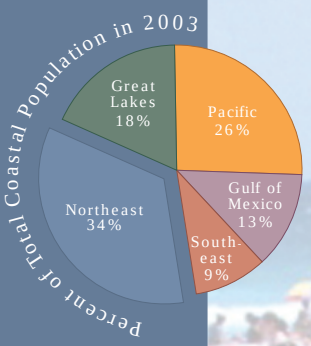
Regional Trends



Northeast Region

The Northeast region is the most populated coastal region in the United States. In 2003, 52.6 million people, or 34 percent of the nation's total coastal population, resided there. The Northeast region extends from northern Maine south to the tidewaters of Virginia, encompassing the coastlines of 11 states. Ten of the 11 states in the region have the majority of their populations in coastal counties. The 180 coastal counties found in this region (including the District of Columbia) constitute 40 percent of the region's total land area and contain 77 percent of the region's population. Of the nation's 10 largest metropolitan areas, four are located along the coast of this region: New York, Washington DC/Baltimore, Philadelphia, and Boston.

Population Density

In 2003, the population density of the combined coastal counties in this region was 641 persons per square mile, up from 543 in 1980, and is expected to climb to 661 in 2008. This is over 11 times the nation's noncoastal population density (not including Alaska). Of the 25 most densely populated coastal counties in the United States, 21 are found in the Northeast region.

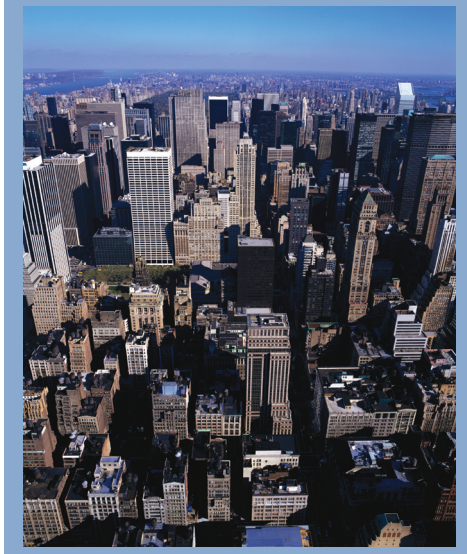
Hot Spots of Growth

From 2003 to 2008, the Northeast coastal population is expected to increase by approximately 1.7 million people. This change will occur most heavily in counties that fall within, are adjacent to, or are one county beyond major metropolitan centers. Six of the counties expecting large population increases will be found in and around New York City and four outside of Washington, DC (Figure 10). For instance, Fairfax, VA, located adjacent to Washington, DC, is expected to show the greatest increase, growing by over 100,000 people in this five-year period. Queens County, Kings County, and Suffolk County, NY, are all expected to increase between 54,000 and 86,000 people.

In contrast to population change, percent population change from 2003 to 2008 reveals a different pattern. The greatest percent coastal population change is expected to occur in the two southernmost states of the region, Maryland and Virginia (Figure 11). Of the 10 leading coastal counties in percent population change, eight are located in Virginia and two are located in Maryland, all averaging a 13 percent to 23 percent increase in growth. Additionally, many of these counties are located further from major metropolitan centers than those leading in absolute growth.

Air Quality

Ground-level ozone, created primarily from motor vehicles, industrial emissions, and chemical solvents, has the potential to cause respiratory health problems and is particularly dangerous to children with asthma. Of the 474 counties nationwide that do not meet the 8-hour ozone standard (or that cause a county downwind to fail), 231 are coastal (USEPA 2004). The majority (197) of these coastal counties are found in the Northeast and Great Lakes regions (USEPA 2004).



