Phase I
Florida's Ocean and Coastal
Economies Report
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Definitions and Terminology

To avoid repetition and for clarification purposes, the following terms and definitions regarding economic indicators and valuation categories are found in the beginning of this report, so that the reader can fully understand what is intended throughout the text.

Coastal Economy:
> The sum of all economic activity occurring in counties defined states as part of their coastal zone management program or part of a coastal watershed as defined by the U.S. Geological Survey. For purposes of analyzing the Florida Coastal Economy, counties are divided between shore-adjacent and inland counties to better illuminate the differences between the shoreline and inland regions.

Ocean Economy:
> The concept of the Ocean Economy derives from the ocean (or Great Lakes) and its resources being a direct or indirect input of goods and/or services to an economic activity: a) an industry whose definition explicitly ties the activity to the ocean, or b) which is partially related to the ocean and is located in a shore adjacent zip code. This is defined in part by the definition of an industry in the North American Industrial Classification System[1] (for example, Deep Sea Freight Transportation) and partly by geographic location (for example, a hotel in a coastal town).

North American Industrial Classification System (NAICS):
> NOEP Economic statistics are grouped by a classification system known as the North American Industrial Classification System (NAICS), which imperfectly reflects the relationship between economic activity and the ocean. The NAICS is the successor to the Standard Industrial Classification. It was developed in the 1990s as a part of the North American Free Trade Agreement (NAFTA) to provide a common basis for the United States, Canada, and Mexico to measure their economic activity. The definition of the Ocean Economy industries is derived from the NAICS classifications for the following industries (see Table 1).

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[1] As of 2000, all industries are classified using the North American Industry Classification System (NAICS) rather than the Standard Industrial Classification (SIC by BLS). NAICS focuses on how products and services are created, as opposed to SIC which focuses on what is produced. Using NAICS yields significantly different industry groupings from those produced using SIC.

Table 1.1: Sectors and Industries of the Ocean Economy

Construction – Marine	Tourism & Recreation – Coastal
	Amusement and Recreation Services, NEC*
Living Resources – Marine	*Boat Dealers*
Fishing	*Eating & Drinking Places*
Fish Hatcheries and Aquaculture	*Hotels & Lodging Places*
Seafood Processing	*Marinas*
Seafood Markets	*Recreational Vehicle Parks & Campgrounds*
Minerals – Offshore	*Scenic Water Tours*
Limestone, Sand, & Gravel	*Sporting Goods Retailers*
Oil and Gas Exploration	*Zoos, Aquaria*
Oil and Gas Production	**Transportation – Marine**
	Deep Sea Freight Transportation
	Marine Passenger Transportation
Ship & Boat Building	Marine Transportation Services
Boat Building and Repair	Search and Navigation Equipment
Ship Building and Repair	*Warehousing*

*Not elsewhere classified

The sectors, Marine Construction, Marine Living Resources, Offshore Minerals, Ship & Boat Building and Repair, Coastal Tourism & Recreation, and Marine Transportation include specific industries that contribute to the Ocean Economy. Those industries shown in *italics* are considered ocean-related only when they are located in near-shore areas, which is defined by location in a shore-adjacent zip code. The use of NAICS codes and geography provides the best means of measuring the Ocean Economy. This methodology is based on available data consistent across all states and can provide information from the national to the local level.

Dollar Values:

Values are expressed in constant dollars with 2000 as the base year unless otherwise stated. Wages are adjusted using the U.S. Consumer Price Index (CPI). The Gross State Product (GSP) is estimated using Bureau of Economic Analysis estimates of real GSP. [2]

- Dollar values are estimated as direct and indirect values. Indirect values include induced values.
- Direct values: those activities associated only with the designated ocean sectors such as Recreation & Tourism and Living Resources (examples include labor and capital costs associated with fish processing or ship building.
- Multipliers: indirect and induced values. Multipliers affect the estimates of employment, wages, and output within the region. Indirect effects include both the change in economic activity in industries within the region that buy or sell

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[2] Landefeld, J.S. and Robert Parker, BEA's Chain Indexes, Time Series, and Measures of Long Term Economic Growth. Survey of Current Business, May 1997. It can be downloaded from the BEA website at http://www.bea.gov/bea/regional/gsp/help/OnlineHelp.htm

from ocean industries (examples include sales of food to restaurants and hotels and the activities of travel agents booking trips) and the change in economic activity resulting from the spending of the wages earned by those employed of the ocean industries within the region (induced). All indirect values or multiplier effects are based on IMPLAN, a standard and widely used economic impact model.

- Unless otherwise indicated, all measures are stated as direct values.

Employment:

Annual average wage and salary employment (excluding self-employment) as reported in the Quarterly Census of Employment and Wages (formerly known as the ES-202 employment series). This definition covers about 90% of employment in the U.S. It excludes farm employment, the military, railroads, and self-employment. Wage and salary employment measures employment by place of work, not by place of residence. It also measures jobs, not people. It does not distinguish between full and part time work, or year-round and part-year jobs. The data in the NOEP database is annual average employment. Employment in the fisheries harvesting sector is generally excluded from the unemployment insurance laws and thus is not included in the NOEP data.

Forecasts:

The NOEP forecasts of ocean and coastal economic data are prepared using a well-known economic model from Moody's/Economy.com, a leading provider of economic data and forecasting services. NOEP forecasts found in this report are based on the May 2006 Moody's forecast and therefore do include the effects of the hurricanes that affected Florida and the Gulf of Mexico states in August and September 2005. Forecasting models are fit for each sector in each state and the Ocean Economy forecast is the sum of the individual sector forecasts. Coastal Economy forecasts in NOEP show the population, employment, wage, and GSP forecasts for the county-based regions (shoreline counties in the case of Florida, coastal zone counties, watershed counties, upland counties, and inland counties).[3]

Gross State Product (GSP):

GSP is a measure of the contribution of the sector to the value of goods and services in the economy. GSP is a measure of value-added, or sales, minus the cost of inputs. Using this measure eliminates "double counting," among sectors.[4] GSP data is published only at the state level and for industry aggregations greater than used in the Ocean Economy definition. In order to estimate a share of GSP in an Ocean or Coastal Economy industry, the proportion of the GSP for a given

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[3] County-level data is not shown in the NOEP database as these are the property of Moody's/Economy.com.

[4] Bureau of Economic Analysis defines GSP as "the value added in production by the labor and property located in a state. GSP for a State is derived as the sum of the gross state product originating in all industries in a State. In concept, an industry's GSP, referred to as its "value added", is equivalent to its gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (consumption of goods and services purchased from other U.S. industries or imported). Thus, GSP is often considered the state counterpart of the nation's gross domestic product (GDP), BEA's featured measure of U.S. output. In practice, GSP estimates are measured as the sum of the costs incurred and incomes earned in the production of GDP."

sector is calculated based on the proportion of total wages paid in that sector by a given establishment. Since wages often account for as much as 60% of GSP, this method is a reasonable approximation of individual establishments' contribution to GSP.

Housing Patterns and Trends:
These include housing units both single and multi-family including seasonal and year round, owner occupied and rental.

National Ocean Economics Program (NOEP):
Externally funded program to understand and estimate changes in the nature and value of the coastal and ocean-based economy of the United States.

Wages and Salaries:
Total wages and salaries paid; all wages are shown in year 2000 dollars.

Chapter 1 Introduction and Background

1.1 FLORIDA AND ITS COASTS

Florida's 8,426 statute miles of tidal-influenced[5] or 1,350 statute miles of general shoreline[6,7] is the second longest coastline in the United States.[8] On the one hand, Florida can be seen as three states: the two sets of shoreline counties bordering two primary bodies of water, the Atlantic Ocean and the Gulf of Mexico, and inland Florida. On the other hand, Florida is so integrated through its enormous watershed system, that the entire state is designated coastal zone for purposes of managing the coast through its coastal management program.

Florida's best-known natural assets are preserved in its Florida Keys National Marine Sanctuary's large coral reef system, one of only a few places in the United States with coral reefs, several Estuarine Research Reserves, and the Everglades National Park ecosystem, which is being restored. On its Gulf coast, Florida's barrier islands provide unique opportunities for nature viewing and other coastal recreation.

Florida's strength is also in its diversity. It claims a vast and diverse treasure of natural resources, which support a large economy and a diverse population. It has for decades been a favorite tourist, as well as a retirement, destination due to its climate and natural assets. Coastal wetlands, estuaries, and beautiful sandy beaches draw millions of tourists annually, and support large sectors of the state and national economies. Florida has one of the highest rates of population and economic growth of coastal states in the United States. Sustaining the unique environment found in Florida is crucial to sustaining Florida's economy and supporting its growing population.

A magnet for millions of people, Florida is a fascinating place to examine and understand, with its unique physical qualities. Geographically and geologically, its shores are a mixture of broad beaches providing recreational and entertainment services, and stunning natural and estuarine areas teaming with wildlife. In this respect, Florida's economy might be understood in terms of beach-driven and non-beach-driven. Florida has an inland waterway system that serves its economy but, at the same time, creates unique challenges for stabilizing its shorelines. Demographically the Gulf and Atlantic coasts are very different, the Atlantic being far more populated, and the Gulf coast being more rural and naturally preserved. Parts of the panhandle area are almost without

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[5] Figures are lengths of general outline of seacoast. This does not include freshwater coastlines. Measurements are made with unit measure of 30 minutes of latitude on charts as near scale of 1:1,200,000 as possible. Coastline of bays and sounds is included to point where they narrow to width of unit measure, and distance across at such point is included

[6] Figures were obtained in 1939–1940 with recording instrument on the largest-scale maps and charts then available. Shoreline of outer coast, offshore islands, sounds, bays, rivers, and creeks is included to head of tidewater, or to point where tidal waters narrow to width of 100 feet.

Source: Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service.

[7] http://www.infoplease.com/ipa/A0001801.html

[8] Alaska has the longest coastline.

human life because of the unique and natural environment Florida has chosen to preserve along its beautiful watersheds. In the past, it has been difficult to fully appreciate the magnitude of Florida's connections to the ocean. Now, it is possible to measure the economic and demographic relationships as they change over time throughout the state as a whole, and in the different coastal regions of Florida.

Between 1990 and 2004, Florida's population grew from 12.9 million to 17.4 million, a growth rate of more than 34%. During the same period, Florida's shoreline county population grew from 10.2 million to 13.3 million, a rate of nearly 31% growth, yet not as rapid as the total state population growth rate. During the same period, total state housing grew from 6.1 million to 8 million units, a rate of almost 32%, tracking population growth. At the same time shoreline county housing grew from 4.9 million to 6.3 million units, an increase of approximately 29%, lagging behind the state growth rate. Hence Florida's shoreline did not grow as rapidly as the state in either category. Inland counties grew in population at the rate of 49% with housing growth at more than 42% during the same period. The Gulf coast of Florida also grew both in population and housing at a faster rate than the Atlantic during this same period, with growth rates of 32% for housing and population growth along the Gulf Coast compared to 30% population growth and 26% housing growth on the Atlantic coast for the period 1990-2000. The higher growth rate areas were also the less populated areas with room for growth.

While the average population growth rate may not seem so alarming, the increasing population density in some areas is of concern. See chapter 5.

Data from the NOEP indicates that a large Coastal Economy is supporting the coastal population. However, it appears that growth in coastal population may not be the best growth indicator that warrants attention; rather the growth of the economy (GSP) and the employees that support it appear to be a crucial indicator of change.

Florida, with its long and diverse coastline, has tackled major issues in past decades to draw attention to its concerns for conservation and preservation of its unique and valuable natural assets. A list of innovative and important management programs and processes includes the establishment of the Florida Keys National Marine Sanctuary and its management plan. Florida holds a prominent political leadership position with respect to coastal zone and ocean management. As one of the first states to pass ocean management legislation,[9] responding to the recent policy recommendations of the two ocean commissions, it is setting the standard as a model for other states by its practical and targeted responses to coastal and ocean issues. Florida's growing population and historic popularity as a tourist destination have brought it both economic wealth and the accompanying challenges of enormous pressure on all of its natural resources, particularly those along its more populated shoreline areas.

Beaches are the top destination for its tourists, and one of Florida's greatest assets. Yet, like other states' beaches, its beaches are subject to coastal erosion for a variety of

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[9] Florida House Bill 1855, Part IV, 161.7: Oceans and Coastal Resources Management Act, May 2005.

reasons, and require nourishment, particularly on the Atlantic Coast. While this represents a high financial investment periodically, its costs are more than surpassed by the robust tourist revenues that result. Stabilizing the shoreline and beaches is only part of the challenge. Florida, like other coastal states suffers from coastal pollution. Its warm waters, dense coastal population and inland agricultural activities combine to create challenges to maintain water quality standards along some areas of Florida's coasts.

