), trends in the number and percentage of Southerners 16 years old and older participating in nature-based activities from 1994 to 2009

	1994 to 1995[a]	1999 to 2001[b]	2005 to 2009[c]		1999 to 2009
Activity	Number of participants (millions)		Number of participants (millions)	Portion of population (percent)	Change (percent)
Camping at primitive site	9.1	9.2	9.3	11.8	1.7
Big game hunting	6.7	6.4	8.0	10.1	25.2
Waterskiing	7.8	5.4	7.7	9.7	43.3
Using personal watercraft	4.6	6.8	7.7	9.7	13.7
Horseback riding/equestrian	6.9	6.7	7.6	9.6	12.9
Coldwater fishing	5.7	6.8	7.4	9.4	8.0
Canoeing	5.4	5.1	7.1	9.0	39.3
Small game hunting	6.7	5.9	6.8	8.6	16.0
Rafting	6.4	5.9	6.3	7.9	5.3
Backpacking on trails	4.2	5.0	6.1	7.8	22.5
Horseback riding on trails	4.7	5.4	5.6	7.1	3.7
Snorkeling[d]	5.4	4.2	4.7	5.9	10.7
Sledding	3.7	3.7	3.8	4.8	2.9
Kayaking	0.9	1.4	3.6	4.6	154.3
Mountain climbing	2.3	3.0	3.3	4.1	8.4
Caving	2.8	3.1	3.3	4.1	5.3
Downhill skiing	4.3	2.9	3.2	4.0	8.2

[a]Based on 64.01 million people age 16 and older (Woods and Poole Economics, Inc. 2009).
[b]Based on 69.88 million people age 16 and older (U.S. Census Bureau 2008a).
[c]Based on 79.02 million people age 16 and older (U.S. Census Bureau 2008a).
[d]Snorkeling in 1994-1995 included scuba diving.
Source: USDA Forest Service 2009a.

Table 7.8— For activities with fewer than 3 million participants (2005–09), trends in the number and percentage of Southerners 16 years old and older participating in nature-based activities from 1994 to 2009

	1994 to 1995[ab]	1999 to 2001[c]	2005 to 2009[d]		1999 to 2009
Activity	Number of participants (millions)		Number of participants (millions)	Portion of population (percent)	Change (percent)
Anadromous fishing	2.8	2.0	2.7	3.4	33.8
Sailing	3.0	2.6	2.6	3.2	-3.2
Rowing	2.4	1.9	2.4	3.1	24.2
Rock climbing	1.8	2.2	2.2	2.7	-0.9
Migratory bird hunting	2.2	1.8	1.9	2.5	9.7
Snowboarding	0.9	1.2	1.8	2.2	48.2
Orienteering	1.4	1.0	1.5	1.9	47.4
Ice skating	1.3	1.5	1.5	1.9	-1.9
Surfing	0.9	1.0	1.3	1.6	32.4
Snowmobiling	1.0	0.9	1.1	1.4	15.2
Scuba diving[b]	–	1.4	1.0	1.3	-25.7
Cross-country skiing	0.5	0.7	0.6	0.8	-10.6
Ice fishing	0.2	0.2	0.3	0.4	83.3
Windsurfing	0.8	0.4	0.3	0.3	-33.6
Snowshoeing	–	0.3	0.2	0.2	-36.0

– = Missing data indicate that participation was not asked during this time period.
[a]Based on 64.01 million people age 16 and older (Woods and Poole Economics, Inc. 2009).
[b]Scuba diving was included as part of snorkeling in 1994-1995.
[c]Based on 69.88 million people age 16 and older (U.S. Census Bureau 2008a).
[d]Based on 79.02 million people age 16 and older (U.S. Census Bureau 2008a).
Source: USDA Forest Service 2009a.

over time. Some of the activities that dominated in the 1960s, 1970s, and 1980s no longer dominate as generations, society, lifestyles, information, and technology are shifting (Cordell 2008).

Federal Recreation Resources

Federal land—The almost 640 million acres of Federal land provide vast areas for outdoor recreation. Such areas are as important in the South as they are throughout the country. With the exception of some national wildlife refuges, areas reserved for science and research, dams, and other administrative and operational sites, nearly all Federal land is open and available to the public. However, access is sometimes inhibited by in-holdings and ownership fragmentation.

Less than 5 percent of Federal land, about 30.5 million acres, is in the South, about 44 percent of which is managed by the Forest Service. More than 92 percent of Federal land is located in the Western United States. Even excluding Alaska—which has 36 percent of the national Federal total, Federal land is still predominantly western at 88 percent. The regional distribution of acreage in the three water resource agencies (Army Corps of Engineers, Bureau of Reclamation, and Tennessee Valley Authority), however, is much more evenly split between the West and East. Of the land and water area in the East, about 37 percent is in the South and 12 percent is in the North.

Federal acreage changes very little over time. What does change however, particularly by region, is the per capita amount of Federal land as population changes, mostly through growth. In 2008, the 2,105 acres per 1,000 U.S. residents (or about 2.1 acres per person) represented a 5.6 percent decrease from the 2002 level. Declines were largest in the Rocky Mountains (8.8 percent) and Pacific Coast (7.7 percent), reflecting greater population growth. In the South, the 296.3 Federal acres per 1,000 persons was a 4.8 percent decline since 2002.

The decline in per capita Federal acres nationally was even more pronounced when compared to 1995 levels, mirroring the 14 percent population increase (table 7.9): a decrease of 21.2 percent in the Rocky Mountains, 17.8 percent in the Pacific Coast, 15.4 percent in the South, and 8.2 percent in the North. These figures suggest that the pressure for recreation space may well grow as population grows.

Wilderness—As with Federal land in general, the Federal National Wilderness Preservation System is mostly in the western regions (96 percent), in particular in Alaska, which has more than 52 percent largely managed by the National Park Service and Fish and Wildlife Service. The South accounts for just 2.5 percent, or about 2.7 million of the 109.5 million acres. Even with Alaska's acres removed, the South's share rises to just 5.2 percent of the Nation's total. Since 1995, Wilderness area has grown about 6 percent, but with population increases, per capita acres have declined 3 percent (table 7.10) for the Nation and nearly 16 percent for the South compared to 8 percent Rocky Mountains and 10 percent for Oregon, California, and Washington on the Pacific Coast. Per capita Wilderness acres decreased across all agencies, except for Bureau of Land Management.

Protected rivers and trails—The National Wild and Scenic Rivers and National Recreation Trails were established by Congress in 1968 to designate high-value linear land areas that are important for resource protection and outdoor recreation. The more than 12,500 miles of wild and scenic rivers in the United States represent an 11 percent increase since 2000 (table 7.11); 3,000 miles are in the East and the remaining 75 percent are in the West. Classified as wild, scenic, or recreational, these rivers range from the most primitive and undeveloped (wild) to the most accessible which may have been impounded in the past (recreational). The South has only 810 miles (about 6 percent of the national total), despite an increase of more than 31 percent since 2000. Just under 100 miles were added to each of the wild and scenic classifications in the South, but no miles were added as recreational rivers.

The National Trails System consists of three categories of nationally significant, mostly long-distance trails: national scenic trails, national historic trails, and national recreation trails. Similar to the Federal designated rivers, national trails protect linear land resources that are judged to have significant value for the entire country. Scenic and historic trails are typically overland trails that are remote from population centers, but national recreation trails tend to be located near or within urban areas for the express purpose of providing accessible recreation opportunities. There were more than 20,000 miles of national recreation trails in the United States as of 2009 (table 7.12), nearly 69 percent of which are located in populous eastern areas. More than 6,500 miles are in the South, almost a third of the system. Further, the South led all regions with 84 percent growth in designated trail mileage since 2004, adding nearly 3,000 new trail miles.