New York, NY;©Corbis

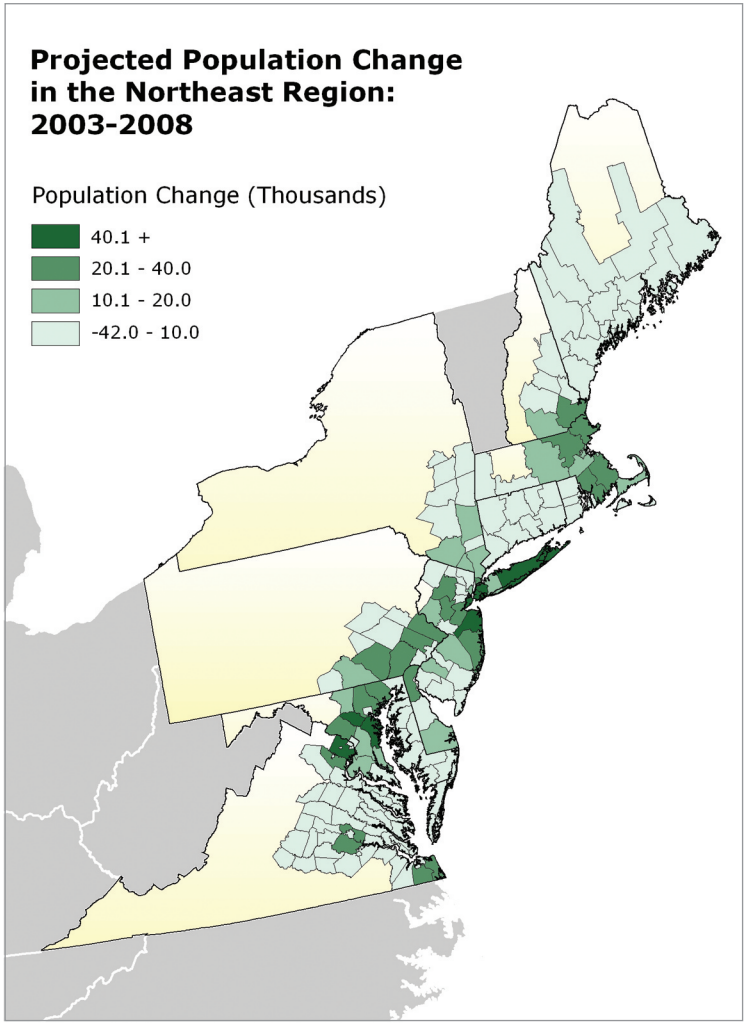


FIGURE 10. Projected population change in the Northeast Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.

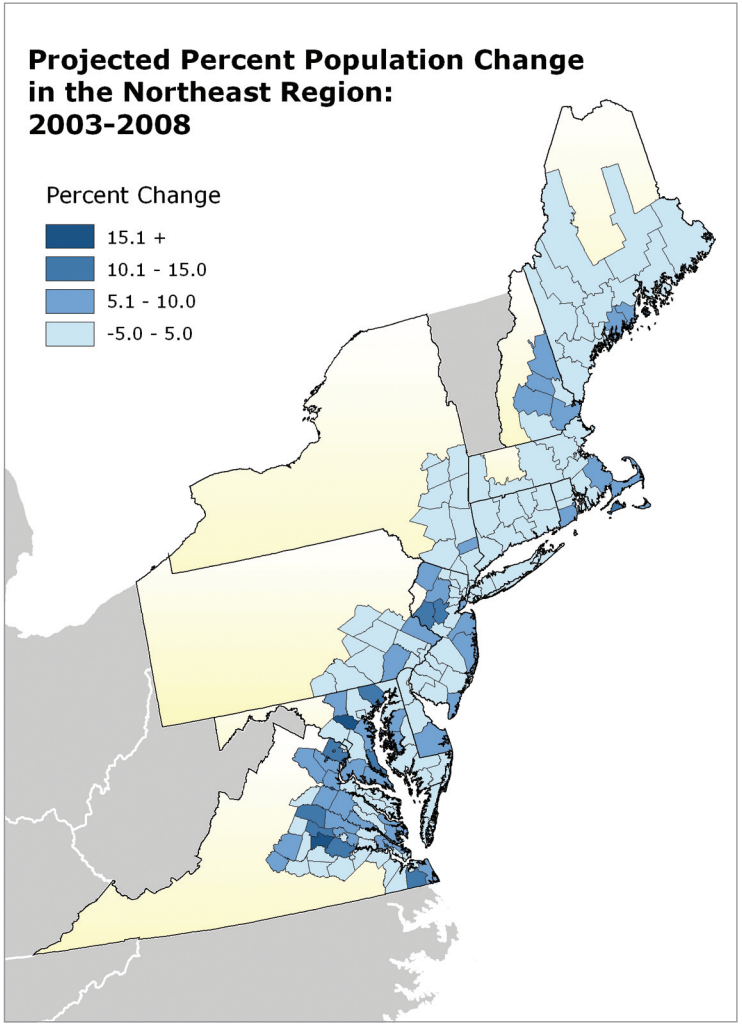
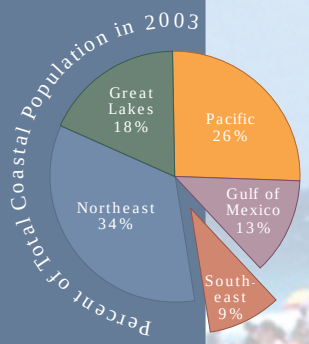


FIGURE 11. Projected percent population change in the Northeast Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.



Southeast Region

The Southeast region is the least populated coastal region of the United States. In 2003, 14 million people, or 9 percent of the nation's coastal county population, resided there. The Southeast region extends from the northern Outer Banks of North Carolina to the southern tip of Florida. Only one of the region's states, Florida, has most of its population living in coastal counties. The 103 coastal counties in this region constitute 33 percent of the region's total land area and contain 37 percent of the region's population. The region's largest metropolitan area found along the coast is Miami/Fort Lauderdale, FL (the twelfth largest in the entire United States).

Population Density

In 2003, the coastal population density of the region was 224 persons per square mile, up from 142 in 1980, and expected to increase to 241 in 2008. The expected population density increase from 1980 to 2008 represents the largest percent increase of any region. The most densely populated counties in the region are Broward County, FL, with 1,437 persons per square mile, and Seminole County, FL, with 1,254 persons per square mile. By 2008, these counties are expected to increase in population density by 10 percent and 14 percent, respectively.