Florida faces a long list of challenges and activities that dominate the Florida coastal landscape. These activities require monitoring, and management to ensure that the shores of Florida can sustain the pressures and deliver the amenities and goods the public seeks. To date, however, except for site, time, and function-specific studies, there has not been consistent time series information reflecting the value of the coast and ocean to the state of Florida, and even less information about how these values have changed over time. Likewise, there continues to be a need for better understanding of the state's economic dependence on these natural resources. Uncovering the depth of Florida's relationships to the ocean and its economy is the purpose of this report.

1.2 ABOUT THIS STUDY

This report was prepared for and funded by the Florida State Department of Environmental Protection with the encouragement of members from the Florida Ocean Alliance, Florida Oceans and Coastal Resources Council and other groups with deep interests in the future of Florida's coast. It is a preliminary study of Florida's Ocean and Coastal Economies based only on information currently found within the datasets of the National Ocean Economics Program. (NOEP). It reflects only a portion of the value of Florida's coastal related economy and should not be considered comprehensive. A more customized study based on the unique coastal and ocean-dependent economic activities of the State of Florida should be carried out to complete the picture of Florida's dependence upon its coasts.

The NOEP, the source of this report, is a unique multi-institutional effort to provide a comprehensive information system to track changes in human activities and economic values in coastal areas with a set of indicators that are comparable across geographies and industrial sectors. Using standard, federally collected datasets from the Bureau of Labor Statistics, the Census Bureau, and the Bureau of Economic Analysis, the NOEP has carefully configured this data to accommodate this unique geographic region.[10]

NOEP developed its special methodology because the data available to measure the Ocean Economy was imperfect for the following reasons: (1) standard economic data series available were not designed to measure in detail the relationship between the ocean and economic activity, so a methodology has been devised that allows the data sets to be as compatible as possible with the realities of this particular slice of the economy; (2) other essential data are missing or irregularly available. Particularly, sector data at the

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[10] The State of Florida compiles additional information on coastal related activities, but are not included in this Phase I study. Their inclusion of the data awaits the Phase II.

county, and even regional level, in many cases cannot be publicly revealed because of federal rules of disclosure that protect proprietary information on firms; (3) standard economic data do not fully capture all of the economic value of the ocean. Recreational uses such as a day at the beach, or just enjoying a view of the sea do not appear in market data sets, but rather, are found in studies using a range of methodologies, and are thus not included in our estimates. However, Chapter 6 addresses some of the values beyond market data.

The information in this Phase I is limited to the datasets compiled by the NOEP for all Coastal and Great Lakes states (www.OceanEconomics.org). The NOEP defines two separate but overlapping categories of economic activities to measure the value of Florida's coast to the economy: the Ocean Economy and the Coastal Economy. For example, industries for the Tourism & Recreation sector of the Ocean Economy will also be found in the supersector for leisure industries, used in the Coastal Economy. The NOEP currently uses six sectors of economic activities derived from broader categories of the National Income and Product Accounts as the foundation for the Ocean Economy: Coastal Construction, Marine Living Resources, Marine Transportation, Offshore Minerals, Ship & Boat Building and Repair, and Coastal Tourism & Recreation. All of these depend on the oceans in a direct way. The Coastal Economy represents the full range of all economic activities that occur in coastal geographies, reported as the aggregate of twelve Super-sector categories developed and reported by the Department of Commerce Bureau of Economic Analysis and the US Department of Labor Bureau of Labor Statistics.

The Coastal and Ocean Economies Are Not the Same

Economic Activity Located Along the Coast

Economic Activity Using the Ocean as an Input

Coastal Economy

Ocean Economy
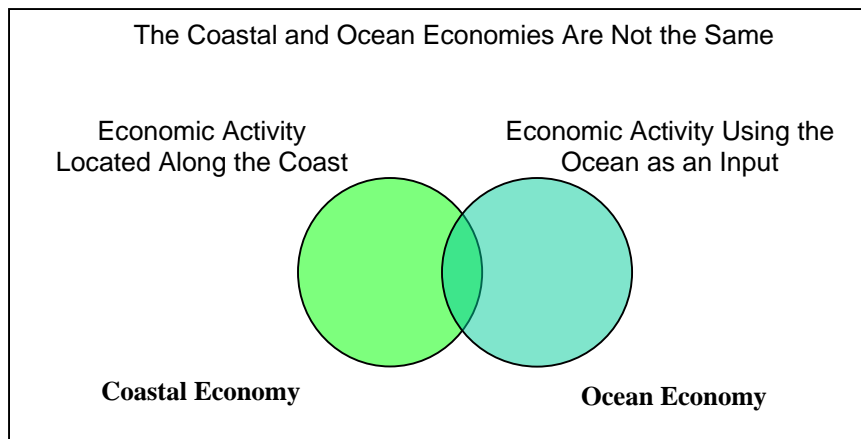
The information included here is based on consistent Federal statistics, so that all information can be compared within and across coastal state geographies and economic activities. The following pages give an overview of the value and size of Florida's Ocean and Coastal economies as they contribute to the nation, as Florida compares with other coastal states, and comparisons within Florida by regions and counties. Information is provided primarily for the period 1990-2003, using seven indicators: employment, wages, Gross State Product (GSP), production and value (of commercial fisheries), and population and housing by land and density.

1.3 RECOMMENDATIONS FOR FURTHER INVESTIGATION

Although this report covers many categories of activities, it does not capture the full value of the Florida Ocean and Coastal Economies. This study omits some important industries that make large contributions to Florida's economy. A Phase II detailed and customized study to provide a fuller picture should include the following industries that are not included in Phase I:

- Additional and very important Florida Coastal and Ocean industries requiring local Florida and private data sources, and information refinement to be merged with those already found here include:
    o Coastal Real Estate
    o Recreational Fishing
    o International Cruise
    o Coastal Agriculture
    o Marine Science and Education

- Refinements of some of those sectors already included but for which data is either more difficult to acquire, or provided at such large aggregates they are not so useful.[11]
    o Commercial fisheries harvesting employment values are not included in the nation's employment database, and are not accurately and consistently available from any one source.
    o Marinas and recreational boating and fishing, currently included in the Tourism & Recreation sector are at too large an aggregate to be useful to local managers.
    o Tourism & Recreation values need to be re-categorized and refined to better reflect Florida's true picture. Travel needs to be disaggregated, if possible.
    o Coastal Construction is incomplete in the federal database and needs coaxing from state and local files as well as private sector information. Activities such as beach nourishment and restoration of natural areas as mangroves, estuaries, and watersheds are not included in current categories.
    o Port Cargo Data. While the Maritime Transportation sector includes the four basic indicators of establishments, employment, wages and GSP, it does not include value and types of imported and exported cargo at Florida's commercial ports. Local port construction and land ownership values should be included.
    o Demographic and Housing data should include additional categories such as part-time or second homes, commuters, retirees, home ownership and rental units to provide a better backdrop to Coastal Economy dynamics, thereby giving managers a better picture of both social and physical infrastructure needs.

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[11] The NOEP dataset is restricted by Federal agency suppressions considered proprietary industry data within any geographic unit with three or less establishments of a particular sector. As a result, certain industries are underestimated because of data holes in these instances. In the case of Florida, some of the limitations and omissions listed here represent a significant portion of Florida's Ocean and Coastal Economies.

- Legislative Districts. To provide more meaningful information for particular groups, information can be geographically classified in different areas. Legislative districts would be one option.

- Florida's investment in its coasts and coastal oceans. The government sector is excluded; the NAICS codes do not distinguish between coast and ocean-related sectors and non-ocean related activities of the federal, state, and local government agencies. A Florida government investment study of how much and where Florida invests its money in its ocean and coastal assets would provide indication of consistency of expenditures with strategic planning goals.

- Self-employment and income is not yet a part of this dataset. Much of the fishing and recreation and tourism sector need to include these values.

- Ocean Economy is measured only in coastal counties at this time, although the ripple effects of Ocean Economy activities extend throughout the country and should be included to indicate the full extent of Florida's influence.

- Natural Resources.   Fisheries landings and values can be presented by harbor, numbers of permits and boats, etc, which are available from Florida sources.

- Beyond Market values. With such a broad spectrum of natural coastal-related assets, studies valuing either categories of these assets or selected sites could be carried out to provide a more reliable estimate of Florida's natural assets only peripherally covered in Phase I. Few studies have been done in Florida for such values; the Florida Keys and Indian Lagoon are among the few valued.

- A baseline of local coastal recreational activities within the state.

With many industries omitted and some information suppressed in federal datasets, this report should be considered only as a preliminary report of Florida's Ocean and Coastal Economies with much more remaining and much great value to be accounted for. These limitations aside, the data found within this study is the most comprehensive of its kind to date, and provides a representative picture of Florida's Coastal and Ocean Economies.

Chapter 2   Summary of Findings

2.1   OCEAN ECONOMY

- In 2003, Florida's direct Ocean Economy (GSP) was an estimated $13 billion ranking second in the nation behind California. Florida's total Ocean Economy that same year (including multipliers) was an estimated $23.2 billion.

- The total Florida Ocean Economy (with multipliers) contributed 3.2% of Florida employment and 4.5% of Florida GSP in 2003.

- Employment forecasts for the Ocean Economy Project a 73% growth with more than 268,000 new jobs by 2015.

- The Tourism & Recreation sector GSP was the fastest growing in the Ocean Economy, far surpassing the others with 90% growth between 1990 and 2003. The Marine Transportation Sector GSP grew 82% during the period 1990-2003. The other four sectors had either minimal growth or negative growth during that period.

2.2   COASTAL ECONOMY

- In 2003, Florida's Coastal Economy (shoreline counties) contributed an estimated $402 billion, or 77% of the state's total economy.

- Florida contributed 9.7% of the national Coastal Economy GSP in 2003, with only 4.6% of the national coastal county land area.

- Economic indicators appear to be better indicators of coastal change than population. Between 1990 and 2003, Florida's shoreline county economy grew at a faster rate than population. Wages grew at 49% and GSP grew at 65%, while population grew at 31%.

- During the period 1990-2003, Florida's shoreline county/Coastal Economy grew at a faster rate than the Coastal Economy of California, the Gulf States combined and the nation: at 31% employment growth, 48% for wages, and 63% for GSP.

- In 2003, shoreline counties contributed more than 70% of all employment, population and housing in the state with only 56% of land area.

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2.3   POPULATION AND HOUSING

- 77% of Florida's population lives in coastal counties, with 46% living on the Atlantic and 31% on the Gulf coast. The remaining population lives inland.

- Population density in shoreline counties, however, measured at approximately 444 people per square mile, while the density inland was an estimated 170 people per square mile, the differences partially due to large cities along the coast.

- Inland counties, with smaller population levels, have grown faster than shoreline counties with population and housing growth at approximately 42% during the period 1990-2004.

- Florida ranks third among the coastal states for shoreline county population and 13th for shoreline county population density.

2.4   NON-MARKET ECONOMIC VALUES FOR COASTAL RECREATIONAL RESOURCES

- Beach values for the State of Florida ranged from $3.5 billion to $17.7 billion in 2000, using 2005 dollars.

- Florida ranks number one among the nation's destinations for Americans that swim, fish, dive and otherwise enjoy the state's many beaches, coastal wetlands, and shores. More than 22 million people visited the Florida coasts in 2000.

- The Non-Market value of recreational fishing along Florida's Gulf coast ranged between just under $3.4 billion to $5.6 billion annually in 2000, using 2005 dollars.

Chapter 3   Ocean Economy

INTRODUCTION

Florida's Ocean Economy has been growing at a significant pace over the past decade. In this chapter, the Ocean Economy includes those six sectors of economic activities the NOEP has extracted from the US National Income and Product Accounts, which are dependent on the ocean in some direct way. The use of federal government datasets from the U.S. Department of Labor Bureau of Labor Statistics and the U.S. Department of Commerce Bureau of Economic Analysis and the Census Bureau allows comparisons across geographies and sectors, providing a consistent set of indicators of change. Beginning with a forecast for the Ocean Economy to 2015, the chapter returns to the present and the past, examines each of the six sectors, compares the size and growth of the sectors in Florida over a period of 13 years, gives a summary of the contribution of these sectors to Florida's economy and compares Florida's Ocean Economy to the nation and other states. This unique way of viewing the value of the oceans to Florida demonstrates the direct importance of the oceans to Florida's economy.

The sectors measured here are Living Resources, Marine Construction, Marine Transportation, Offshore Minerals, Ship and Boat Building and Repair, and Coastal Tourism and Recreation. While this is not an exhaustive list of ocean-dependent industries (see chapter 2 for others of importance), it provides a solid indication of the importance of the ocean to Florida.

3.1   THE OUTLOOK FOR FLORIDA'S OCEAN AND COASTAL ECONOMIES TO 2015

For planning and policy purposes, an important question is whether these trends will continue. While forecasting economic conditions a decade ahead is always uncertain, it is still possible to prepare projections that provide at least one view of what the future may look like.