Recreation facilities—The U.S. Department of the Interior coordinates the Recreation Information Database, an interagency effort to provide data to the public on Federal recreation sites and facilities through the website, www.recreation.gov. Table 7.13 shows that the Nation's estimated 9,075 Federal facilities translate into just under 30 facilities per million people (or about 1 per 33,500), with the West leading in all categories. With just 12.1 facilities per million people overall (or about 1 per 83,000), the South is fairly well represented in boating facilities, although still trailing

Table 7.9—Federal agency acres per 1,000 people (including Alaska) in 1995[a] and percent change from 1995 to 2008[b]

	North		South		Rocky Mountains		Pacific Coast		United States	
Federal Agency	Acres 1995[c]	Percent change 2008	Acres 1995[c]	Percent change 2008	Acres 1995[c]	Percent change 2008	Acres 1995[c]	Percent change 2008	Acres 1995[c]	Percent change 2008
U.S. Forest Service	101.9	-3.4	151.7	-14.6	4,600.3	-22.3	1,581.1	-12.7	719.6	-11.9
National Park Service	11.0	-1.8	58.3	-13.4	482.5	-17.5	1,447.3	-13.8	292.0	-11.2
U.S. Fish and Wildlife Service	10.3	34.0	44.8	-5.4	330.6	7.6	1,855.6	-13.7	339.7	-8.5
Bureau of Reclamation	0.0	0.0	2.3	-17.4	251.4	-21.8	20.3	-14.3	24.5	-12.7
Bureau of Land Management	3.3	-100.0	9.4	-95.7	6,629.1	-22.5	2,898.7	-22.4	1,005.1	-17.1
Tennessee Valley Authority	0.0	0.0	2.9	-17.2	0.0	0.0	0.0	0.0	0.9	-11.1
U.S. Army Corps of Engineers	24.8	-16.9	66.2	4.4	113.8	11.9	12.8	-13.3	43.4	4.1
All Federal agencies	156.4	-8.2	350.2	-15.4	12,422.9	-21.2	7,911.8	-17.8	2,448.6	-14.0

[a]1995 U.S. population estimate is 266.28 million (Woods and Poole Economics, Inc. 2009).
[b]2008 U.S. population estimate is 304.06 million (U.S. Census Bureau 2008a).
[c]Resource data years for earlier period vary by agency; expressed as 1995 because 1995 population estimates were used in per capita measures.
Sources: USDA Forest Service 1995, 2008; U.S. Department of the Interior National Park Service 1995, 2008; U.S. Department of the Interior Fish and Wildlife Service 1995, 2008; U.S. Department of the Interior Bureau of Reclamation 1993, 2008; Tennessee Valley Authority 2008; U.S. Army Corps of Engineers 2006.

Table 7.10—Federal acres in the National Wilderness Preservation System by region and Federal agency (excluding Alaska) per 1,000 people in 1995[a], and percent change from 1995 to 2009[b]

	North		South		Rocky Mountains		Pacific Coast		United States	
Agency	Acres 1995	Percent change 2009	Acres 1995	Percent change 2009	Acres 1995	Percent change 2009	Acres 1995	Percent change 2009	Acres 1995	Percent change 2009
Bureau of Land Management	0.0	0.0	0.0	0.0	74.8	121.4	89.5	-3.5	20.0	44.0
U.S. Fish and Wildlife Service	0.5	0.0	5.5	-16.4	67.3	-21.7	0.3	-33.3	7.6	-11.8
U.S. Forest Service	11.5	0.0	8.3	-12.0	823.1	-20.5	237.8	-9.1	111.5	-9.5
National Park Service	1.1	27.3	17.5	-17.1	36.0	34.2	200.9	-13.8	39.0	-6.9
U.S. total	13.2	1.5	31.3	-15.7	1,001.2	-8.0	505.2	-9.8	176.9	-3.0

[a]1995 U.S. population estimate is 265.67 million, excluding Alaska (Woods and Poole Economics, Inc. 2009).
[b]2008 U.S. population estimate is 303.37 million, excluding Alaska (U.S. Census Bureau 2008a).
Source: Wilderness.net 2009.

Table 7.11—Miles of river in the National Wild and Scenic River System by classification and region, 2000 and 2009

	Wild rivers			Scenic rivers			Recreational rivers			Total		
Region	2000	2009	Percent change	2000	2009	Percent change	2000	2009	Percent change	2000	2009	Percent change
North	172	174	1.5	935	1,014	8.5	964	1,007	4.4	2,070	2,195	6.0
South	187	284	51.8	318	414	30.2	112	112	0.0	617	810	31.3
Rocky Mountains	710	1,328	87.1	288	380	31.9	532	587	10.5	1,530	2,295	50.0
Pacific Coast	4,280	4,370	2.1	911	936	2.7	1,886	1,946	3.2	7,077	7,252	2.5
U.S. total	5,349	6,156	15.1	2,452	2,743	11.9	3,493	3,652	4.6	11,294	12,552	11.1

Source: Interagency Wild and Scenic Rivers Council 2009.

Table 7.12—Number and miles of National Recreation Trails in 2004 and 2009 by region and percent change in 2009

	National Recreation Trails					
	Number			Miles		
Region	2004	2009	Percent change	2004	2009	Percent change
North	226	312	38.1	4,119	7,319	77.7
South	220	264	20.0	3,578	6,577	83.8
Rocky Mountains	254	292	15.0	2,969	3,380	13.8
Pacific Coast	198	209	5.6	2,622	2,944	12.3
U.S. total	898	1,077	19.9	13,288	20,220	52.2

Source: American Trails 2010.

Table 7.13—Federal recreation facilities and activities supported per 1 million people by region in 2009

	Ratio (per 1 million people)[a]				
Activity or facility	North	South	Rocky Mountains	Pacific Coast	United States
Camping	8.3	11.2	121.3	63.8	28.6
Hiking	1.5	1.8	65.6	19.9	10.4
Fishing	1.3	2.4	64.0	18.3	10.2
Boating	1.9	4.3	22.7	10.2	5.9
Picnicking	0.1	0.1	43.6	9.3	5.6
Recreational vehicle camping	0.0	0.0	38.0	11.7	5.4
Biking	0.4	0.4	32.4	5.7	4.2
Horseback riding	0.1	0.4	27.5	4.7	3.5
Hunting	0.4	0.8	24.8	4.2	3.4
Wildlife viewing	0.1	0.1	20.1	7.5	3.1
Auto touring	0.0	0.0	13.4	2.4	1.6
Water sports	0.0	0.0	6.4	3.9	1.2
Interpretive programs	0.8	0.7	4.7	1.3	1.2
Visitor centers	0.9	0.8	4.0	1.1	1.2
Riding off highway vehicles	0.0	0.0	9.3	1.2	1.0
Wildernesses	0.0	0.0	6.0	2.3	0.9
Winter sports	0.0	0.0	6.3	0.8	0.7
Swimming sites	0.0	0.0	2.2	2.8	0.6
Historic and cultural sites	0.2	0.0	4.0	0.5	0.5
Fish hatcheries	0.1	0.2	0.7	0.3	0.2
Day use areas	0.0	0.0	1.4	0.4	0.2
Climbing	0.0	0.0	1.5	0.2	0.2
All activities and facilities	9.5	12.1	124.2	65.2	29.8

[a]Based on 2008 U.S. population estimate of 304.06 million (U.S. Census Bureau 2008a).
Source: U.S. Department of the Interior 2009.

the West in per capita availability by a wide margin due to its larger population. The Rocky Mountains has more than 10 times the number of available Federal facilities per capita than both the South and the North and nearly twice as many as the Pacific Coast. Camping facilities dominate the list; they are offered at nearly 96 percent of facilities nationwide.