Hot Spots of Growth

From 2003 to 2008, coastal population in the Southeast region is expected to grow by 1.1 million people or 8 percent. This is the largest percent increase of all regions within this period. Of the 10 leading counties in population change, 8 are expected to be in Florida (Figure 12). Population growth will be most prominent in the southernmost portion of Florida, with Broward County expected to increase by 167,000 persons and Palm Beach County expected to increase by 151,000 persons.

Coastal counties with high percent population change are found throughout the region. Particularly, counties in Florida and North Carolina rank highest (Figure 13). For example, Brunswick, NC, is expected to show the greatest percent increase, 17 percent, followed by Nassau, FL, with 16 percent. The fastest-growing counties in South Carolina and Georgia are expected to average 10 to 12 percent growth.

Land Conversion

The nation's coastal counties are losing 1,997 acres of farmland per day to urban and other land uses. This is approximately 2 percent faster than noncoastal counties. The average size of farms in coastal counties has decreased by 15 percent between 1987 and 2002 compared to a decrease of 7 percent in noncoastal counties (USDA, 2004).

Miami-Dade County, Florida; SFWMD

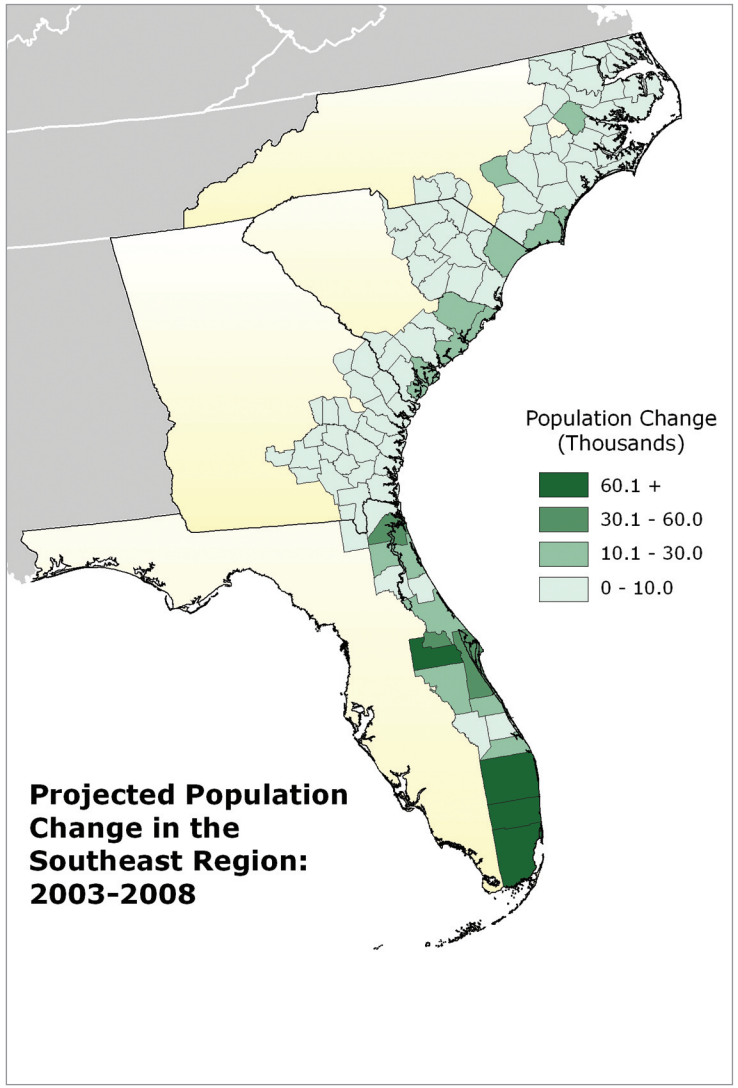


FIGURE 12. Projected population change in the Southeast Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.