Forecasts of the NOEP Ocean and Coastal economic data through 2015 were prepared in cooperation with Moody's/Economy.com, one of the leading economic forecasting services. The Ocean Economy forecasts were based on NOEP forecasts for each ocean-related industrial sector, using data and projections from the Moody's/Economy.com national and state models as of May 2006.

Ocean Economy forecasts are based on the assumption that future rates of growth of the industrial sectors included in this economy are determined by the past statistical relationship between the growth of these industries (for example, ocean tourism and recreation) and the growth of the broader national and state industrial sectors that include them (Florida's leisure and hospitality sector for the case of tourism). Once these statistical relationships are determined, the rate of growth of industries included in the Ocean Economy are projected using forecasted data from Moody's/Economy.com   The

definitions of the Ocean Economy industries in the forecasts are the same as those for the Ocean Economy discussed throughout this report.

The Coastal Economy forecasts (see Chapter 4) are based on the Moody's/Economy.com county projections for the same national and state forecast upon which the Ocean Economy forecasts are based.

3.1.1   Outlook for the Ocean Economy

Overall, it appears that the Florida Ocean Economy will grow strongly during the next decade, led by employment in ocean Tourism & Recreation. Employment projections from 2005 through 2015 show more than 268,000 new jobs in 2015, a growth rate of 73% over the period (see Figure 3.1).
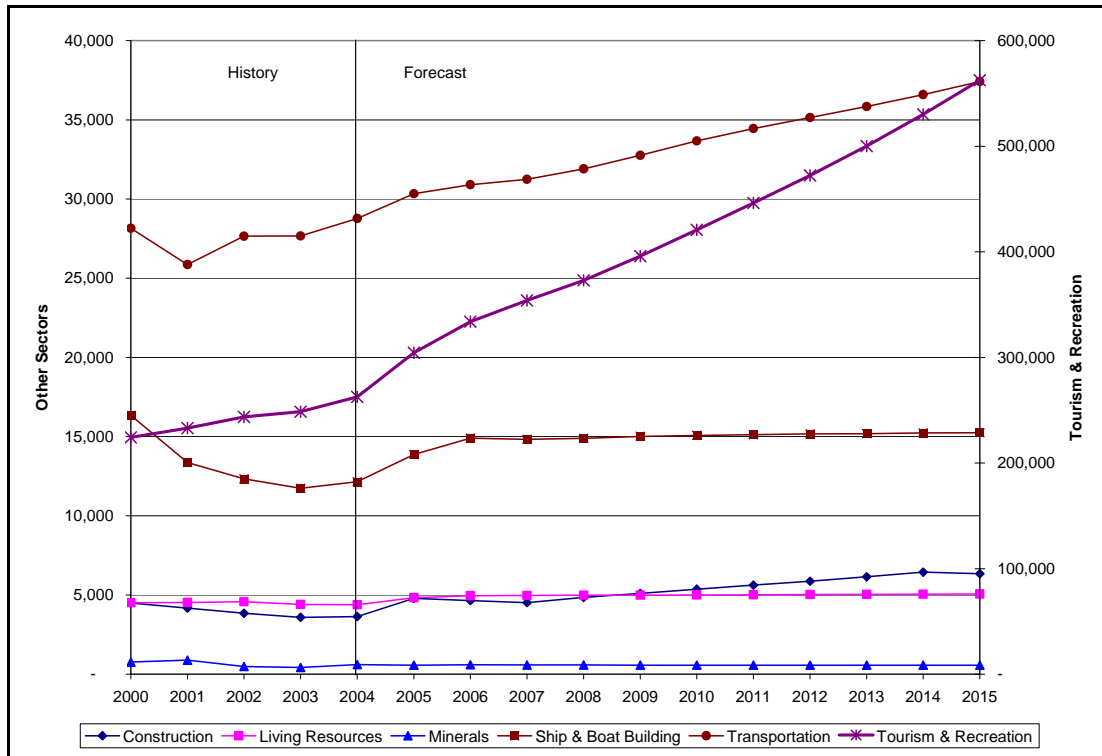
Figure 3.1: Wage and Salary Employment in the Florida Ocean Economy 2000-2015

Almost all of the job growth (268,000) will come from Tourism & Recreation, which will grow at 7.5% per year. Marine Transportation will also see steady growth, adding more than 7,000 jobs (23% growth). After a slight decline in the early part of this decade, Marine Construction should grow steadily, but slowly, while Living Resources will remain largely unchanged. Ship & Boat Building shows a moderate increase in jobs of about 10% over the next decade. This sector peaked in employment at more than 16,000 jobs in 2000, and has been declining since then, with slight increases in 2004 and 2005.

Table 3.1 shows the growth rates for employment in the Florida Ocean Economy in five-year increments over the 25-year span from 1990-2015. This table demonstrates that the Florida Ocean Economy is strongly tied to national business cycles. The early 1990s were clearly a difficult period, heavily influenced by the fact that 1990 was the peak year of the 1990s boom period, and the years that followed were essentially recovery years from the 1991 recession. By 1995, with the exception of the small Minerals sector, none of the Florida Ocean Economy industries had recovered to the 1990 peak levels.

But the second half of the 1990s was clearly a very strong growth period, with the overall Florida Ocean Economy growing by almost 50% in just five years. During this same period, all of the Ocean Economy sectors saw robust employment growth. Employment slowed once again in the early part of the current decade as a mild national recession, and consequently a slow growth period, took hold.

Table 3.1: Wage & Salary Employment Growth Rates for Florida Ocean Economy 1990-2015

	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Trans-portation	Ocean Economy
1990-1995	-25%	-54%	29%	-26%	-6%	-25%	-12%
1995-2000	66%	43%	25%	76%	49%	28%	48%
2000-2005	7%	7%	-25%	-15%	36%	8%	29%
2005-2010	12%	3%	0%	9%	38%	11%	34%
2010-2015	18%	1%	-1%	1%	34%	11%	30%

The second half of the current decade is projected to see significant growth, particularly in Tourism & Recreation, which is forecast to add more than 116,000 jobs by 2010. This projection shows a significant increase in the rate of growth compared with forecasts prepared by NOEP using the August, 2005 national outlook from Moody's/Economy.com. Based on the earlier outlook, Tourism & Recreation was forecast to grow by a still substantial 89,000 jobs between 2005 and 2010. The current forecast of 116,000 jobs reflects in part a more robust national outlook, but also some diversion of Tourism & Recreation activity from other Gulf of Mexico states to Florida because of the effects of the 2005 hurricanes on the central Gulf states.

The relative size of the Florida Ocean Economy for 2000 through 2015 is shown in Figure 3.2, measured by its share of total state employment and GSP. Forecasts for total employment and GSP are also derived from data from the Moody's/Economy.com, as of May 2006. Driven by Tourism & Recreation, the Ocean Economy's share of employment in the state of Florida will increase from 4.6% of total employment in 2005 to 6.2% in 2015. However, the share of Florida's GSP accounted for by the Ocean Economy will remain constant at about 2.5%.
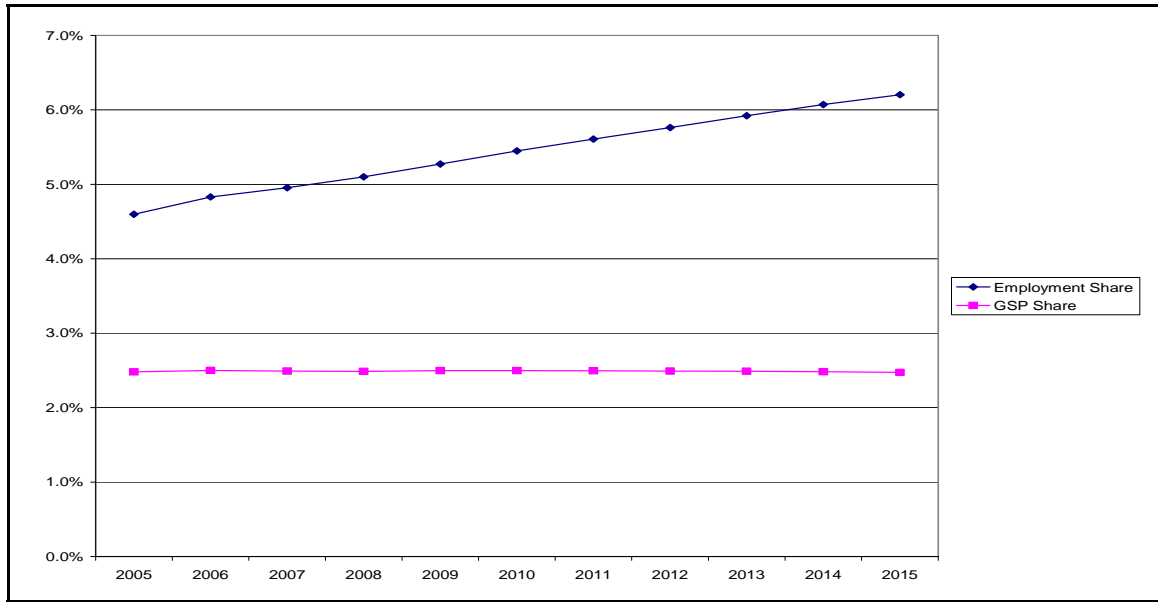
Figure 3.2: Ocean Economy Share of Florida Employment and GSP 2000-2015

3.2 LIVING RESOURCES

This section provides an overview of Florida's Living Resources sector. It includes:

a) Basic economic information (employment, wages, and net output (GSP)) about the four industries of the sector (Seafood Processing, Fish Harvesting, Fish Hatcheries and Aquaculture, and Seafood Markets).
b) A summary of the changes in the industry.
c) The recent history of landings and landed value for the major fisheries.
d) A discussion of Import and Export markets
e) Summary estimates for the Sport and Recreational Fishing Industry in Florida

The Living Resources 2003 contribution to the Florida economy, by sector is shown in Table 3.2. Table 3.3 summarizes the indirect contribution of the sector as industries generate additional demand for other sectors' products while producing their output.

Table 3.2: Employment, Wages, and GSP for Living Resources Sector, 2003

Industry[12]	Employment	Wages	GSP
Seafood Processing	2,515	$73,015,567	$188,097,500
Fishing Harvesting	N/A	N/A	N/A
Fish Hatcheries & Aquaculture	N/A	N/A	N/A
Seafood Markets	1,289	$27,942,529	$6,552,680
Living Marine Totals[13]	**4,474**	**$116,537,867**	**$426,366,200**

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[12] Some fishing companies fall under the unemployment insurance laws and report their employment like other companies. Other people employed in fish harvesting, primarily the self-employed and the largest segment, are not counted. Thus, these figures represent only the BLS portion of the harvesting sector and should be considered low estimates.

Table 3.3: Contribution of Living Resources Sector to Florida's Economy, 2003

	Direct	Indirect & Induced	Total
Employment	4,474	4,752	9,226
Wages	$116,537,867	$153,760,062	$270,297,929
GSP	$426,366,200	$351,666,842	$778,033,042

This chapter gives industry data by state only. It is not possible to present regional data for the Living Resources sector because information at the county and regional levels was either not available, or was suppressed in many cases. It is difficult to measure the Fish Harvesting and Fish Hatcheries and Aquaculture sectors because:

    a. These industries are concentrated in a few companies, perhaps due to declines in fish catch, or dominance of particular regions by less than three companies. Hence, disclosure of information is not possible without violating confidentiality, according to BLS rules.

    b. Employment and wage data for Fish Harvesting are not available from a consistent national source. While some state data exists, it is not included in this phase of the work.

Table 3.4 and Figure 3.3 show data on employment, wages, and GSP for two industries in the Living Resources sector (Seafood Markets and Seafood Processing), and totals for the whole sector. In 2003, employment and total wages in the Living Resources sector were significantly lower than in 1990, but GSP increased by 27%. Wages per employee increased during the period. In the Seafood Markets industry wages and GSP increased significantly, but employment remained the same, probably due to the large seafood import market (See section 3.12). This is an indication of increased productivity (as measured by the contribution of labor to total output) for the Living Resources sector and particularly for the Seafood Market industries. The Seafood Processing industry contracted during the 1990-2003 period. Employment almost halved, and total wages and output reduced also.

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[13] Total includes suppressions. Some fishing companies fall under the unemployment insurance laws and report their employment like other companies. Other people employed in fish harvesting, primarily the self-employed, which is the largest segment, are not counted. Thus, these figures represent only the known portion of the harvesting sector and should be considered low estimates.