Non-Federal Recreation Resources

State parks—State park systems exist in all 50 States, usually as a division or agency within a State department of natural resources or conservation. They are usually closer to population centers and more developed than their Federal counterparts, and although most manage a significant number of backcountry acres, these holdings are not nearly as extensive as those in Federal systems. State parks have been called "intermediate" resources because they represent a middle ground between the sometimes vast and distant Federal lands and the usually much smaller and more highly developed parks managed by local governments (Clawson and Knetsch 1966).

Every State system is built around flagship "State parks," but also typically consists of recreation areas and several types of other areas such as natural areas, historic sites, environmental education and science areas, State forests, and wildlife and fish areas. Although these other types of areas exist within State natural resource departments, in many States they are not managed within the State park system. This is the case for most, but not all, State forests and State wildlife and fish areas.

State park systems' accessibility is evident in their distribution across counties of the United States (fig. 7.9). The majority of U.S. counties have one or more acres of State park system lands. Although many of the largest holdings are found in western counties, representation is also substantial throughout the Eastern United States (particularly the Atlantic States and Florida for the South). With the exception of some areas in the Great Plains, and a few other scattered regions across the country, it is rare to travel across more than just a few counties without encountering State park system lands.

State parks typically provide a diversity of recreation opportunities, so many of the activities that people enjoy on Federal lands can also be enjoyed on the State park system lands. Although figure 7.9 shows Southern States having less extensive coverage as States in the Northeast and Midwest, State parks are located within less than an hour's drive regardless of where one is located in Florida and South Carolina, and throughout much of the South.

In 2009, the National Association of State Park Directors reported more than 13.9 million acres in State park systems, an increase of about 3 percent in acres per 1,000 people since 1995 (table 7.14).[2] Southern States reported about 2.2 million acres (16 percent of the national total or 21 percent if Alaska's large State parks are removed from the Pacific Coast total). State park acreage per capita grew 40 percent between 1995 and 2008 in the South. State recreation area acreage per capita dropped by nearly 29 percent during this period. The South's 8.8 percent growth in per capita acreage across all categories of areas under State park system management was more than twice that of the Nation, but was dwarfed by the North, which increased a full one-third in size. It should be noted, however, that most of the North's increase was likely due to reclassification of other State properties into the State park system jurisdictions. This was particularly prevalent in New York.

State park systems have faced difficult budgetary pressures since the onset of the 2007 recession, occasionally resulting in closure of some facilities (four in Arizona), transfer of others to other government and quasi-government entities, and/or reduced hours, services, and staffing (table 7.15). Two of the most affected States—Alabama and Georgia—are located in the South. The location and status of State park units throughout the 48 States is shown in figure 7.9. Substantial numbers are particularly evident throughout much of the Northeast, Midwest, Florida, and along the Pacific Coast. Although there are many fewer parks in the West, they tend to be larger than those in the North and South.

State facilities—Table 7.16 lists eight major types of facilities provided by State park systems and trends in these facilities since 1995. Campsites are by far the most plentiful resource per capita, although a comparison with the numbers of other facilities listed is not appropriate since each of those represents a much larger investment of resources. Nationally, improved campsites, cabins, golf courses, and marinas held steady on a per capita basis (per one million people) since 1995, but primitive campsites fell about 12 percent. The opposite was true in the South, where primitive campsites increased nearly 29 percent, accompanied by decreases in cabins, golf courses, and marinas. The drop in the number of swimming pools per capita at Southern State parks was in the same direction as the national trend. The South's large percent gain in stables per capita may represent just a handful of stables in the region, as the base number in 1995 was relatively small.

[2] Information derived from series of reports: National Association of State Park Directors. 2009. Annual Information Exchange for the Period July 1, 2007 through June 30, 2008, and National Association of State Park Directors. 1996. Annual Information Exchange for the Period July 1, 1994 through June 30, 1995. Available from North Carolina State University. Department of Parks, Recreation and Tourism Management, Jordan Hall 5107, Box 7106, Raleigh, NC 27697-7106. Yu-Fai Leung, Principal Investigator.

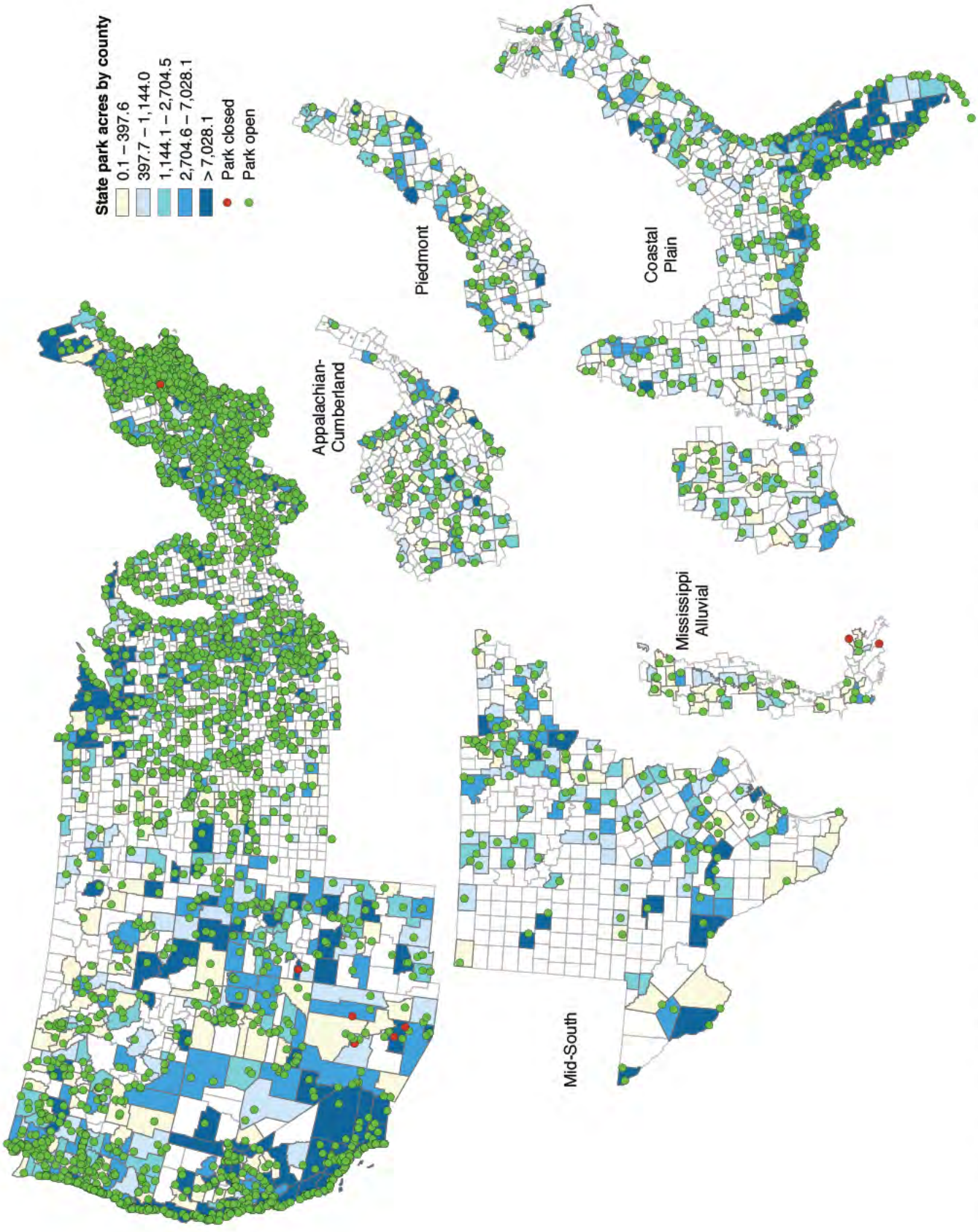

Figure 7.9—Location and status of State park system units and acres by county in the contiguous United States, 2009. (Source: U.S. Department of Agriculture Forest Service 2009b)

