Coastal Trends Report Series

Population Trends Along the Coastal United States: 1980-2008

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service

Assessing the effects of current and projected population growth and development in the nation's coastal areas has been a continuing effort within the Special Projects office of NOAA's National Ocean Service. The mission of Special Projects is to enhance the performance and capacity of NOAA's National Ocean Service and its partners through strategic problem solving, integration, and innovation, as well as to ensure more effective and efficient delivery of products and services to the coastal stewardship community. Special Projects conducts analyses and assessments for coastal areas and works to identify issues and solutions, assemble and synthesize data, evaluate and prioritize options, and develop products that support quality coastal resource management.

This report updates a previous report issued by Special Projects that was compiled over a decade ago. It provides coastal population data, trends, and projections, and is intended to help provide insight as to where coastal population has occurred in the past few decades and where it is likely to occur in the next five years. This report will also be included in the Assessments section of NOAA's forthcoming Spatial Trends in Coastal Socioeconomics (STICS) Web site (http://stics.noaa.gov).

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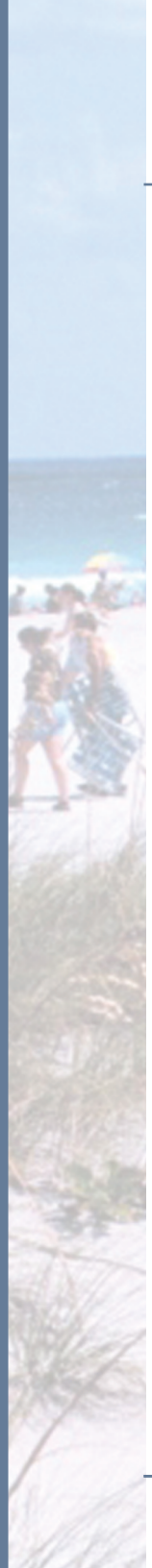

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1980-2008

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Table of Contents

Introduction 1
- Geographic Units 2
- Population Data 2

National Overview 3
- Regional and State Trends 3
- Population in Coastal Counties 6
- Building Along the Coast 9
- Characteristics of the Coastal Population 11

Regional Trends 14
- Northeast Region 14
- Southeast Region 16
- Gulf of Mexico Region 18
- Pacific Region 20
- Great Lakes Region 22

Population by Coastal Watershed 24

Conclusion 26

References 27

Appendix A. Population Change 30
Appendix B. Total Housing Units 31
Appendix C. Northeast 32
Appendix D. Southeast 36
Appendix E. Gulf of Mexico 39
Appendix F. Pacific 42
Appendix G. Great Lakes 45

Tables

Table 1. Coastal geographic regions, coastal states, and coastal counties 2
Table 2. Leading states in coastal population growth, 1980-2003 3
Table 3. Leading coastal states in number of building permits issued from 1998 to 2002 9

Figures

Figure 1. Regional distribution of nation's coastal population 3
Figure 2. Coastal county population in 2003 4
Figure 3. Coastal county percent population change in 2003 5
Figure 4. Population density of the United States, coastal states, coastal counties, and noncoastal counties from 1980 to 2008 7
Figure 5. Coastal county population density in 2003 8
Figure 6. Seasonal housing units in 2000 10
Figure 7. Population by age group 11
Figure 8. Coastal and noncoastal median household income by region in 2000 12
Figure 9. Median household income in 2000 13
Figure 10. Projected population change in the Northeast region, 2003-2008 15
Figure 11. Projected percent population change in the Northeast region, 2003-2008 15
Figure 12. Projected population change in the Southeast region, 2003-2008 17
Figure 13. Projected percent population change in the Southeast region, 2003-2008 17
Figure 14. Projected population change in the Gulf of Mexico region, 2003-2008 19
Figure 15. Projected percent population change in the Gulf of Mexico region, 2003-2008 19
Figure 16. Projected population change in the Pacific region, 2003-2008 21
Figure 17. Projected percent population change in the Pacific region, 2003-2008 21
Figure 18. Projected population change in the Great Lakes region, 2003-2008 23
Figure 19. Projected percent population change in the Great Lakes region, 2003-2008 23
Figure 20. Ten most populated coastal watersheds with their associated population density for 2000 24
Figure 21. Population change in coastal watersheds, 1980-2000 25

Introduction

Coastal areas are home to a wealth of natural resources and are rich with diverse species, habitat types, and nutrients (WRI, 2000). They also sustain a wealth of economic activity. Employment, recreation and tourism, waterborne commerce, and energy and mineral production are driving forces of population migration to these areas (Bookman et al., 1999; The Heinz Center, 2000; U.S. Commission on Ocean Policy, 2004). Coastal management policies seek to balance economic growth and environmental protection. The value of coastal resources is illustrated in the breadth and depth of their use. Ironically, the qualities that make them so desirable are the very ones that have led to their endangerment.