Table 3.4: Employment, Wages, and GSP Changes in Living Resources Sector 1990-2003

Industry	Employment			Wages ($Millions)			GSP ($Millions)		
	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change
Fishing	809	N/A	N/A	$17.8	N/A	N/A		N/A	N/A
Fish Hatcheries & Aquaculture	171	N/A	N/A	$4.3	N/A	N/A		N/A	N/A
Seafood Markets	1,347	1,289	-4.3%	$22.0	$27.9	26.9%	$35.7	$65.5	83.3%
Seafood Processing	4,630	2,515	-45.7%	$89.3	$73.0	-18.3%	$246.3	$188.1	-23.6%
Total	6,956	4,474	-35.7%	$133.5	$116.5	-12.7%	$334.6	$426.4	27.4%

*Total includes suppressions

	Seafood Markets	Seafood Processing	Sector Total
☐ Employment	-4.3%	-45.7%	-35.7%
☐ Wages	26.9%	-18.3%	-12.7%
☐ GSP	83.3%	-23.6%	27.4%

Industry
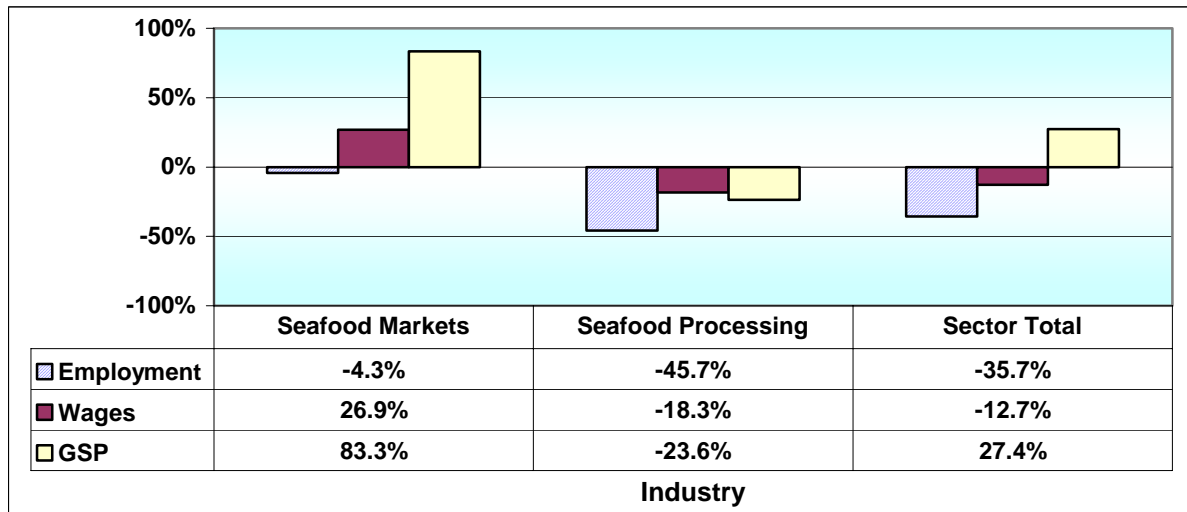
Figure 3.3: Changes in Living Resources Sector 1990-2003

Figure 3.4 shows history data on employment, wages, and GSP for the Living Resources sector. Employment decreased sharply in 1991 to less than half the 1990 level.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Employment	6,956	2,874	2,921	3,226	3,560	3,166	3,936	4,270	4,617	4,515	4,514	4,529	4,574	4,474
Wages	$133	$64	$61	$66	$78	$70	$88	$95	$107	$112	$119	$118	$122	$117
GSP	$335	$243	$204	$247	$248	$210	$258	$386	$414	$415	$469	$463	$474	$426
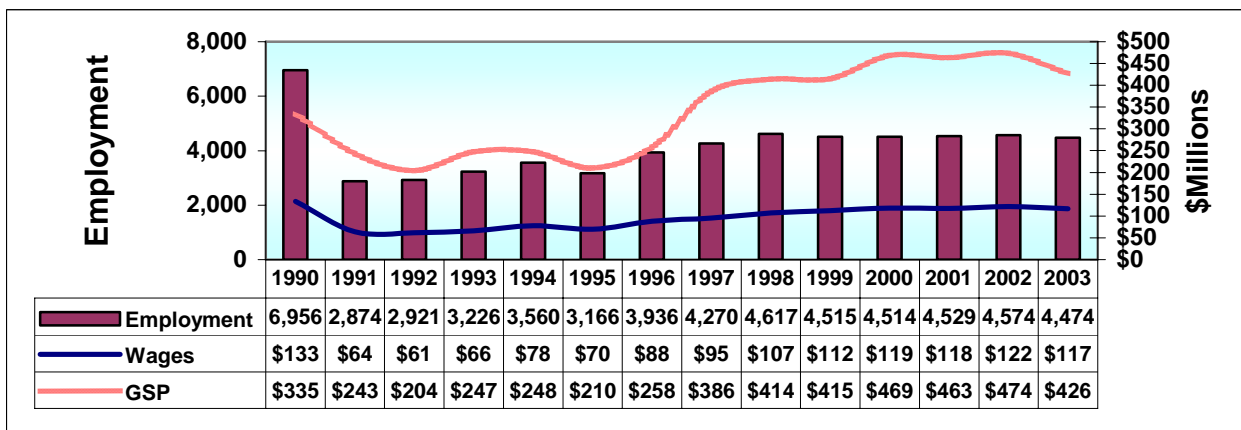
Figure 3.4: Living Marine Resources History (1990-2003)

Between 1992 and 1998, there were some gains in employment, but by 2003 employment levels were still about 36% lower than in 1990. Total wages were lower in 2003 than in 1990, but since employment reduced significantly, wages per employee increased about 35%, an indication of increases in productivity in the Living Resources sector. Gross State Product also increased during the period, by 27% from the 1990 level, and doubled from 1992, when this sector's output had reached its the lowest level.

Of all the Florida Ocean Economy sectors, Living Resources is possibly the least understood and most controversial. The demand for seafood in the U.S. is large and growing. Consumption of seafood rose to 16.6 pounds of seafood per person in 2004. Shrimp remains the top seafood choice in the U.S., and Florida's leading fishery. Due to a higher demand for seafood, the per capita demand for seafood in Florida will probably continue to increase. This has both national and international implications for Florida's economy, since a portion of Florida's fisheries is exported to foreign nations. The more Florida can effectively manage its fisheries for optimal sustainable productivity, the greater the opportunity for foreign trade as well as serving local and national markets.

The data problems, due to disclosure issues resulting from the concentration of the industry discussed earlier and other factors, make this sector's economic contribution difficult to assess:

a) Landings and landed values have been unstable in the past and continue to be due to large declines in the catch of particular species.

b) There is no way of accurately knowing how many fishermen there are in Florida (or other states) nor how much they earn. Absence of mandated standardized employment and wage reporting for fish harvesting prevent accurate accounting of the value of fish harvesting. This is because much of the fishing industry is "self-employed" and does not fall under the federal mandates for reporting wages and numbers of employees, as in other sectors where companies pay wages. Hence, the only fishing operations that can be included in our dataset from the Federal Government are reporting private companies. The only amount that can be estimated is that amount of money that the owner of the boat receives for the catch at the dock, because legally, the buyer of the catch must report these records. An unfortunate consequence of this lack of complete information is that regulators do not have a benchmark to determine the extent to which regulations or limits will impact the economy of the fishermen.

c) The size of the catch and its contribution to Florida's economy is only a part of its value. The Living Resources market sector is relatively small in comparison to the larger Ocean Economy sectors in Florida such as Tourism & Recreation and Transportation. However, as a source of food and employment, the commercial fishing industry is very important to Florida's Ocean Economy. Many activities are dependent on this industry, such as boat construction and repair, brokerage, dock handling, trucking and other transportation, gear and rigging stores, fish processing, and commercial seafood trade. In addition, the health of Florida's fisheries is integrally related to the health of Florida's coastal waters, reflecting the strength of offshore ecosystems. These other values are not captured in the market place, but

have far reaching effects on the sustainability of Florida's coastal resources, which fuels its flourishing Coastal Economy. The long-term sustainability of Florida's fisheries is very valuable because fisheries are a renewable resource that, if well managed, could sustain a viable industry for years to come. Poor management of Florida's fisheries would be an opportunity lost, taking a major source of revenue and food from the citizens of Florida, costing them future earnings and revenues.

Florida's Ocean Economy has increased during the 1990-2000 decade as measured by market values, with the exception of the Living Resources sector. A portion of the Living Resources market values decrease could be attributed to new laws. With the prohibition of gill nets in the Florida fisheries, there was a steep decline in the catch of certain species. However, increases in the Non-Market value of this sector could have offset some or all of this decrease. Unfortunately, it is impossible to determine the extent of Non-Market influences.

3.2.1 Overview of Fisheries Landings and Values

The remainder of this sector focuses on data NOEP acquired form the National Marine Fisheries Service (NMFS), NOAA. Unless otherwise stated, all tables and figures are shown in converted year 2000 dollars. When comparing Atlantic and Gulf Florida, Monroe County is included in the Gulf region, consistent with NMFS data collection patterns. Some tables have color-coding to visually coordinate overlapping species between categories.

3.2.1.1 Comparisons with the U. S. Fishing Industry

The U.S. fishing industry has undergone massive changes during the past thirty years, but overall, landings, have remained relatively steady since the 1990s at about 10 billion pounds a year (Figure 3.5). The landed value peaked in 1979 at over $5 billion, and since the late 1980s has declined steadily; 2004 is estimated at $3.4 billion in constant 2000 dollars. However, the overall national appearance does not tell the whole story. While the values have declined, some states have increased their take of new species and others have seen their fisheries almost collapse.
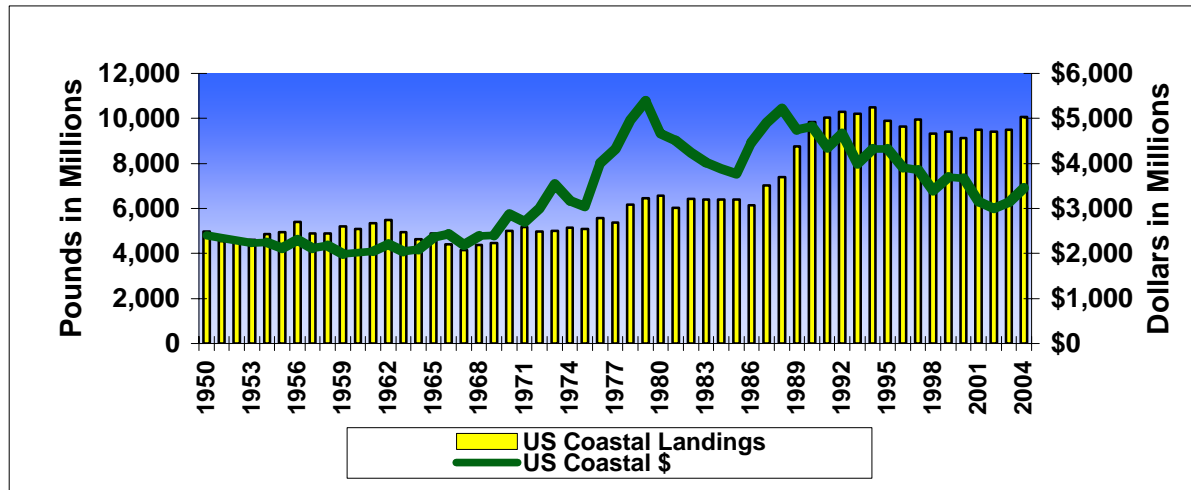
Figure 3.5: U.S. Commercial Fishery Landings and Values 1950-2004