Table 7.14—State park system area by region and type of area per 1,000 people in 1995[a] and percent change from 1995 to 2008[b]

	North		South		Rocky Mountains		Pacific Coast		United States	
Type	Acres 1995	Percent change 2008	Acres 1995	Percent change 2008	Acres 1995	Percent change 2008	Acres 1995	Percent change 2008	Acres 1995	Percent change 2008
State parks	18.0	-2.3	10.1	40.2	37.0	-12.8	95.3	-8.1	29.4	-1.1
Recreation areas	1.5	49.7	1.3	-28.8	8.9	-22.9	18.1	-28.1	4.7	-15.0
Historic sites	0.1	123.1	0.3	-8.8	1.2	-59.8	0.4	51.2	0.3	12.1
Natural areas[c]	0.9	77.6	0.1	9066.7[d]	0.3	2907.4[d]	0.0	–	0.4	804.9
Other areas	9.4	111.6	0.6	-7.9	14.4	-87.1	1.2	7.5	5.7	52.5
All areas	31.2	33.2	19.7	8.8	70.5	-29.7	117.4	-10.1	44.4	3.2

– = unavailable.
[a]1995 U.S. population estimate is 266.28 million (Woods and Poole Economics, Inc. 2009).
[b]2008 U.S. population estimate is 304.06 million (U.S. Census Bureau 2008a).
[c]Includes environmental education sites and areas classified as scientific sites.
[d]Includes forests, fish and wildlife areas, and other miscellaneous State park system sites. Changes are likely the result of system reclassifications and not additions.
Source: National Association of State Park Directors 1996, 2009 (see footnote 2).

Table 7.15—State park systems affected by closure or reduction in services by State, 2009

State	Number of system areas	Number of closures	Reduction in services
Alabama	23	0	One park transferred to county government
Arizona	28	Two parks and two historic sites	Hours open were cut for two State parks and five historic parks
Georgia	63	0	One park changed to outdoor recreation area; six historic parks/sites have cut hours; and three historic sites are now operated by the counties within which they reside
Hawaii	50	0	One park transferred to a development corporation
Massachusetts	136	Two State forests	Two areas will not be staffed
Michigan	93	0	One site cut hours for the summer

Source: USDA Forest Service 2009b.

Table 7.16—State park system facilities per 1 million people by region and type of facility in 1995[a] and percent change from 1995 to 2008[b]

	North		South		Rocky Mountains		Pacific Coast		United States	
Facilities	Number 1995	Percent change 2008	Number 1995	Percent change 2008	Number 1995	Percent change 2008	Number 1995	Percent change 2008	Number 1995	Percent change 2008
Improved campsites	608.1	15.0	361.1	-2.4	837.2	4.7	514.8	-40.4	533.2	0.3
Primitive campsites	144.4	-31.3	60.6	28.7	855.1	-5.4	215.0	-30.5	186.9	-11.7
Cabins	23.3	11.7	30.1	-11.2	17.3	50.4	9.7	29.0	22.8	5.5
Golf courses	0.4	19.5	0.6	-3.2	0.2	38.9	0.1	-42.9	0.4	4.8
Golf holes	6.4	28.2	9.8	3.3	2.5	108.9	1.7	-46.2	6.4	15.1
Marinas	0.8	29.8	1.0	-22.9	2.5	-10.7	0.3	0.0	0.9	3.3
Swimming pools	1.4	-8.1	1.5	-19.9	0.4	8.1	0.1	100.0	1.1	-12.6
Stables	0.3	-10.0	0.3	92.6	0.6	-40.0	0.1	-77.8	0.3	14.3

[a]1995 U.S. population estimate is 266.28 million (Woods and Poole Economics, Inc. 2009).
[b]2008 U.S. population estimate is 304.06 million (U.S. Census Bureau 2008a).
Source: National Association of State Park Directors 1996, 2009 (see footnote 2).

Local government services—The 2007 Census of Governments tallied 8,852 local governments nationwide that provide recreation and park services, with just fewer than 29 percent of these (2,552 units) in the South. On a per capita basis (per million people) the South experienced almost 18 percent growth since 1997—slightly higher than the national rate of 13 percent and higher than any other single region (table 7.17). Municipal recreation departments grew much faster than county departments in the South. Fastest of all was special recreation and park districts, which grew more than 53 percent per capita. These numbers, however, were very small in 1997, with only a single special district department for every 2 million Southern residents. Further, the Trust For Public Land's LandVote database tracks ballot measures throughout the country that finance recreation and park-related protection, development, and improvements (TPL 2011). Since 2000, TPL reports 184 ballot measures passing (out of 226 or 81 percent) for municipal and county governments in the South. These initiatives summed to just over $5 billion worth of funding through bond and tax measures.

Local government resources are important for the basic fact that they provide 'close-to-home' recreation opportunities, especially in urban and urbanizing areas. Many of the most popular outdoor recreation activities (based on the proportion of people who participate in them), such as walking and bicycling for pleasure, picnicking, and outdoor family gatherings, occur most often in accessible places near where people live, hence the importance of local parks and recreation areas. Though most local parks tend to be highly developed in terms of facilities and infrastructure, a significant proportion of local resources also provide more natural environments that are suitable for dispersed forms of recreation. Nature centers, natural areas, trails, and greenways are examples of resources that offer nature-based recreation opportunities. The TPL's Center for City Park Excellence estimates that almost exactly one-half of the local government parkland in the Nation's 77 largest cities is in its natural state, as opposed to being designed or developed for human use (Harnik and others 2012).

Private businesses and land—Among the nine outdoor recreation business categories tracked, five showed a decline in the number of establishments per million people from 1998 to 2007 (table 7.18). Skiing facilities (very few of which were located in the South in 1998), amusement/theme parks, recreational/vacation camps, golf courses, and marinas all posted double-digit declines in the South. Private-sector historical sites, nature parks, and zoos/botanical gardens—all in the viewing/learning/photography group of activities—posted the greatest gains. Historical sites and zoos/gardens exceeded that national trend, and nature parks were not far from the national growth rate of 42 percent.

Table 7.17—Number of local government parks and recreation departments by governmental unit and region per million people in 1997 and 2007, and percent change from 1997[a] to 2007[b]

Type of government unit	North			South			Rocky Mountains			Pacific Coast			United States		
	1997	2007	Percent change	1997	2007	Percent change	1997	2007	Percent change	1997	2007	Percent change	1997	2007	Percent change
County	3.5	3.5	0.3	5.4	5.7	6.2	5.8	5.1	-12.6	2.3	2.2	-5.6	4.1	4.2	1.7
Municipal	15.0	18.4	22.7	15.5	18.8	20.7	21.0	29.4	40.3	12.9	14.0	8.0	15.3	18.8	22.6
Town or township	8.5	9.4	11.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	3.7	3.9	5.1
Special district	3.4	3.2	-5.6	0.5	0.7	53.2	7.6	4.8	-37.1	3.8	3.4	-11.3	2.9	2.5	-11.5
All local units	30.3	34.5	13.6	21.4	25.2	17.7	34.4	39.5	14.8	19.1	19.5	2.5	26.0	29.4	13.0

[a]1997 U.S. population estimate is 272.65 million (Woods and Poole Economics, Inc. 2009).
[b]2007 U.S. population estimate is 301.29 million (U.S. Census Bureau 2008a).
Source: U.S. Census Bureau 2007a.