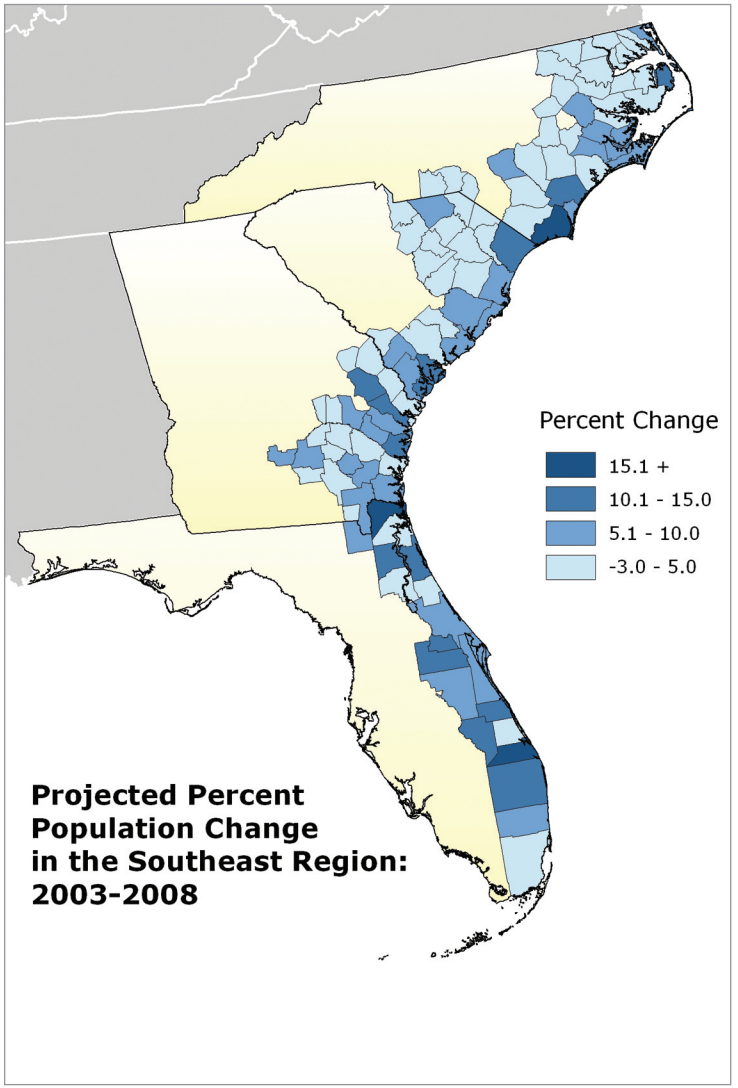
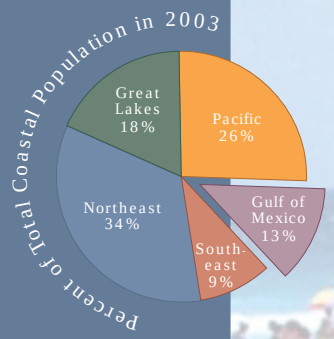


FIGURE 13. Projected percent population change in the Southeast Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.



Gulf of Mexico Region

The Gulf of Mexico region is the fourth most populated coastal region in the United States. In 2003, the region's coastal population was just over 19.1 million, 13 percent of the nation's coastal population. The Gulf of Mexico region extends from the Florida Keys westward to the southern tip of Texas, following the coastline of six states. Only two of the region's states, Louisiana and Florida, have the majority of their populations in coastal counties. The 144 coastal counties found in this region constitute 23 percent of the region's total land area and contain 32 percent of the region's population. Of the nation's 10 largest metropolitan areas, one is located along the coast in this region: Houston-Galveston-Brazoria.

Population Density

In 2003, the population density of coastal counties in this region was 164 persons per square mile, up from 113 in 1980, and expected to increase to 175 in 2008. This is the least densely populated of all the regions (when Alaska is not included in the population density calculation for the Pacific region). Two of the three most densely populated coastal counties in the region are Pinellas, FL, found within the large metropolitan area of Tampa-St. Petersburg-Clearwater, with 3,308 persons per square mile, and Harris, TX, found within Houston-Galveston-Brazoria with 2,080 persons per square mile. By 2008, these counties are expected to increase in population density by 4 percent and 5 percent, respectively.

Hot Spots of Growth

From 2003 to 2008, the Gulf of Mexico's coastal population is expected to grow by just over 1.2 million people or 7 percent. This is the second-highest rate of growth during this period, just behind the Southeast region. The leading coastal counties in population change are found in Texas and along Florida's central Gulf Coast (Figure 14). Harris, TX, located northwest of Galveston Bay and containing the city of Houston, is expected to increase by 168,750 persons. This is more than double that of any other county in this region.

In terms of percentages, coastal population growth is expected to occur heavily in the Florida panhandle, in Alabama, and in southern Texas (Figure 15), where the increase is expected to reach over 18 percent in some counties.

Waterborne Commerce

Nationwide, waterborne tonnage coming through the principal U.S. ports has increased by 14.5 million in the past five years. Of the 10 leaders in waterborne tonnage, seven are found in the Gulf of Mexico. The Port of South Louisiana alone accounts for approximately 9% of all the waterborne tonnage through principal U.S. ports (U.S. Army Corps of Engineers, 1998; 2000).[2]