In Florida, the finfish landings have declined throughout the last twenty years; however, the shrimp and crab fisheries have remained fairly steady, and in some cases increased. Figure 3.6 illustrates the State's fisheries history.
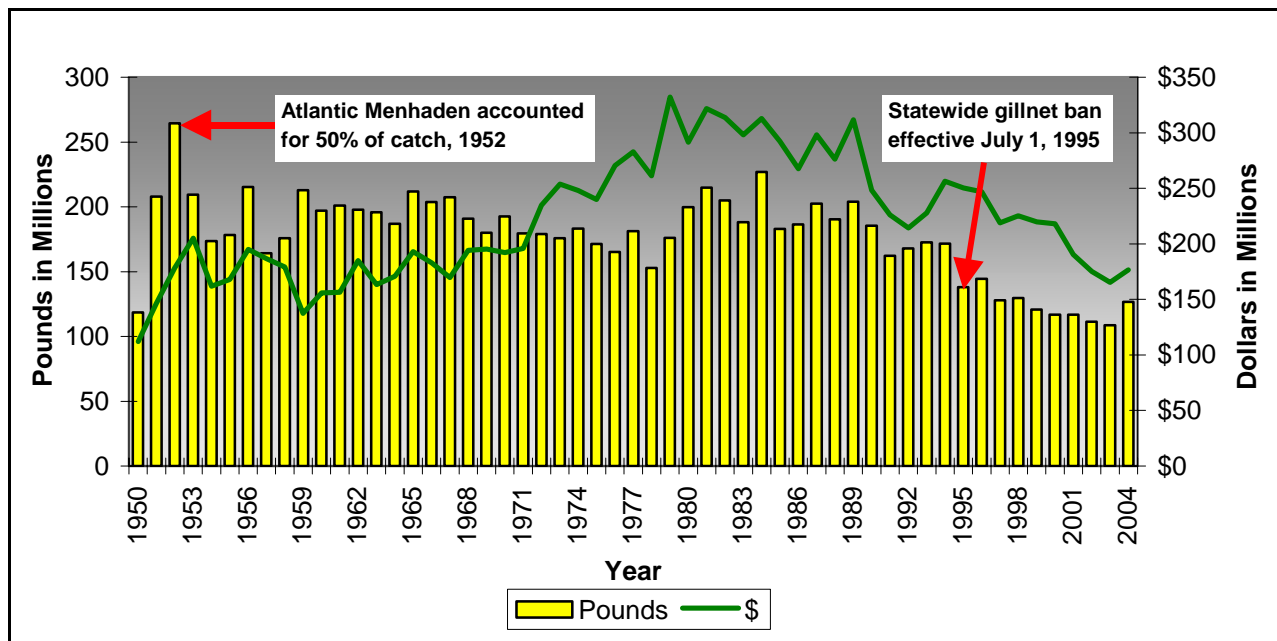
Figure 3.6: Florida's Fisheries History 1950-2004

Florida landings spiked in 1952 to over 265 million pounds, approximately half of which was Atlantic Menhaden. In 2000 constant dollars, landed value peaked in 1979, and brought more than $332 million in revenues, compared to $177 million in 2004. Florida's share of the U.S. total commercial landings slid from more than 5% in 1952 and 1968 to 1.3% in 2004. In the early 1970s, the relationship between landings and value shifted. While landings remained stable, the landed values increased rapidly.

Figure 3.7 illustrates Florida's historical relationship with the thirty coastal states total since 1950. The 1951-1953 spike stands out even when converted to 2000 dollars.
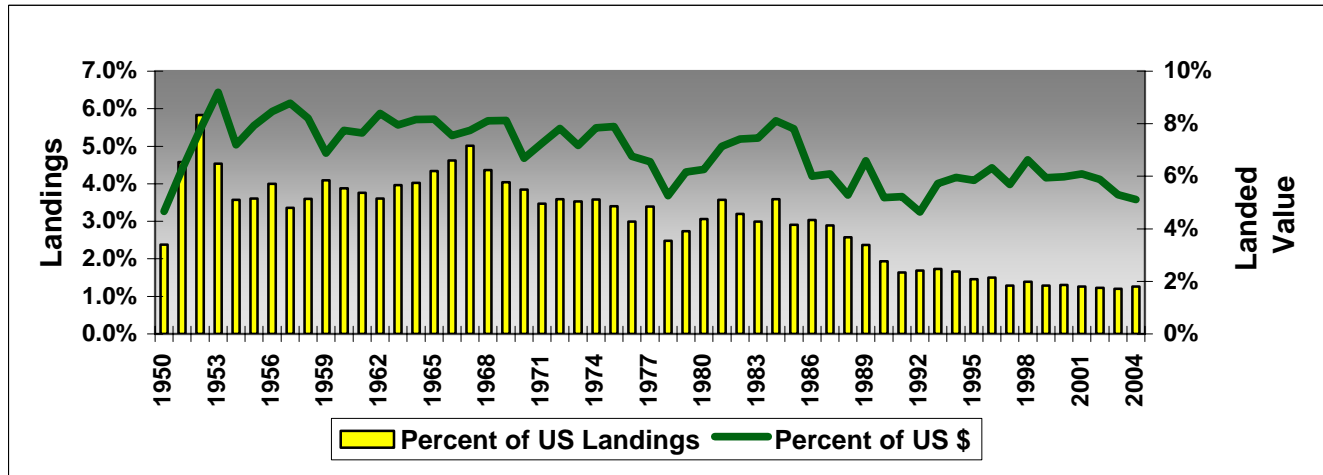
Figure 3.7: Florida's Fisheries as a Percentage of U.S. Coastal 1950-2004

Florida landings have experienced a steady slide since 1985 compared to all coastal states, yet the values remained fairly stable. Change occurred in 2004 as the percentage of landings compared to the U.S. increased.

3.2.1.2 Florida's Ten Largest Years

The NOEP fisheries data covers the period from 1950 through 2004. Table 3.5 provides a 10-year snapshot of landings, nominal landed value, and value in 2000 constant dollars. (CF stands for conversion factor to 2000 dollars.)

Table 3.5: Florida Fisheries Top Ten Years

Commercial Landings: Ranked by Pounds 1950-2004					
Year	Pounds	Nominal Value	CF	Year 2000 Value	Year
1952	264,561,200	$27,474,576	0.154	$178,406,338	1952
1984	229,852,953	$189,773,424	0.603	$314,715,463	1984
1956	215,399,700	$30,808,625	0.158	$194,991,297	1956
1981	214,954,697	$169,856,415	0.528	$321,697,756	1981
1959	212,950,400	$23,227,024	0.169	$137,438,012	1959
1965	211,886,900	$35,345,871	0.183	$193,146,836	1965
1953	209,428,600	$31,799,387	0.155	$205,157,335	1953
1951	207,876,000	$22,152,519	0.151	$146,705,424	1951
1967	207,414,500	$32,941,018	0.194	$169,799,062	1967
1989	207,074,102	$225,320,579	0.72	$312,945,249	1989

Table 3.5: Florida Fisheries Top Ten Years (continued)

Year	Pounds	Nominal Value	CF	Year 2000 Value	Year
Value: Ranked by 2000 Constant Dollars 1950-2004

Year	Pounds	Nominal Value	CF	Year 2000 Value	Year
1979	176,851,235	$140,322,934	0.422	**$332,518,801**	1979
1981	214,954,697	$169,856,415	0.528	**$321,697,756**	1981
1984	229,852,953	$189,773,424	0.603	**$314,715,463**	1984
1982	206,079,412	$175,912,151	0.56	**$314,128,841**	1982
1989	207,074,102	$225,320,579	0.72	**$312,945,249**	1989
1983	191,223,422	$172,972,764	0.578	**$299,260,837**	1983
1987	202,839,150	$196,865,819	0.66	**$298,281,544**	1987
1985	185,957,341	$183,903,023	0.625	**$294,244,837**	1985
1980	200,504,148	$139,658,740	0.479	**$291,563,132**	1980
1977	182,345,100	$99,679,887	0.352	**$283,181,497**	1977

Five of the top ten years for commercial fisheries landings occurred in the 1950s. In 1952, Florida's peak year of landings reached over 265 million pounds, compared to landings of 127 million pounds in 2004. The highest landed values for the 54-year period occurred in the late 1970s and the 1980s. Florida's most valuable year comparing constant dollars was 1979 with $333 million compared to 2004 at $177 million.

3.2.2   Comparing Fisheries by Regions

Florida is unique with its two very different coasts: the Gulf of Mexico and the Atlantic Ocean. Consequently, Florida fisheries can be compared with other Gulf states and the South Atlantic states. Table 3.6 compares Florida's landings and landed value with the adjacent regional states as well as all coastal states.

Florida's landed weight ranks fourth among adjacent states, and represents 1.3% of the nearly ten billion pounds collectively landed by all coastal states. Florida ranks second in landed value, $195 million, which contributed 5.2% to the $3.7 billion total value for all coastal states in 2004. For comparison in 2000 constant dollars, Louisiana contributed 7.4%, or $251 million, to Florida's $176.7 million in 2004.

Table 3.6: Gulf and South Atlantic States Landings and Value, 2004

Rank	State	Landed Weight (lbs)	State	Landed Value	Rank
	All Coastal States	9,672,065,941	All Coastal States	3,717,526,669	
1	Louisiana	1,096,581,770	Louisiana	$275,065,335	1
2	Mississippi	183,761,862	Florida	$194,715,986	2
3	North Carolina	136,451,548	Texas	$166,208,228	3
4	Florida	127,281,969	North Carolina	$77,142,163	4
5	Texas	85,557,054	Mississippi	$43,790,554	5
6	Alabama	26,558,704	Alabama	$37,035,271	6
7	South Carolina	12,438,628	South Carolina	$18,541,887	7
8	Georgia	6,663,606	Georgia	$12,013,208	8

* Values shown in nominal dollars; Inland values included

3.2.2.1 Atlantic and Gulf Coast Comparisons

Table 3.7 and Figure 3.8 illustrate differences between Atlantic and Gulf fisheries (Menhaden and Tilapia have been removed). When comparing the five most recent years, each coast experienced the highest value for commercial fisheries in 2000 for a combined value of $212 million; however, the average Gulf value was nearly four times that of the Atlantic, and three times the landed weight.

Table 3.7: Gulf and Atlantic Coasts Landings and Value 2000-2004

	Atlantic Florida		Gulf Florida		
Year	Landing Weight (lbs)	Landed Value	Landing Weight (lbs)	Landed Value	Year
2004	28,241,816	$35,536,954	84,173,415	$134,742,494	2004
2003	23,394,232	$30,832,086	79,027,666	$131,977,414	2003
2002	22,135,820	$33,000,338	81,935,924	$137,856,856	2002
2001	27,157,703	$41,614,158	80,687,242	$142,460,946	2001
2000	31,114,628	**$52,121,754**	77,241,115	**$159,700,207**	2000

Note: Menhaden and Tilapia have been removed
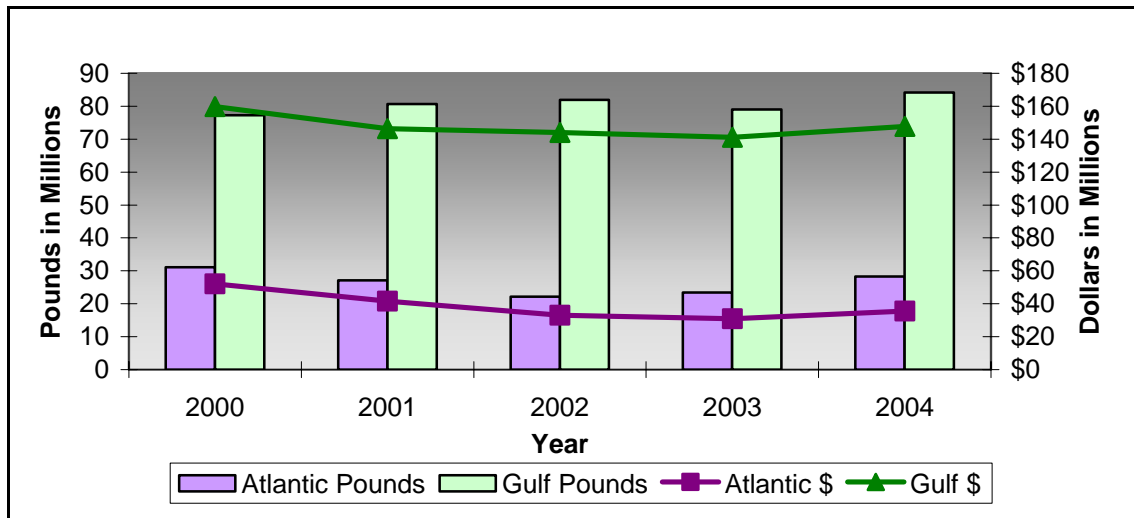
Figure 3.8: Gulf and Atlantic Coast Landings and Landed Values 2000-2004
Note: Menhaden and Tilapia have been removed

3.2.3 Comparing Fisheries by Species

Composition of Florida's 1950 fisheries compared to its 2004 fisheries reveal changes of certain marine finfish and shellfish (see Tables 3.8 and 3.9).

Table 3.8: Landings by Species 1950 and 2004

Rank	1950 Species*	Weight (lbs)	2004 Species*	Weight (lbs)	Rank
1	MULLET, STRIPED	29,341,900	SHRIMP, PINK **	14,528,501	1
2	SHRIMP, MARINE, OTHER	22,906,100	CRAB, BLUE	11,518,786	2
3	GROUPERS	6,267,400	MULLET, STRIPED	7,524,339	3
4	CRAB, BLUE	6,166,500	GROUPER, RED	6,800,909	4
5	MACKEREL, SPANISH	5,890,000	SHRIMP, ROCK	6,796,064	5
6	SNAPPER, RED	4,711,800	CRAB, FLORIDA STONE CLAWS	5,999,688	6
7	SEATROUT, SPOTTED	4,490,900	CATFISHES & BULLHEADS	5,513,254	7
8	MACKEREL, KING AND CERO	1,578,400	LOBSTER, CARIBBEAN SPINY	5,006,493	8
9	LOBSTER, CARIBBEAN SPINY	1,559,700	SHRIMP, WHITE	4,463,628	9
10	BLUEFISH	1,398,100	MACKEREL, KING AND CERO	3,488,690	10
	1950 Top Ten by Landings	**84,310,800**	**2004 Top Ten by Landings**	**71,640,352**	

* Menhaden is omitted.