Table 7.18—Number of selected private recreation business establishments by type of business and region per million people in 1998[a] and percent change from 1998 to 2007[b]

Recreation business	North		South		Rocky Mountains		Pacific Coast		United States	
	Number 1998	Percent change 2007	Number 1998	Percent change 2007	Number 1998	Percent change 2007	Number 1998	Percent change 2007	Number 1998	Percent change 2007
Golf courses and country clubs	49.8	-4.3	40.1	-11.7	47.1	-6.0	26.0	-8.8	42.6	-7.7
Recreational vehicle parks and campgrounds	13.3	4.1	11.4	0.4	26.9	-1.3	17.3	-3.1	14.5	1.4
Marinas	17.7	-3.5	16.5	-18.6	7.5	-24.9	10.6	-12.3	15.3	-11.5
Recreational and vacation camps (not campgrounds)	14.0	-18.1	8.5	-20.7	22.5	-28.4	11.3	-12.2	12.5	-19.6
Historical sites	4.5	6.1	2.3	23.9	3.8	-15.2	1.8	3.4	3.3	6.7
Nature parks and similar institutions	1.9	31.7	1.5	35.6	2.9	20.7	1.3	118.5	1.7	42.5
Amusement and theme parks	3.7	-47.8	3.6	-36.8	2.9	-16.6	2.4	-12.9	3.4	-37.7
Zoos and botanical gardens	1.4	33.8	1.3	44.8	1.7	15.5	1.5	49.3	1.4	37.8
Skiing facilities	1.7	0.6	0.4	-40.5	4.4	-7.7	1.5	-17.6	1.5	-8.3

[a]1998 U.S. population estimate is 272.65 million (Woods and Poole Economics, Inc. 2009).
[b]2007 U.S. population estimate is 301.29 million (U.S. Census Bureau 2008a).
Source: U.S. Census Bureau 2007b.

Privately-owned land, particularly forest, is a significant outdoor recreation resource, especially in the eastern United States. The 2006 National Woodland Owner Survey estimated that 10.4 million family forest owners hold about 264 million acres (35 percent) of all U.S. forest land and 62 percent of private forest land area (Butler 2008). Most of the private forest land is in the southern and northern regions (Butler 2008). The South has 44 percent of both the Nation's private forest land and private forest owners. Besides family forest owners, most of the other private forest land in the South is controlled by forest industry and forest management companies, including timber investment management organizations (TIMOs) and timber-oriented real estate investment trusts (REITs). More than half of family forests are owned primarily for their beauty and scenery, but also for nature protection, and other reasons. Among secondary reasons are for a vacation home or cabin and recreation, primarily for the landowner, their family, and friends. While only 15 percent of family forest land is open to the general public for recreation, all private forest land tracts may be considered available to be used by someone for recreation. Each State has a recreational use statute which limits the liability of private landowners to allow access to their land, thus ostensibly encouraging public use. However, the interpretation of what constitutes a recreational 'user' varies by State. An online copy of each State's recreational use statute appears on the University of Arkansas's National Agricultural Law Center Web site (NALC 2011).

Recreation leases on private land in the South, especially for hunting, are a popular and mutually beneficial means of allowing users access to private property while providing income to the land owner. Hunters and other recreationists who are willing to pay a fee in effect compensate the land owner for providing the necessary wildlife habitat to maintain wildlife populations. Yarrow (2009) has provided an online primer on hunting leases, including a description of four different types of lease-hunting arrangements and a copy of a sample lease. In addition to hunting, lessees may use private property for fishing, observing or photographing wildlife, and other compatible nature-based recreation activities. Timber and other forest industry companies are also in the business of offering recreation leases. Plum Creek Timber Company, Inc. is the largest private landowner in the United States with approximately 6.8 million acres of timberland in 19 States (including every Southern State except Tennessee, Virginia, and Kentucky). They are certainly one of the largest private providers of recreational opportunities (Plum Creek Timber Company, Inc. 2011). Much of Plum Creek's land in the northern and western States is open to the public, but access in the South is limited to lease arrangements. Data on industry recreation leases are not released for proprietary reasons and although some recent studies have examined economic issues regarding hunting leases in parts of the South (e.g., see Hussain and

others 2007, Liu and others 2010, Zhang and others 2006), no region-wide assessment or summary statistics on recreation leases in the South exists.

The NSRE estimated the number and percent of annual recreation activity days in the United States that occur on private land (Cordell 2012). Based on a national sample of about 5,400 people age 16 and older, the estimates for seven activity groups were split into East and West regions. (Forest Service Regions Northern and Southern were combined to form the East group because of an insufficient sample for the South alone for some less popular activities.) Hunting led all activities with 47 percent of all annual days nationwide occurring on private forest lands in the East. Motorized activities ranked second with 43 percent followed by 34 percent of nature viewing and photography estimated to occur on eastern private forest lands. Backcountry activities, such as backpacking, day hiking and visiting a primitive area, were least likely to occur on eastern private forest lands.

Nearby Recreation Resources (Current)

Figure 7.10 shows the county-level pattern of four levels of Federal and State-park land acreage within the 75-mile distance zone (considered to be suitable for a day trip with no overnight stay necessary). Whereas some counties have no Federal or State land within their boundaries, all have some access to public acreage when surrounding counties are considered. Most counties in the South have from 0.07 acres to 1.46 acres of public land per person, with a high between 1.46 acres and 18.31 acres in the Ozark Highlands and the Virginia mountains and a low of less than 0.1 acres per person in central Florida and the southeastern Piedmont.

Counties in much of the drier parts of western Texas and in some parts of Nevada and California lack non-Federal forest land within their 75-mile recreation day trip zone (figure 7.11). Although much of the South has abundant forest land area, when population density is considered in calculating per capita acreage, some of the metropolitan areas are found to have relatively little. Parts of Arkansas, Louisiana, Mississippi, Alabama, and Georgia have relatively abundant per capita non-Federal forest land within 75 miles.

As with public land area, all counties have access to some water area when the 75-mile zone for each county is considered (fig. 7.12). Water as defined here is all water area with the exception of open ocean. For the South, greater water (non-ocean) area per capita is in coastland counties along the Atlantic Ocean and Gulf of Mexico. Moderate levels of water per capita are found inland throughout the South. Relatively low water per capita is found in Texas metropolitan and the Atlanta metropolitan areas (because of greater populations in these areas), as well as large portions of North Carolina, Virginia, and Kentucky. On a per capita basis, the greatest water area is the Great Lakes area, the Dakotas, and Montana (because of low population density), and in a few counties in the West.

Nearby Recreation Resources (Projected)

Federal and State park lands—Federal and State park acreage is expected to be (or almost be) constant through time. Forecasts of future areas of Federal and State park lands were not attempted for this report. Historically, the net area of federal land has changed very little in recent decades. State park systems, despite growth in per capita acreage since 1995, are not expected to continue expanding at recent historical rates. Given the recent State political and budget trends nationwide which have resulted in many closures, downsizing, and understaffing of State park units, a no-growth scenario for State park resources might be considered a reasonable future projection. For the country as a whole, about 26 percent of the total area is in Federal or State management or slightly more than 2 acres per person (table 7.19). By 2060, per capita Federal and State park acreage is predicted to decline to 1.4 acres per person or about 68 percent of the 2008 amount.