Tampa, FL; K. Arnold

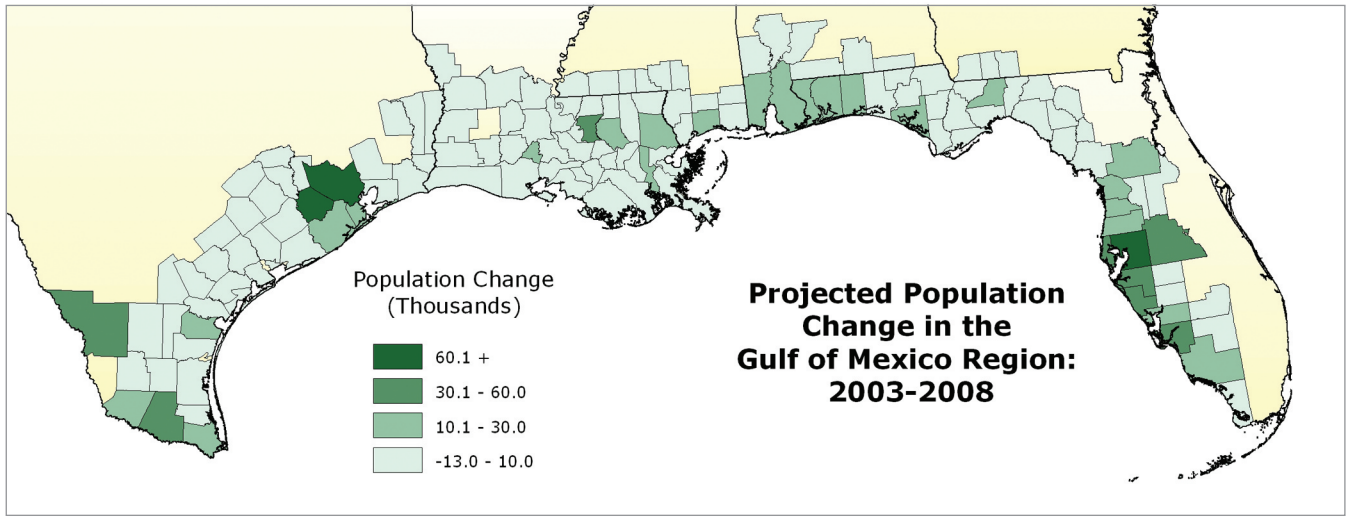


FIGURE 14. Projected population change in the Gulf of Mexico Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.

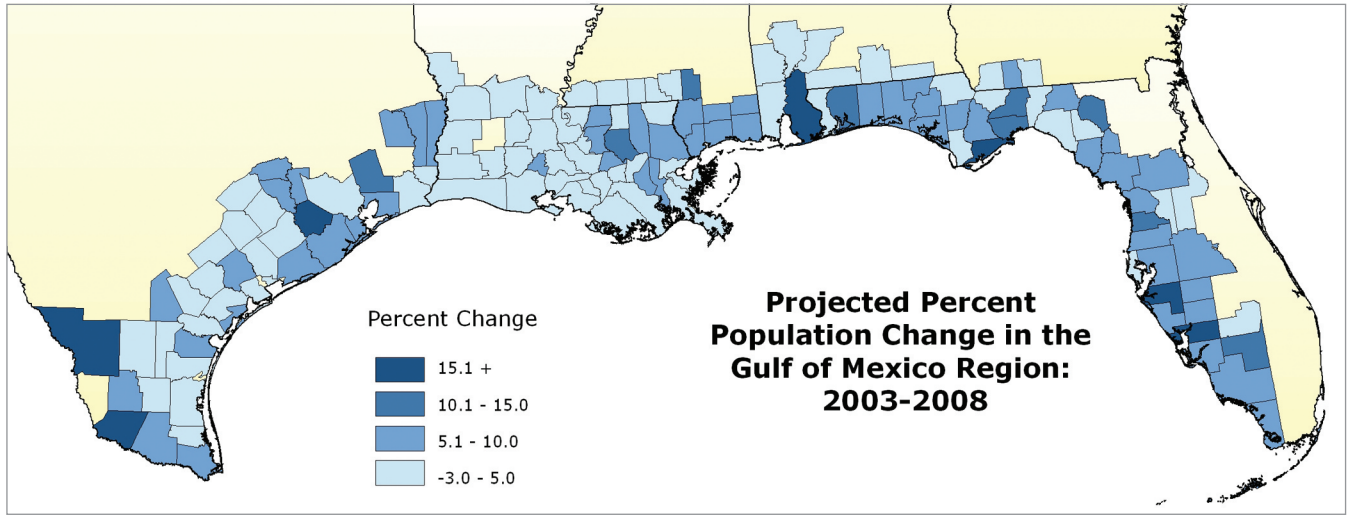
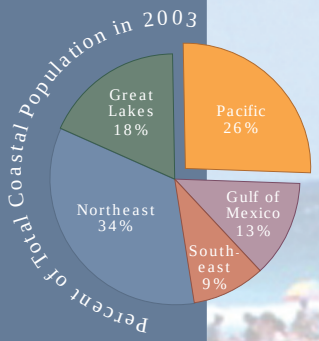


FIGURE 15. Projected percent population change in the Gulf of Mexico Region:2003-2008

Source: U.S. Census Bureau and W&PE, Inc.



Pacific Region

The Pacific region is the second most populated coastal region in the United States. In 2003, the population reached 39.4 million people, or 26 percent of the nation's total coastal population. The Pacific region includes the coastlines of California, Oregon, Washington, Alaska, and the entire state of Hawaii. All five states in the Pacific region have the majority of their populations in coastal counties. The 88 coastal counties constitute 57 percent of the region's total land area and contain 84 percent of the region's population. Of the nation's 10 largest metropolitan areas, two are found along the coast in this region: Los Angeles-Riverside-Orange County, CA, and San Francisco-Oakland-San Jose, CA. Other metropolitan areas include Honolulu, HI, Portland, OR, and Anchorage, AK.

Population Density

In 2003, the coastal population density (not including Alaska) of the Pacific Region was 303 persons per square mile, up from 207 in 1980, and expected to increase to 320 in 2008. Of the 25 most densely populated coastal counties in the United States, two are found in the Pacific region: Orange County, CA, and San Francisco County, CA. The state of Alaska has the smallest coastal population density with an average of 1.4 persons per square mile.