** NMFS does not have a record prior to 1978 for Pink shrimp

Florida's total top ten landings of food finfish and shellfish declined approximately 18% over the 54-year span; however some species' landings have increased, such as Caribbean Spiny Lobster, Blue Crab, and Mackerel. There are fewer Finfish in the 2004 top ten landings. Color-coding shows the consistencies.

Table 3.9: Species by Value 1950 and 2004

Rank	1950 Species*	Landed Value	2004 Species*	Landed Value	Rank
1	SHRIMP, MARINE, OTHER	$45,564,107	CRAB, FLORIDA STONE CLAWS	$24,481,906	1
2	MULLET, STRIPED	$21,965,429	SHRIMP, PINK**	$24,236,769	2
3	SNAPPER, RED	$7,978,643	LOBSTER, CARIBBEAN SPINY	$20,788,438	3
4	SEATROUT, SPOTTED	$6,632,500	GROUPER, RED	$12,134,371	4
5	GROUPERS	$4,092,429	CRAB, BLUE	$9,446,936	5
6	MACKEREL, SPANISH	$3,786,786	SHRIMP, WHITE	$8,892,867	6
7	POMPANO, FLORIDA	$3,203,179	GAG	$7,488,104	7
8	OYSTER, ATLANTIC ERN	$2,899,000	SHRIMP, MARINE, OTHER	$6,022,631	8
9	CRAB, BLUE	$2,153,386	MULLET, STRIPED	$4,920,327	9
10	LOBSTER, CARIBBEAN SPINY	$2,005,286	SHRIMP, ROCK	$4,727,509	10
	1950 Top Ten by Value	**$100,280,743**	**2004 Top Ten by Value**	**$123,139,859**	

* Menhaden is omitted.

** NMFS does not have a record prior to 1978 for Pink shrimp

The landed value increased approximately 23% in constant 2000 dollars over the same time period. For example, the landed weight for Mullet dropped over 21,000 pounds, but the value per pound increased from $1.34 to $1.53 per pound. Shrimp, crab, and lobster are the most valuable fisheries in Florida.

3.2.4   Comparing Species by Coast

While some species are common to both coasts, there are also some important differences. Tables 3.10 and 3.11 show the top-ten species in 2004 by landings and actual value for the Atlantic and Gulf coasts. Shrimp and crab continue to be the two most valuable fisheries on both the Atlantic and Gulf coasts.

Table 3.10: Atlantic and Gulf Fisheries by Landings, 2004

	Atlantic Landings		Gulf Landings		
Rank	Marine Species	Weight (lbs	Marine Species	Weight (lbs)	Rank
1	SHRIMP, ROCK	5,955,295	SHRIMP, PINK	14,038,429	1
2	CRAB, BLUE	3,510,479	CRAB, BLUE	8,008,307	2
3	SHRIMP, WHITE	3,364,618	GROUPER, RED	6,782,576	3
4	MACKEREL, SPANISH	3,066,356	MULLET, STRIPED	6,423,212	4
5	MACKEREL, KING AND CERO	2,291,301	CRAB, FLORIDA STONE CLAWS	5,932,592	5
6	MULLET, STRIPED	1,101,127	LOBSTER, CARIBBEAN SPINY	4,551,408	6
7	SHRIMP, BROWN	999,349	JELLYFISH	3,334,196	7
8	SWORDFISH	510,512	GAG	3,130,793	8
9	SHRIMP, PINK	490,072	HERRING, ATLANTIC THREAD	3,116,782	9
10	LOBSTER, CARIBBEAN SPINY	455,085	SARDINE, SPANISH	2,118,987	10
	Top Ten Atlantic Landings	**21,744,194**	**Top Ten Gulf Landings**	**57,437,282**	

Table 3.11: Atlantic and Gulf Fisheries by Value, 2004

	Atlantic Landed Value		Gulf Landed Value		
Rank	Marine Species	Landed Value*	Marine Species	Landed Value*	Rank
1	SHRIMP, WHITE	$8,055,363	CRAB, FLORIDA STONE CLAWS	$26,507,010	1
2	SHRIMP, ROCK	$4,416,274	SHRIMP, PINK	$25,898,958	2
3	MACKEREL, KING AND CERO	$3,650,244	LOBSTER, CARIBBEAN SPINY	$20,658,358	3
4	CRAB, BLUE	$3,524,403	GROUPER, RED	$13,268,271	4
5	LOBSTER, CARIBBEAN SPINY	$2,146,559	GAG	$7,800,440	5
6	MACKEREL, SPANISH	$1,826,902	CRAB, BLUE	$6,838,886	6
7	SHRIMP, BROWN	$1,670,259	SHRIMP, MARINE, OTHER	$5,140,104	7
8	SWORDFISH	$1,491,341	MULLET, STRIPED	$4,721,532	8
9	SHRIMP, MARINE, OTHER	$1,466,722	SNAPPER, YELLOWTAIL	$2,983,002	9
10	SHRIMP, PINK	$688,778	OYSTER, ATLANTIC	$2,883,421	10
	Top Ten Atlantic Value	**$25,657,420**	**Top Ten Gulf Value**	**$97,197,077**	

* Values shown in nominal dollars

Florida's Gulf coast landed $97.2 million dollars of food finfish and shellfish, while the Atlantic coast landed $25.6 million dollars.
- Pink shrimp from the Gulf and Atlantic provided a combined value of $26.6 million in 2004.
- Florida Stone Claws crab from the Gulf landed value was $26.5 million in 2004, the most valuable in the Gulf coast.

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3.2.5 History of Key Species

Figures 3.9 through 3.13 graph the histories of five Florida fisheries.[14] Each specie history is available at the NOEP website: http://noep.csumb.edu/LMR/LMR.asp.
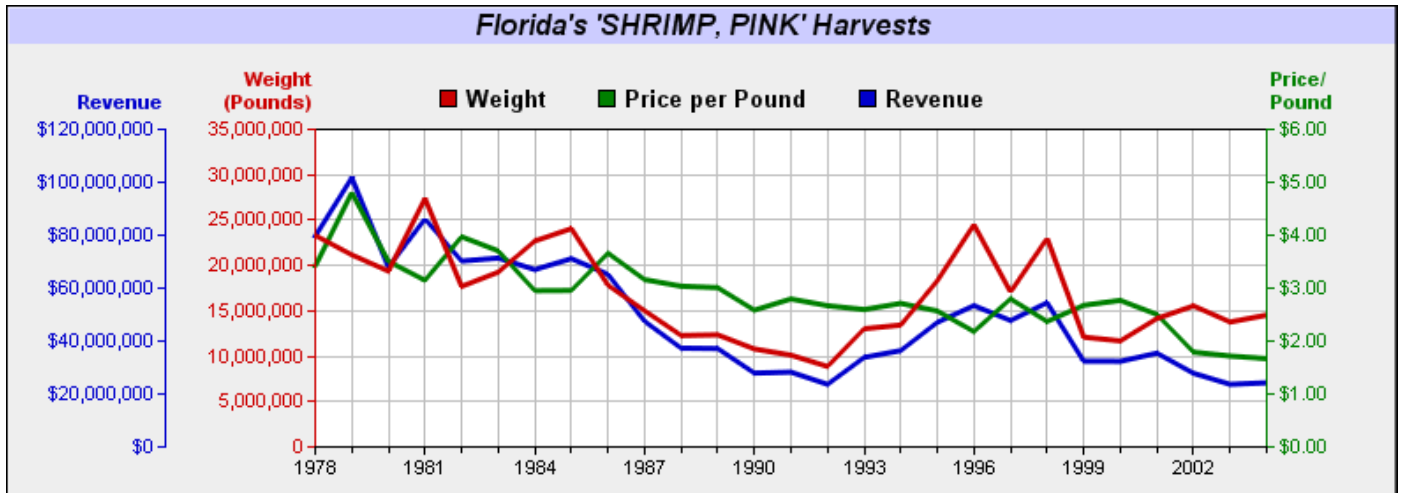
Figure 3.9: Pink Shrimp Fishery History 1950-2004
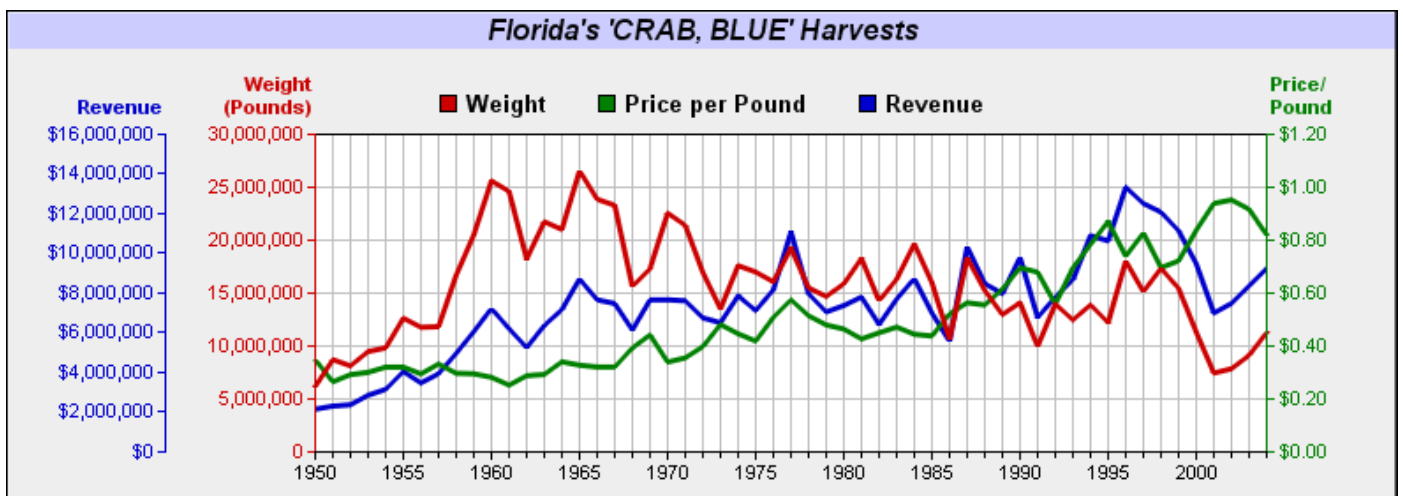
Figure 3.10: Blue Crab Fishery History 1950-2004