Federal or State-park land is much less in the East, with 5 percent of total area in the South or less than 0.3 acres per person. By 2060, the Federal or State park land area per person is projected to decrease to 0.17 acres, about 63 percent of the 2008 level. Percentage of total area that is Federal or State-park land is somewhat higher for the Atlantic States than for southern States further west (7.4 versus 4 percent), but higher population growth is expected to result in lower per capita acreages of the public land acres for these States.

Non-Federal forest—Non-Federal forest land area is expected to change with continuing conversions from forests and farmlands to cities and suburbs. For the country as a whole (excluding Alaska and Hawaii), about 19 percent of total land area is non-Federal forest (table 7.20), or 1.27 acres per person. By 2060, per capita non-Federal forest area is predicted to decline to 0.8 acres per person, or 63 percent of the 2010 amount.

For the South, more than 30 percent of total land area is non-Federal forest, or 1.66 acres per person. By 2060, per capita non-Federal forest is predicted to decline to 0.95 acres per person, or 57 percent of the 2010 level. The percentage of total area that is non-Federal forest is considerably higher for the Atlantic States than for States farther west (about 43 versus 26 percent), but higher projected population growth is expected to result in lower per capita non-Federal forest acreages for these States compared to those farther west.

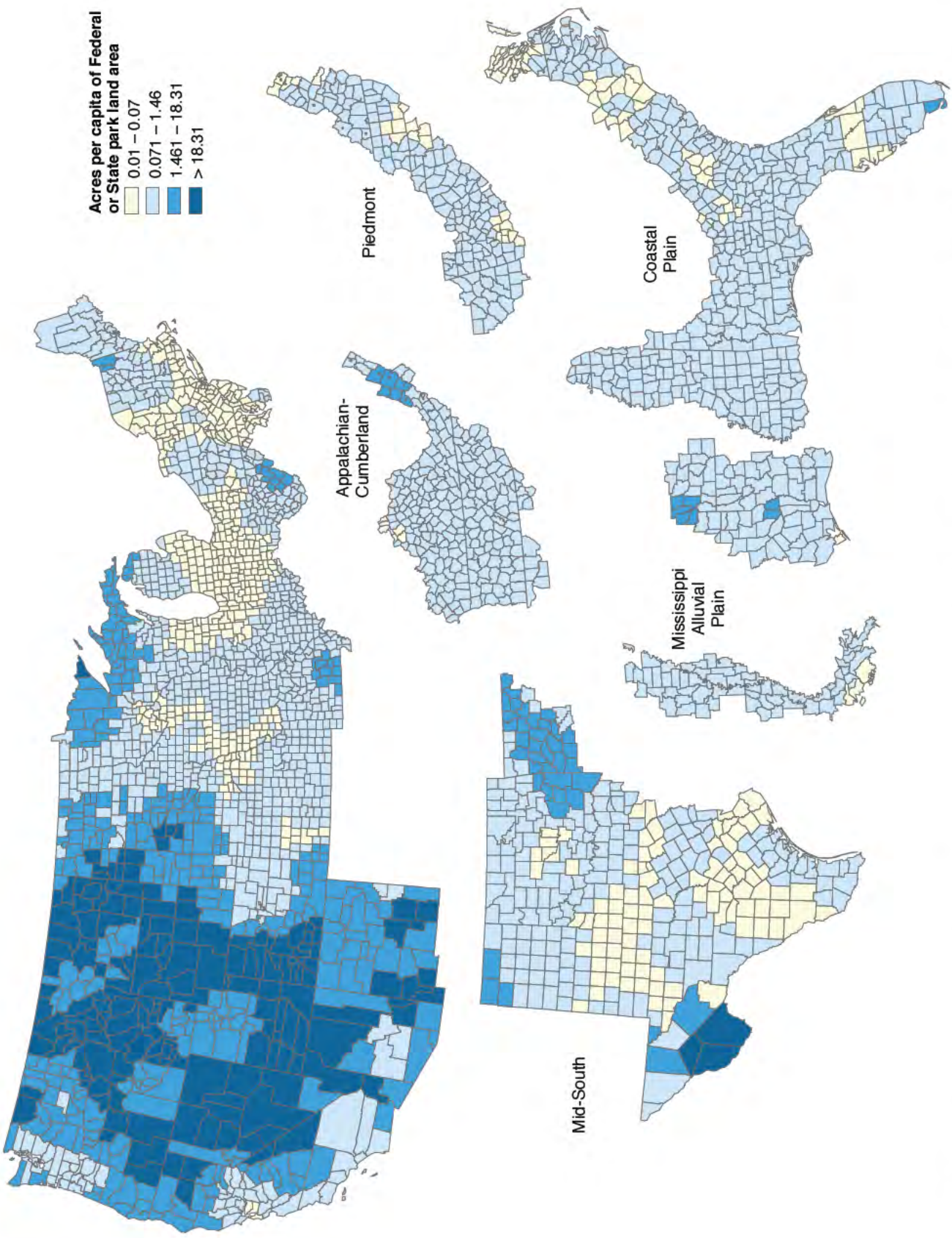

Figure 7.10—Acres per capita of Federal and State land area within a 75-mile recreation day trip of each U.S. county, 2008. [Sources: USDA Forest Service 2008; U.S. Department of the Interior National Park Service 2008; U.S. Department of the Interior Fish and Wildlife Service 2008; U.S. Department of the Interior Bureau of Land Management 2008; Tennessee Valley Authority 2008; U.S. Army Corps of Engineers 2006; National Association of State Park Directors 2009 (see footnote 2)]