Hot Spots of Growth

From 2003 to 2008, the Pacific region is expected to increase by 2.2 million people or 6 percent in coastal population. A large portion of this growth is expected to occur in Southern California, where four counties make up 37 percent of this projected growth (Figure 16). The 10 leading coastal counties in expected population increase contain, fall within, or are adjacent to the large metropolitan areas of San Diego, CA, Los Angeles-Riverside-Orange County, CA, San Francisco-Oakland-San Jose, CA, Sacramento-Yolo, CA, and Seattle-Tacoma-Bremerton, WA. San Diego County, Orange County, and San Bernardino County, CA, also are expected to be leaders of population growth for the entire nation.

In terms of percentages, coastal population growth presents a much different pattern, where counties in California represent only half of the 10 leading counties in expected percent increase (Figure 17). San Benito, CA, shows the highest expected increase with 19 percent, followed by Jefferson County, WA, with 16 percent.

Population projection data provided by Woods and Poole Economics, Inc., for individual counties in Alaska are insufficient and therefore not presented graphically.

Water Consumption

The Pacific region consumes 9.6 billion gallons of water per day. This is more than double that of any other region with the exception of the Gulf of Mexico region (6 billion gallons per day). In total, the nation's coastal counties consume 20 billion gallons of water per day (however, this is four times less than the total water consumption in noncoastal counties) (U.S. Census Bureau, 2001c).[3]

California Aqueduct, CA; Joseph Sohm,©Corbis

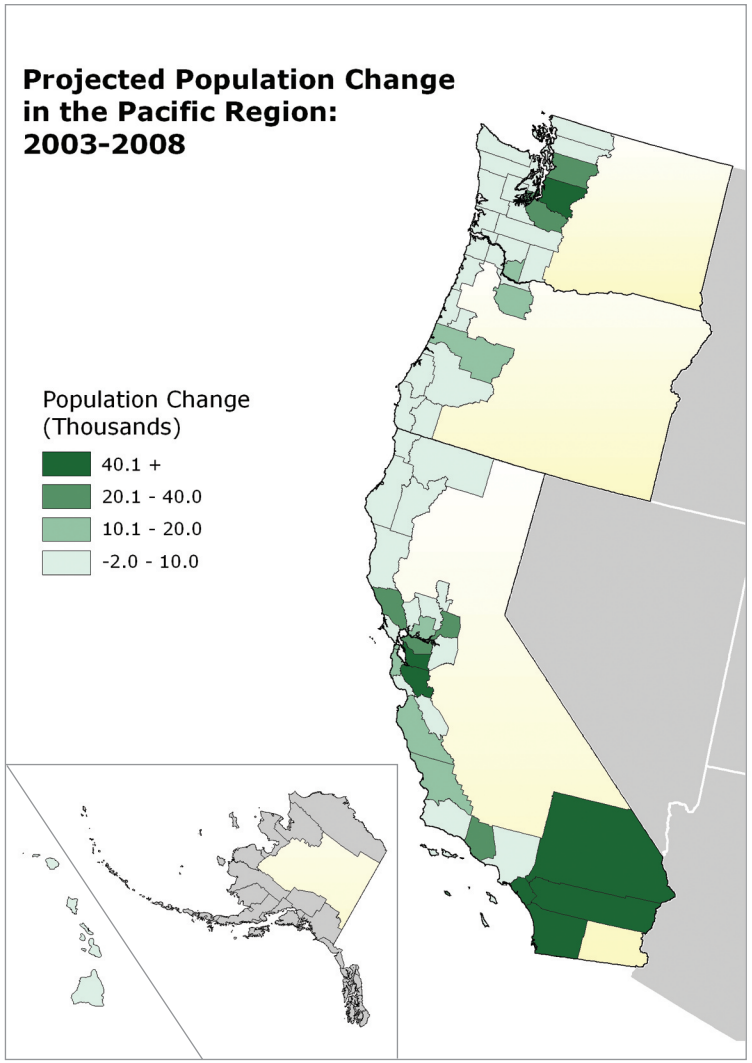


FIGURE 16. Projected population change in the Pacific Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.