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[14] The landed weight is sometimes undervalued, due to disclosure issues forcing omission of some of the catch, causing the calculated price per pound to be inflated.
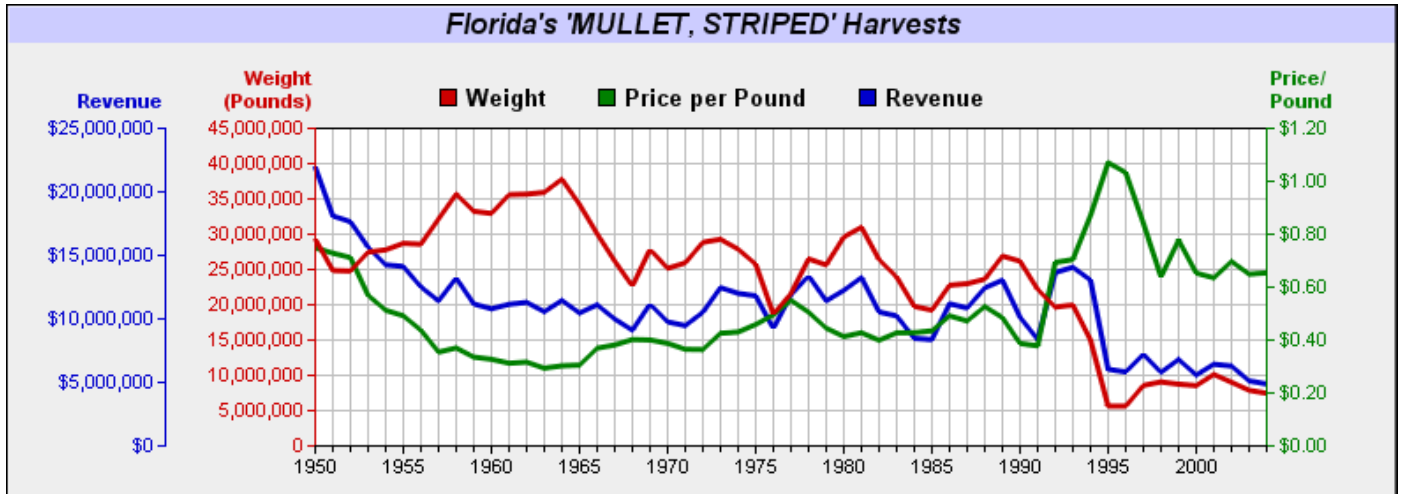
Figure 3.11: Striped Mullet Fishery History 1950-2004
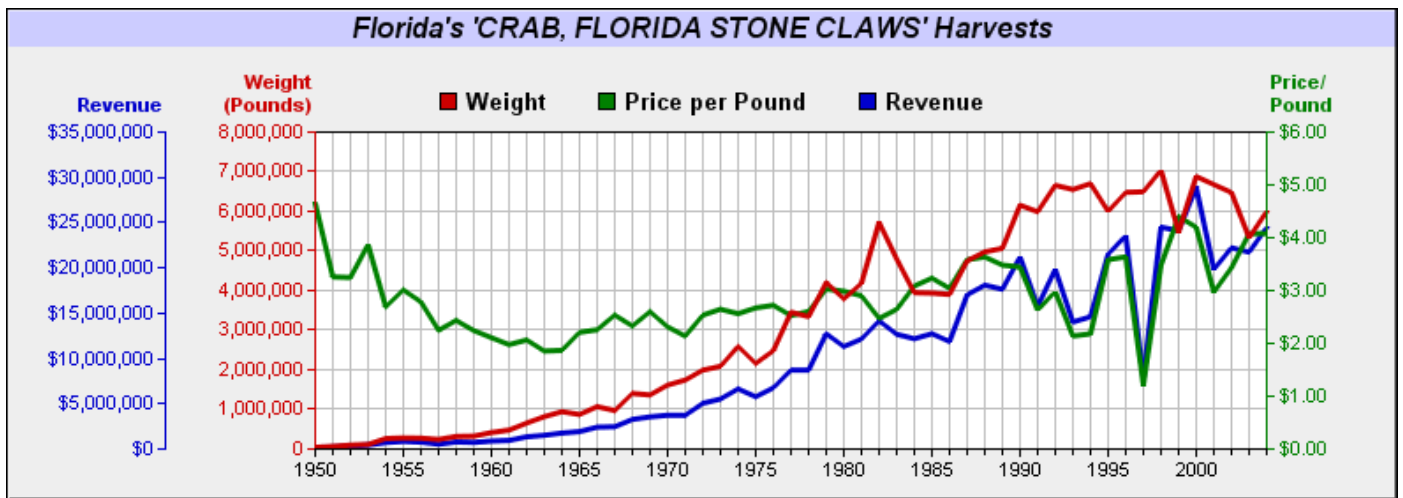
Figure 3.12: Florida Stone Claws Crab Fishery History 1950-2004
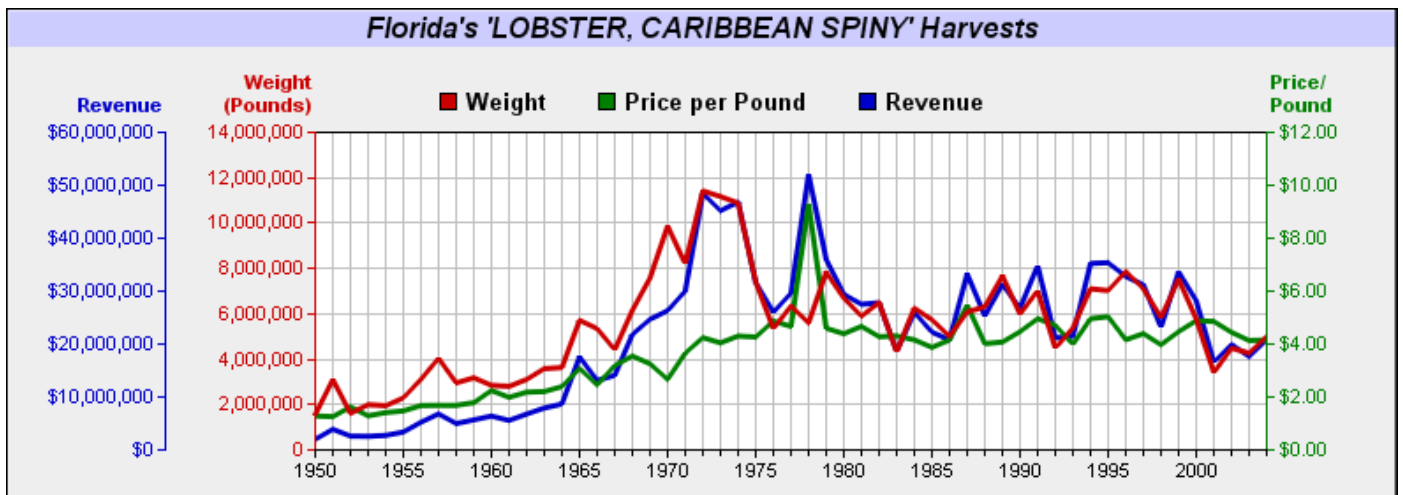
Figure 3.13: Caribbean Spiny Lobster Fishery History 1950-2004

3.2.6 Florida's Commercial Fisheries Imports and Exports

The economic story of Florida's fisheries cannot be told without referring to the enormous contribution of imported fish to its economy, particularly do to the fish processing industry, which would be insignificant without the imports. The foreign trade of commercial fishery products added $1.45 billion to Florida's economy in 2004 (Table 3.12). Participating in the trade, 111 countries exchanged 315 marine products.

Table 3.12: Florida's Import and Export Summary, 2004

	Imports	Exports
Number of Participating Countries	86	81
Fisheries Products	249	160
Total Kilograms	262955021	11671677
Total Pounds	578501046	25677689
Total Dollars*	$45,637,068	$1,446,630,252
Edible	99%	82%
Not Edible	1%	18%

* Values shown in nominal dollars; Menhaden and Tilapia have been removed.

Table 3.13 shows 82% of Florida's marine resources are imported, while 20% of the resources harvested in Florida are exported to foreign countries.[15] Export of domestic harvested resources only provides 19% of Florida's total commercial fisheries and exports revenue, while only 17% of Florida's marine resource imports are paid for by its total commercial fisheries and exports revenue.

Table 3.13: Florida's Commercial Fisheries, Imports, and Exports, 2004

	Pounds	Value	Cost
Commercial Fisheries	127,281,969	$194,715,986	
Imports	578,501,046		$1,446,630,252
Exports	25,677,689	$45,637,068	
Florida Total	(=C.F. lbs +Imp. lbs) 705,783,015	(=C.F. value +Exp. value) $240,353,054	
Import Percentage	(=Imp. lbs / F.T. lbs) 82%		(=F.T. value / Imp. value) 17%
Export Percentage	(=Exp. lbs / C.F. lbs) 20%	(=Exp. value / F.T. value) 19%	

* Values shown in nominal dollars; Menhaden and Tilapia have been removed.
C.F = Commercial Fisheries, F.T. = Florida Total, Imp. = Import, Exp. = Export

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[15] The import and export values, and therefore the import and export percentages are underestimated in Table 3.13. The import value represents the price actually paid for merchandise sold for exportation to the U.S., excluding U.S. import duties, freight, insurance, and any other charges that occur in transport. The export value represents the value at the port of export, based on the transaction price including inland freight, insurance and other charges that occur while placing the merchandise alongside the carrier. It excludes the cost of loading the merchandise, freight, insurance, and other charges or transportation costs beyond the port of exportation.

The 2004 Florida top ten imported marine products represent 152 million pounds, 26% of total imported mass, and account for $802 million, 55% of total import costs, as shown in Table 3.14.

Table 3.14: Florida's Top Ten Marine Import Products, 2004

Rank	Product	Weight (kg)	Dollars	Product	Rank
	2004				
1	SALMON ATLANTIC FILLET FRESH FARMED	59,113,812	$267,207,154	SALMON ATLANTIC FILLET FRESH FARMED	1
2	SHRIMP PEELED FROZEN	22,689,232	$138,853,889	LOBSTER ROCK FROZEN	2
3	TUNA NSPF IN ATC (OTHER) NOT IN OIL OVER QUOTA**	14,738,089	$123,108,116	SHRIMP PEELED FROZEN	3
4	SNAPPER (LUTJANIDAE SPP.) FRESH	9,404,726	$45,367,381	TUNA YELLOWFIN FRESH	4
5	MARINE FISH NSPF FRESH	8,901,621	$42,341,813	SHRIMP SHELL-ON FROZEN 31/40	5
6	MARINE FISH NSPF FILLET FROZEN	8,427,336	$41,754,325	SALMON ATLANTIC FILLET FROZEN	6
7	SALMON ATLANTIC FILLET FROZEN	7,986,860	$39,252,233	MARINE FISH NSPF FRESH	7
8	SHRIMP SHELL-ON FROZEN 31/40	7,363,913	$35,385,532	SNAPPER (LUTJANIDAE SPP.) FRESH	8
9	TUNA YELLOWFIN FRESH	6,933,410	$34,467,233	SHRIMP SHELL-ON FROZEN 41/50	9
10	SHRIMP SHELL-ON FROZEN 41/50	6,468,608	$34,132,655	MARINE FISH NSPF FILLET FROZEN	10
	IMPORT MASS	152,027,607	$801,870,331	IMPORT VALUE	

* Values shown in nominal dollars; Menhaden and Tilapia have been removed.
** NSPF: Not specifically provided for.

The 2004 Florida top ten exported marine products represent 6 million pounds, 24% of total exported mass, and account for $22 million, 48% of total export value (Table 3.15).

Table 3.15: Florida's Top Ten Marine Export Products, 2004

Rank	Product	Weight (kg)	Dollars	Product	Rank
	2004				
1	FISH,SHELLFISH MEAL UNFIT FOR HUMAN CONSUMPTION	1,449,000	$4,422,287	FISH NSPF FILLET FROZEN	1
2	FISH NSPF FILLET FROZEN	1,042,394	$3,297,927	LOBSTER (HOMARUS SPP.) FROZEN	2
3	FISH NSPF FROZEN	813,147	$2,095,274	SHRIMP: LIVE/FRESH/DRIED/ SALTED/BRINE	3
4	SQUID NSPF FILLET FROZEN	633,763	$2,035,415	SHRIMP PEELED FROZEN	4
5	TUNA NSPF PREPARED/PRESERVED	532,840	$1,980,176	FISH NSPF FROZEN	5
6	MULLET FROZEN	450,854	$1,905,961	LOBSTER ROCK FROZEN	6
7	SOUPS, BROTHS BASED ON FISH OR OTHER SEAFOOD	373,143	$1,805,127	THICKENERS DERIVED FROM VEGETABLE PRODUCTS (KELP)	7
8	SHRIMP PEELED FROZEN	320,840	$1,690,066	LOBSTR NSPF PRODUCTS PREPARED DINNERS CONTAINING FISH	8
9	LOBSTER (HOMARUS SPP.) FROZEN	260,685	$1,377,391	LOBSTER NSPF OTHER PREPARATIONS	9
10	SALMON NSPF CANNED NOT IN OIL	254,413	$1,291,382	TUNA NSPF PREPARED/PRESERVED	10
	EXPORT MASS	**6,131,079**	**$21,901,006**	**EXPORT VALUE**	

* Values shown in nominal dollars; Menhaden and Tilapia have been removed.

3.2.7   Recreational and Sport Fishing

Recreational and Sport fishing in Florida is already included in the Tourism & Recreation and Ship and Boat Building sectors. However, it is not well covered through the national data sets used, and is not easily broken out of those values. We discuss Recreational and Sport fishing in this chapter because of the competitive nature of sport and commercial fishing for popularly sought after species.

Recreational and Sport fishing is an important industry in the Living Resources sector and merits separate consideration for readers to understand more fully the contribution to the Florida economy. While a detailed assessment of Florida's Sport/Recreational fishing industry is not included in this phase of the study, it is estimated that millions of anglers spend billions of dollars supporting thousands of American jobs in communities from coast to coast. America's anglers spend $41.5 billion in retail sales and generate $116 billion in economic benefits for the nation each year.[16] As one of the top states in the

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[16] The American Sportfishing Association, May 2006

nation for saltwater anglers, Florida receives tremendous economic gains from recreational fishing.

Chapter 6 of this report provides additional information on the recreational fishing industry as reported through Non-Market values. Those estimates do not include the larger Sport and Charter boat industry.