Coastal ecosystems are pressured by population growth, leaving them vulnerable to pollution, habitat degradation and loss, overfishing, invasive species, and increased coastal hazards such as sea-level rise (WRI, 2000; Hinrichsen, 1998; National Safety Council, 1998). It was estimated that in 2003, approximately 153 million people (53 percent of the nation's population) lived in the 673 U.S. coastal counties, an increase of 33 million people since 1980. With such a large percentage of the population living in coastal areas, it is no wonder that 10 of the 15 most populous cities in the United States are located in coastal counties (U.S. Census Bureau, 2001d).

An estimated 153 million people lived in coastal counties in 2003.

Since 1980, coastal population growth has generally reflected the same rate of growth as the entire nation, but in the limited space of coastal counties. This increasing density, coupled with the fast-growing economy of coastal areas (Colgan, 2004), will make the task of managing coastal resources increasingly difficult, especially with the nation's coastal population expected to increase by more than 7 million by 2008 and 12 million by 2015 (W&PE, 2003).

South Florida; South Florida Water Management District (SFWMD)

Coastal areas are also subject to major population influxes during peak vacation periods. Ocean City, MD, for example, had almost 4 million seasonal visitors between the Memorial Day and Labor Day holidays in 2003 (Ocean City Public Relations Office, 2004). With more people comes the need for increased infrastructure, which may lead to even more negative effects on natural resources (National Safety Council, 1998). In the next few decades, coastal areas will also see a growing proportion of older Americans and an unprecedented number of Americans reaching retirement age. This also has the potential to place demands on coastal resources as there will be more time for people to enjoy the many coastal amenities (Culliton, 1998).

This report updates a previous population report issued by the National Ocean Service, NOAA (Culliton et al., 1990) and focuses on population change along our nation's coast from 1980 to 2008. Historical population trends and short-term projections of population change in the nation's coastal areas are provided. It is anticipated that coastal decision makers and stakeholders will use this update to enhance coastal management.

Geographic Units

Physical boundaries and natural characteristics of the landscape, such as watersheds, provide meaningful geographic areas to evaluate the environmental consequences of a growing population. However, local and community-level decisions and legislation are usually made within the frame of political boundaries. The U.S. Census Bureau compiles population data using several different geographic units. There are 30 coastal states in the United States containing a total of 673 coastal counties, boroughs, parishes, or county equivalents. NOAA's Special Projects office defines a county as coastal if one of the following criteria is met: (1) at a minimum, 15 percent of the county's total land area is located within a coastal watershed or (2) a portion of or an entire county accounts for at least 15 percent of a coastal cataloging unit.[1] For the purposes of this report, coastal states and counties are grouped into five regions: Northeast, Southeast, Gulf of Mexico, Pacific, and Great Lakes. The number of states and coastal counties contained in each region is shown below.

TABLE 1. Coastal geographic regions, states, and counties

Region	Number of States	Number of Coastal Counties	Land Area (Sq. Mi.)
Northeast	11	180	82,124
Southeast	4	103	63,516
Gulf of Mexico	6	144	116,644
Pacific	5	88	511,073
Great Lakes	8	158	115,418

Source: National Ocean Service/NOAA

Population Data

Population data for U.S. counties for 1980, 1990, 2000, and 2003 were obtained from the U.S. Census Bureau. The U.S. Census Bureau does not make population projections for the county level, but rather at the state and national levels. County-level population projections were obtained from three private firms and compared. Datasets from Geolytics, Inc., NPA Data Services, Inc., and Woods and Poole Economics, Inc., were aggregated to the state level and compared both to state projections developed by the U.S. Census Bureau and to each other. At the state level, all three datasets were comparable, not demonstrating significant differences. After further analyses, the Woods and Poole Economics, Inc., dataset demonstrated more conservative population projection estimates, and was used for this report.

Woods and Poole Economics, Inc., employs a four-step process to generate county population projections. First, forecasts of total United States variables such as income, earnings, population, and inflation are made. Second, the country is divided into 172 Economic Areas (EA). Employment is projected and used to estimate earnings within each EA. EAs are defined by the Bureau of Economic Analysis to meet minimum size and other criteria necessary to facilitate regional analyses such as projections. County to county commuting flows are analyzed in defining the EA boundaries in an effort to ensure that, to the extent possible, each EA is both the place of work and the place of residence for its labor force (Johnson, 1995). Third, total population for each EA is projected based on net migration rates projected from employment opportunities. Last, following this process using EAs as the control data, county population projections are generated (W&PE, 2003).

Making estimates of future data is not an exact science. The methods Woods and Poole Economics, Inc., employ to make projections are based on analysis of historical data. Consequently, limitations are inherent to the data, and projections should not be interpreted as future predictions. Woods and Poole Economics, Inc. (2003) notes that economic and demographic events may result in outcomes different from the projections and that limitations may result from making projections for small geographic areas. Ultimately, the projections presented in this report are not intended to highlight the projected population change of individual counties but rather to present, on a regional basis, where change is likely to occur.