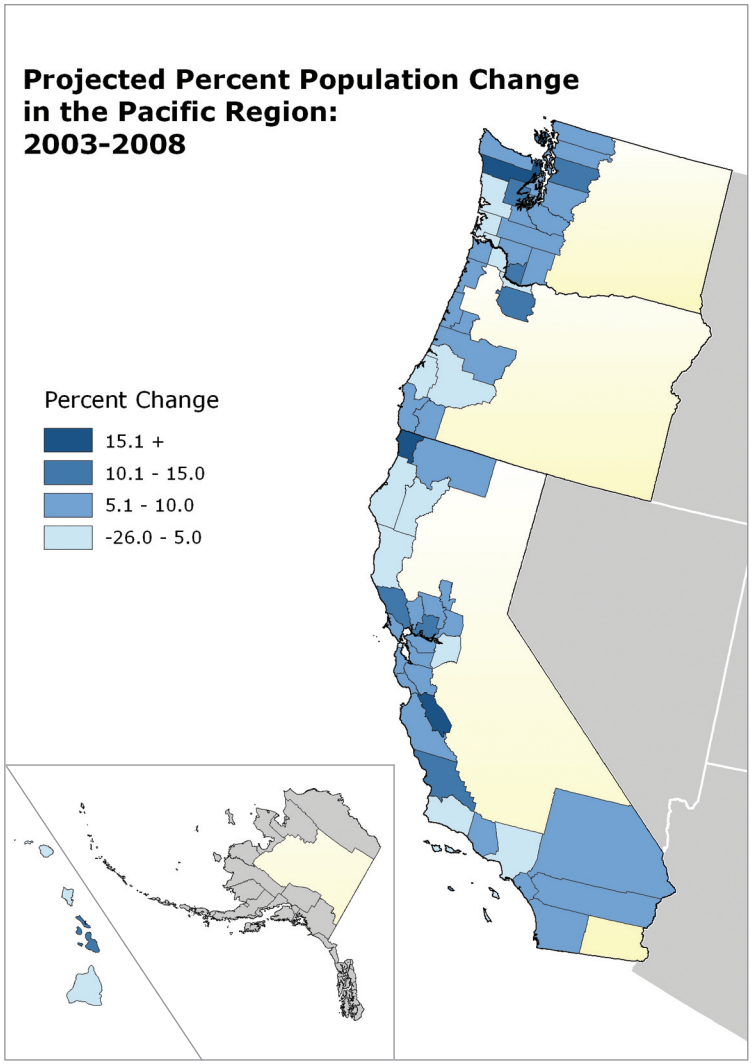
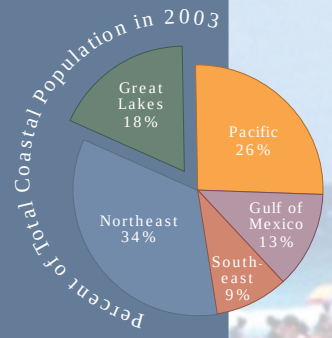


FIGURE 17. Projected percent population change in the Pacific Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.



Great Lakes Region

The Great Lakes region is the third most populated coastal region in the United States. In 2003, 27.5 million people, or 18 percent of the nation's total coastal population, resided there. The Great Lakes region extends from the northeasternmost counties in New York westward toward Minnesota, encompassing the coastlines of eight states along Lake Ontario, Lake Huron, Lake Erie, Lake Michigan, and Lake Superior. Only two states within this region, New York and Michigan, have the majority of their populations in coastal counties. The 158 coastal counties in this region constitute 28 percent of the region's total land area and contain 33 percent of the region's population. Of the nation's 10 largest metropolitan areas, two are found along the coast in this region: Detroit and Chicago.

Population Density

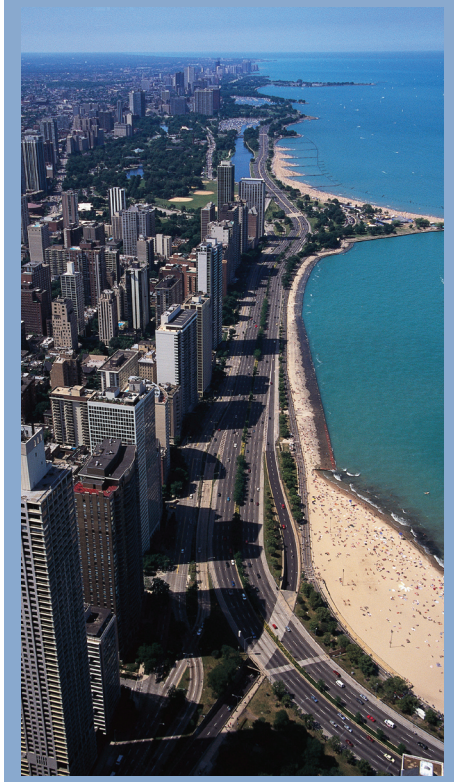
In 2003, the population density of the combined coastal counties in this region was 238 persons per square mile, up from 2226 in 1980, and expected to climb to 244 in 2008. This is the third-highest following the Northeast and Pacific regions. Of the 25 most densely populated coastal counties in the United States, one is found in the Great Lakes region: Cook County, IL.

Hot Spots of Growth

From 2003 to 2008, the Great Lakes coastal population as a whole is expected to increase by approximately 650,000 people. This is the smallest population increase of all regions. As in the Northeast region, coastal population increases and decreases will occur most heavily in counties that fall within, are adjacent to, or are one county beyond major metropolitan centers (Figure 18). Lake County, IL, located north of Chicago, is expected to climb by 74,000 people, and Oakland County, MI, by 72,000 people, the greatest increases of any counties in the region. Of the leading coastal counties in population change, two show large decreases in population.

While the largest overall population increases are expected to occur in southern Michigan, Illinois, and Ohio, coastal counties showing large increases in percent population are located primarily in northern Michigan (Figure 19). Benzie County, MI, is expected to increase by 15 percent, followed by Grand Traverse, MI, and Lake, MI, each of which are expected to increase by 13 percent.