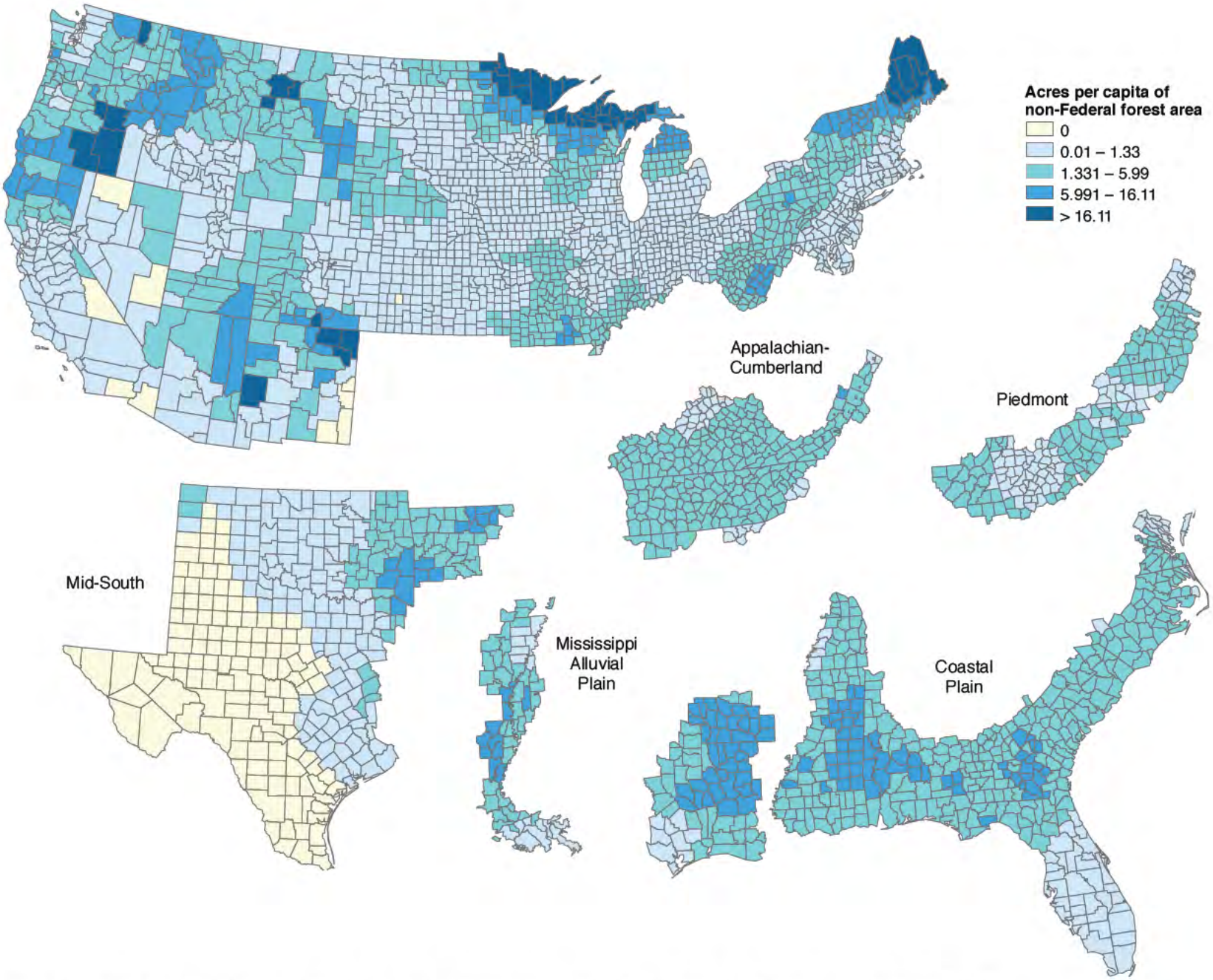

Figure 7.11—Acres of non-Federal forest area per capita within a 75-mile recreation day trip for each U.S. county, 2010. (Source: USDA Forest Service 2010)

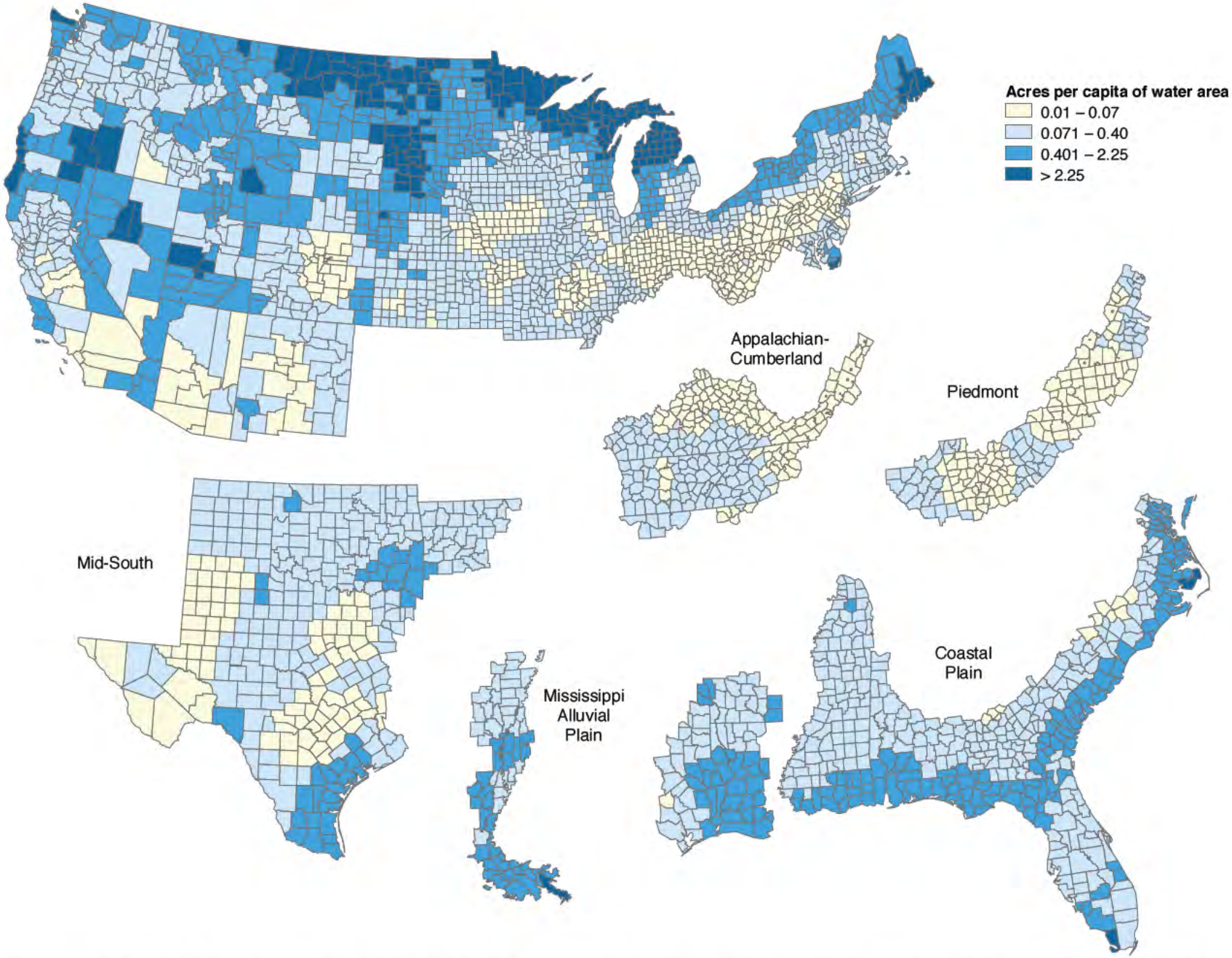

Figure 7.12—Acres per capita of water area (classified as one of four types: inland, coastal, territorial, and Great Lakes) within a 75-mile recreation day trip of each U.S. county, 2008. (Source: U.S. Census Bureau 2000)

Table 7.19—Total and per capita acres of Federal or State park land by region with percent of total surface area 2008, projected per capita acres 2060, and proportion of 2008 acres projected for 2060

	Federal or State park land[a]				
	2008			2060	Proportion of 2008 acres projected for 2060
Region	Total acres (1,000s)	Percent of total area	Per capita acres	Projected per capita acres	
South	28,274	5.0	0.28	0.17	0.63
North	19,915	4.2	0.16	0.13	0.79
Rocky Mountains	259,643	34.6	9.35	5.22	0.56
Pacific Coast	319,487	49.5	6.51	4.19	0.64
U.S. total	627,319	25.8	2.06	1.40	0.68

[a]Federal or State park land is the sum of Federal land-managing agency area and State park system areas. Federal agencies include the National Park Service, USDA Forest Service, U.S. Fish and Wildlife Service, U.S. Department of the Interior Bureau of Land Management, Tennessee Valley Authority, and U.S. Army Corps of Engineers. U.S. Department of the Interior Bureau of Reclamation is not included because most of its areas are managed by other agencies.
Sources: USDA Forest Service 2008; U.S. Department of Interior National Park Service 2008; U.S. Department of the Interior Fish and Wildlife Service 2008; U.S. Department of the Interior Bureau of Land Management 2008; Tennessee Valley Authority 2008; U.S. Army Corps of Engineers 2006; National Association of State Park Directors 2009 (see footnote 2).

Table 7.20—Total and per capita acres of non-Federal forest land by region with percent of total surface area 2010, projected per capita acres 2060, and proportion of 2010 acres projected for 2060

	Non-Federal forest land[a]				
	2010			2060	Proportion of 2010 acres projected for 2060
Region	Total acres (1,000s)	Percent of total area	Per capita acres	Projected per capita acres	
South	171,810	30.5	1.66	0.95	0.57
North	147,762	31.4	1.19	0.88	0.74
Rocky Mountains	28,486	3.8	1.02	0.55	0.54
Pacific Coast	37,736	17.1	0.79	0.47	0.59
U.S. total	385,793	19.3	1.27	0.80	0.63

[a]Non-Federal forest land projections were not done for Alaska and Hawaii.
Source: USDA Forest Service 2010.

Water—Like Federal and State park land, total water area is expected to be (or almost be) constant through time. For the country as a whole, about 7 percent of total surface area is water resources, or roughly half an acre per person (table 7.21). By 2060, per capita water area is predicted to decline to 0.37 acres per person or 68 percent of the 2008 amount.

For the South, water area is slightly more than 5 percent of the total surface area, or 0.28 acres per person. By 2060, per capita water is predicted to decline to 0.18 acres or 63 percent of the 2008 level. Water as a percent of South's total surface area is much higher for the Atlantic States than for the States farther west (9.3 versus 3.5 percent). Despite higher projected population growth, per capita water acreages for the Atlantic States and the Southern States farther west are both projected to equal the 0.18 acres of the South as a whole in 2060.

CONCLUSIONS AND DISCUSSION

The South has been and continues socially to be a very dynamic region of the country. It is characterized by rapid population growth, dramatic changes in demographics, and shifting natural cover and uses of land and water resources. In the last two decades, the South's population grew at a considerably faster rate (over 30 percent) than the Nation as a whole (just above 20 percent). The region now has over half the Nation's African American population and has surpassed the Pacific Coast Region in Hispanic population growth, which has been especially high in North Carolina and Georgia. Within this population growth dynamic, the baby boomer generation age groups (44-64 years old) have dominated all others in percentage growth since 1990. This age group is one that generally has more disposable income and wealth and often demands more housing and other goods, which in turn stimulates other development.

Greater population in this region means more people in its counties and greater density of communities, commercial areas, and industrial complexes. The greatest density of population and development in the South is in Florida, the Piedmont areas of North Carolina to Georgia, eastern Texas, and coastal counties. In some high growth areas, the increase is so substantial that it constitutes the addition of a whole new urban area at least equivalent to the U.S. Census Bureau criteria as an area with 500 or more persons per square mile. Over the next 50 years or so, projected growth for the South is expected to be nearly 60 percent over current population, which is approaching 105 million. Greater numbers of individuals, families, and households in all likelihood will translate directly into greater demand for venues for outdoor recreation, but at the same time create greater pressures on remaining natural lands.

Predicted growth and shifts in the makeup of the South's population and in what people demand for outdoor recreation is covered in the following chapter. The basic data for this chapter and the following chapter are for the most part the same. As shown by trends in this chapter, and what is forecast in the next chapter, what people now choose and likely will continue to choose for outdoor recreation represents a change from past decades and generations. The recreation activities once most popular are not necessarily what contemporary and future generations are or will be choosing. Over the past several years, we have reported growth both in number of outdoor recreation participants and in overall level of participation. Activities oriented toward viewing and photographing nature (scenery, flowers/trees, and wildlife) have been among the fastest growing in popularity. But the list of outdoor pursuits is long meaning there is and will be a variety of activities of interest that occur in forests and other natural settings.

Table 7.21—Total and per capita acres of total water area by region with percent of total surface area 2008, projected per capita acres 2060, and proportion of 2008 acres projected for 2060

	Water area[a]				
	2008			2060	Proportion of 2008 acres projected for 2060
Region	Total acres (1,000s)	Percent of total area	Per capita acres	Projected per capita acres	
South	29,282	5.2	0.28	0.18	0.63
North	56,834	12.1	0.46	0.36	0.79
Rocky Mountains	7,289	1.0	0.26	0.15	0.56
Pacific Coast	70,848	11.0	1.44	0.93	0.64
U.S. total	164,253	6.8	0.54	0.37	0.68

[a]Census Bureau water is classified as one of four types: inland, coastal, territorial, and Great Lakes.
Source: U.S. Census Bureau 2000.

Concurrent with population growth and shifting recreation demands is increasing pressure on forest and other natural lands. In the South, this can pose a challenge. For example, State and Federal lands are often the places people choose for nature-based outdoor recreation. However, less than 5 percent of Federal land, just over 30 million acres, is in the South where almost 105 million people live (about one-third of the Nation's population). Over the last decade and half, Federal acres per 1,000 persons in the South declined slightly faster than the national rate, a decrease of over 15 percent. Similar patterns can be seen for per capita State lands and for most other resources used for outdoor recreation in the South. Residents of most counties in the South have access to fewer than 1.5 acres of public land per person within 75 miles of their county of residence, with a high of up to 18.3 acres in the Ozark Highlands and Virginia mountains. In all likelihood, there will be little to no increases in Federal and State land in the South. In fact, some States have recently closed some State parks.

Water and forests will continue to be important recreation resources. Like water, across the region there is abundant forest land area. But when expressed on a per capita basis, many of the major metropolitan areas are found to have relatively little non-Federal forest land nearby. Water area per capita is abundant in coastal areas, but throughout the rest of the South there is increasing scarcity. Like public lands, total water area is fairly static over time translating to a decreasing per capita acreage over the next few years, and likely decreasing even more in future years.

In 2008, 5 percent of the South's total area was in Federal or State-park ownership, less than 0.3 acres per person. By 2060, the Federal or State-park land area per person is projected to decrease to 0.17 acres, about 63 percent of the 2008 per capita area. In 2010, more than 30 percent of total land area in the South was non-Federal forest, or 1.66 acres per person. By 2060, per capita non-Federal forest is predicted to decrease to 0.95 acres per person, or to 57 percent of the 2010 level. Not only is per capita forest area projected to decline, but also the actual total area of non-Federal forest land area is expected to decline due to conversions from forests and farmlands to cities and suburbs. In 2008, water area in the South was slightly more than 5 percent of the total surface area, or 0.28 acres per person. By 2060, water acres per capita are predicted to decline to 0.18 acres per person, or to 63 percent of the 2008 level.

Population, recreation, and resource trends and futures all are headed in directions that leave one wondering "who, where, and how?" Who will the future recreation participants be from among the South's growing population? Will participants of the future be representative of the growing diversity of our population? Or, could there be a demographic narrowing of who the participants will be as a result of shrinking per capita availability of places and resources for outdoor recreation? Where will outdoor recreation occur? As land and water resources in rural areas are increasingly pressured by expanding urban and other development, private land and water may become less available for outdoor recreation for some segments of the population. This raises the question of how future residents of the South will gain access to outdoor recreation venues. It seems that the importance of easily accessible, nearby public or publicly accessible private areas will only increase in the future. Perhaps one key to an outdoor recreation future for coming generations of Southerners would be to include recreation benefits in the calculation of the value of forest lands, especially those close to populated areas. Without inclusion of recreation and other ecosystem services in land value calculations, very often the development value outweighs all other considerations. Including recreation and other ecosystem service values could open an opportunity for local governments and other public service organizations to find concrete ways to encourage private owners to keep more land in forest and make it more accessible.

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