Transportation



Chicago, IL;©Corbis

Between the years 1980 and 2000, the number of vehicles in the nation's coastal counties have increased by 25.5 million (or 43%).[4] The greatest increase was found in the Northeast region, with 8 million additional cars. The greatest percent increase of vehicles was found in the Southeast region, with 74 percent, and the smallest percent increase was in the Great Lakes region, with 24 percent more vehicles. Although the overall number of vehicles has increased since 1980, in 2000 there were fewer vehicles per capita (U.S. Census Bureau, 1980; 2001e).

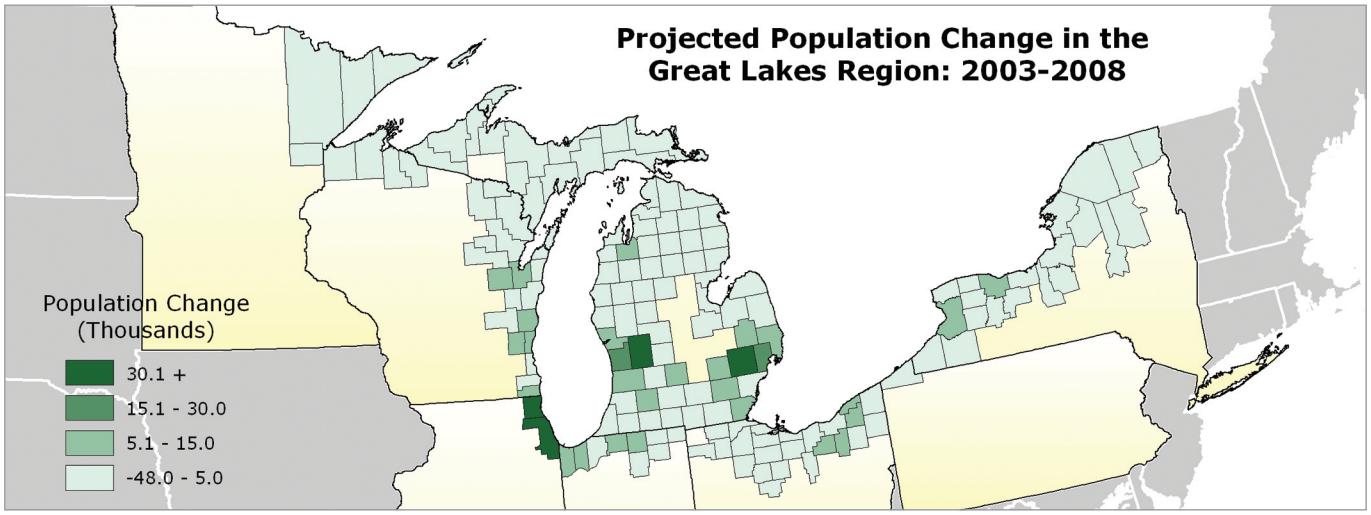


FIGURE 18. Projected population change in the Great Lakes Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.

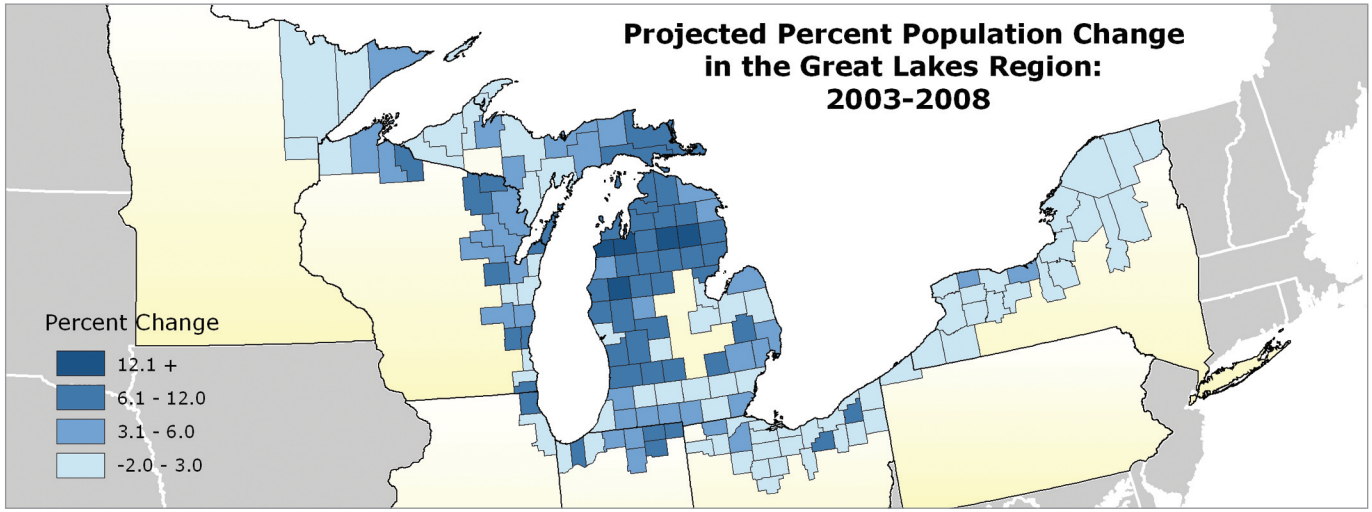


FIGURE 19. Projected percent population change in the Great Lakes Region: 2003-2008

Source: U.S. Census Bureau and W&PE, Inc.