3.2.8 Fisheries Conclusion

Living Resources contribute to the Florida economy through a range of activities. Commercial Fish Harvesting, Seafood Processing, Fish Hatcheries and Aquaculture, Fish Markets, and Recreational and Sport Fishing represent a major source of revenue to the Florida economy. Fish Harvesting has suffered major declines over the past several decades. On the other hand, the extensive seafood imports to Florida help sustain the Seafood Market and Seafood Processing industries. While there is not the evidence to indicate the loss in number of fishermen, nor in wages, the steep decline in catch, limitations on fishing, and loss of species has probably affected both the social and economic fabric of the coastal communities traditionally dependent on fishing. Estimates of the real value of the commercial fisheries sector are incomplete and under-estimated because of the lack of fishermen employment and wage data, and will not become an accurate part of the record until government requires regular and standard reporting of such information from fishermen.

3.3 OCEAN MINERALS

The Offshore Ocean Minerals sector is dominated by a small hard minerals industry producing sand and gravel as well as limestone. Florida does not have any offshore oil and gas production, only exploration. A Federal Outer Continental Shelf (OCS) moratorium on drilling[17] prevents that activity off of Florida's Gulf coast until 2012. Additionally, for those tracts already leased, Florida and the Federal Government[18] are scheduled to buy back nine of the eleven undeveloped federal leases off the Gulf coast of Florida.

Table 3.16 shows the 2003 contribution to the Florida's economy by the Ocean Minerals sector. It includes indirect and induced effects derived from additional demand from ocean minerals industries to other industries in the State.

Table 3.16: Contribution of Ocean Minerals to Florida's Economy, 2003

	Direct	Indirect & Induced	Total
Employment	431	780	1,211
Wages	$13,938,188	$71,119,604	$85,057,792
GSP	$28,282,100	$48,523,599	$76,805,699

Note: Includes Limestone Sand & Gravel and Oil & Gas Exploration and Production.

Table 3.17 provides data on employment, wages, and GSP in the Ocean Minerals sector for the years 1990 and 2003. Sectoral output in 2003 was 14% lower than in 1990.

Table 3.17: Employment, Wages, and GSP Changes in Ocean Minerals Sector 1990-2003

Industry	Employment			Wages ($Millions)			GSP ($Millions)		
	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change
Oil & Gas Exploration and Production	N/A	388	N/A	N/A	$11.9	N/A	N/A	$22.5	N/A
Limestone, Sand & Gravel	N/A	43	N/A	N/A	$2.1	N/A	N/A	$5.8	N/A
Ocean Minerals Sector Total*	**473**	**431**	**-8.9%**	**$14.6**	**$13.9**	**-4.4%**	**$32.9**	**$28.3**	**-14.1%**

*Total includes suppressions

Figure 3.14 describes changes in Ocean Minerals employment, wages, and GSP for three periods: 1990-2000; 2000 and 2003; and 1990-2003. Figure 3.15 shows annual employment, wages, and GSP data from 1990 through 2003. Employment increased by

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[17] Executive Order, President William Clinton, 1998.
[18] The Jeb Bush/George Bush "Compromise" Agreement of 2002, Deferring Offshore Drilling off of the Florida Panhandle for Ten Years (until 2012).

62% from 1990 to 2000, and by 87% between 1990 and 2001, but halved between 2002 and 2003. As a result, the 2003 employment level was almost 9% lower than in 1990. Wages followed a similar path, ending up being about 4.4% lower than in 1990. Similarly, GSP increased from 1990 to 2001, but this increase was completely offset by a decrease in the 2002-2003, ending up in 2003 about 14.1% lower than in 1990. This indicates that there was little change in productivity in this sector.

	1990-2000	2000-2003	1990-2003
☐ Employment	61.7%	-43.7%	-8.9%
■ Wages	69.4%	-43.6%	-4.4%
☐ GSP	52.5%	-43.7%	-14.1%
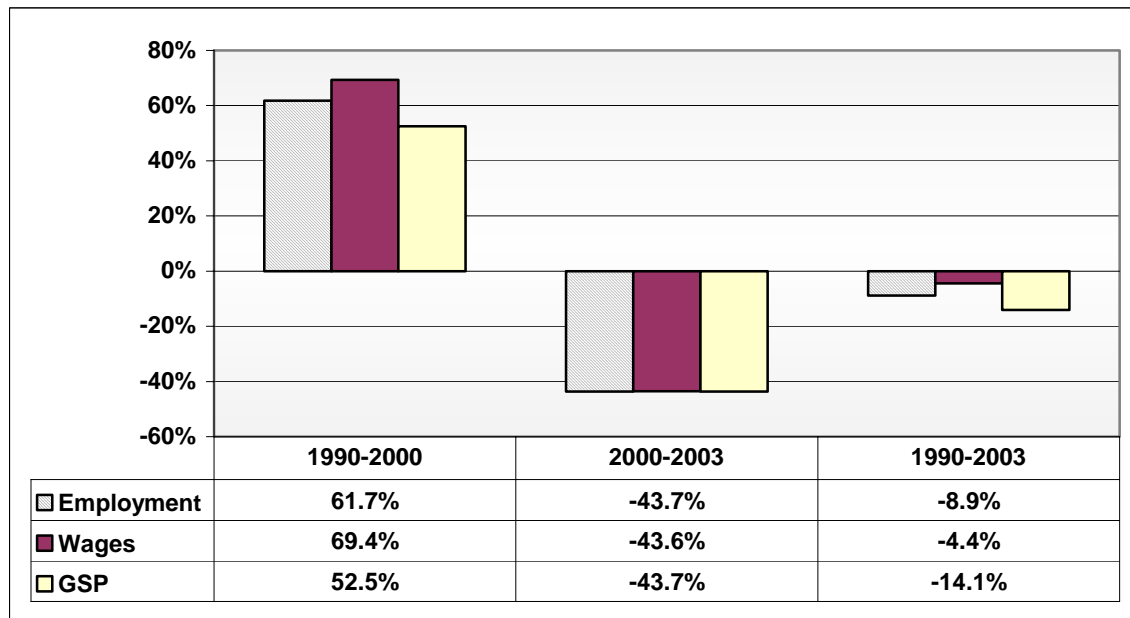
Figure 3.14: Changes in Ocean Minerals Sector 1990-2003

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Employment	473	352	471	553	530	610	550	665	713	743	765	885	493	431
Wages	$15	$9	$14	$18	$16	$19	$17	$21	$23	$24	$25	$30	$15	$14
GSP	$33	$25	$38	$60	$65	$55	$43	$61	$52	$58	$50	$58	$30	$28
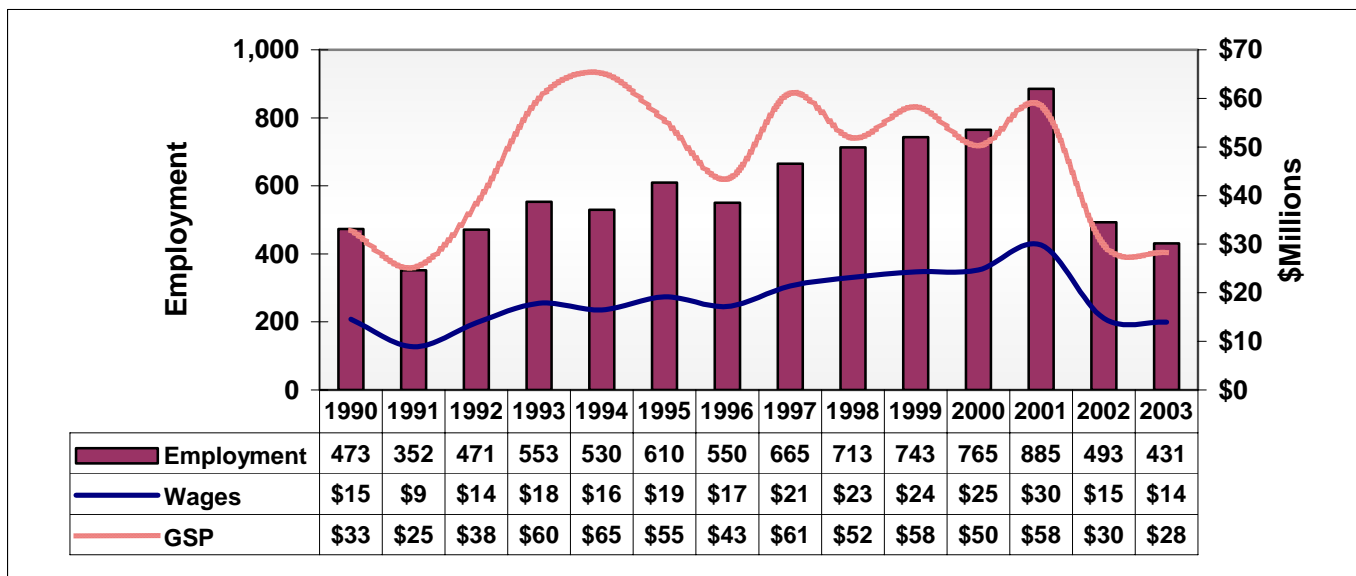
Figure 3.15: Ocean Minerals Resources History 1990-2003

3.4 MARINE TRANSPORTATION

The Marine Transportation contributions to the economy in 2003 are shown in Tables 3.18 and 3.19. Table 3.18 shows the total contribution of the sector, including direct, indirect and induced effects generated by the production processes of the industries included in the Marine Transportation sector. Table 3.19 displays the contribution of the sector's industries. The largest contributor to the GSP of the Marine Transportation sector is the Search and Navigation Equipment industry (generating more than 40% of the sectoral output). The second largest industry is Marine Passenger Transportation (contributing 28% to sectoral output).

Table 3.18: Contribution of Marine Transportation to Florida's Economy, 2003

	Direct	**Indirect & Induced**	**Total**
Employment	27,666	92,844	120,510
Wages	$1,216,096,040	$3,140,057,063	$4,356,177,626
GSP	$2,955,167,500	$5,754,302,156	$8,709,469,656

Table 3.19: Employment, Wages, and GSP in Marine Transportation, 2003

Industry	**Employment**	**Wages**	**GSP**
Deep Sea Freight Transportation	2,711	$151,507,408	$371,026,900
Marine Passenger Transportation	8,029	$340,196,528	$833,108,200
Marine Transportation Services	7,757	$261,548,261	$487,366,700
Search and Navigation Equipment	8,073	$425,314,807	$1,194,829,300
Warehousing	1,096	$37,529,036	$68,836,500
Marine Transportation Industries Total	**27,666**	**$1,216,096,040**	**$2,955,167,500**

Table 3.20 compares 1990-2003 employment, wage, and GSP data for the industries in the Marine Transportation sector. In 2003, GSP in the Marine Transportation sector was more than 80% higher than in 1990. However, employment in 2003 was 6% lower than in 1990. This suggests that this sector experienced a significant increase in productivity as measured by the contribution of labor to output. Major contributors to the increase in sectoral GSP were Marine Passenger Transportation and Deep Sea Freight Transportation. Output in these industries increased by 279% and 169% respectively. These sectors also experienced significant increases in employment. Employment almost doubled in the Marine Passenger Transportation industry and grew by 52% in the Deep Sea Freight Transportation sector.

Table 3.20: Employment, Wages, and GSP Changes in the Marine Transportation Sector, 1990-2003

Industry	Employment			Wages ($Millions)			GSP ($Millions)		
	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change
Deep Sea Freight Transportation	1,788	2,711	51.6%	$89.3	$151.5	69.6%	$137.7	$371.0	169.4%
Marine Passenger Transportation	4,092	8,029	96.2%	$141.0	$340.2	141.2%	$219.6	$833.1	279.4%
Marine Transportation Services	7,770	7,757	-0.2%	$225.0	$261.5	16.2%	$355.7	$487.4	37.0%
Search and Navigation Equipment	14,035	8,073	-42.5%	$573.9	$425.3	-25.9%	$854.1	$1,194.8	39.9%
Warehousing	1,667	1,096	-34.3%	$37.2	$37.5	0.9%	$61.1	$68.8	12.7%
Total	**29,351**	**27,666**	**-5.7%**	**$1,066.4**	**$1,216.1**	**14.0%**	**$1,628.2**	**$2,955.2**	**81.5%**

Figure 3.16 displays annual data on employment, wages, and GSP for the Marine Transportation sector. Employment deceased in 1991, and by 2000 remained 4% lower than the 1990 level. Despite a rebound in 2002, employment in 2003 was still 5.7 lower than in 1990. Total wages increase by 14%, but most of the increase took place between 1995 and 2000. Wages per employee increased by 21% between 1990 and 2003.

Marine Transportation GSP increased by 29% between 1990 and 2000, and growth in this sector accelerated as GSP was 41% higher in 2003 than in 2000.

	Deep Sea Freight Transportation	Marine Passenger Transportation	Marine Transportation Services	Search and Navigation Equipment	Warehousing	Sector Total
Employment	51.6%	96.2%	-0.2%	-42.5%	-34.3%	-5.7%
Wages	69.6%	141.2%	16.2%	-25.9%	0.9%	14.0%
GSP	169.4%	279.4%	37.0%	39.9%	12.7%	81.5%
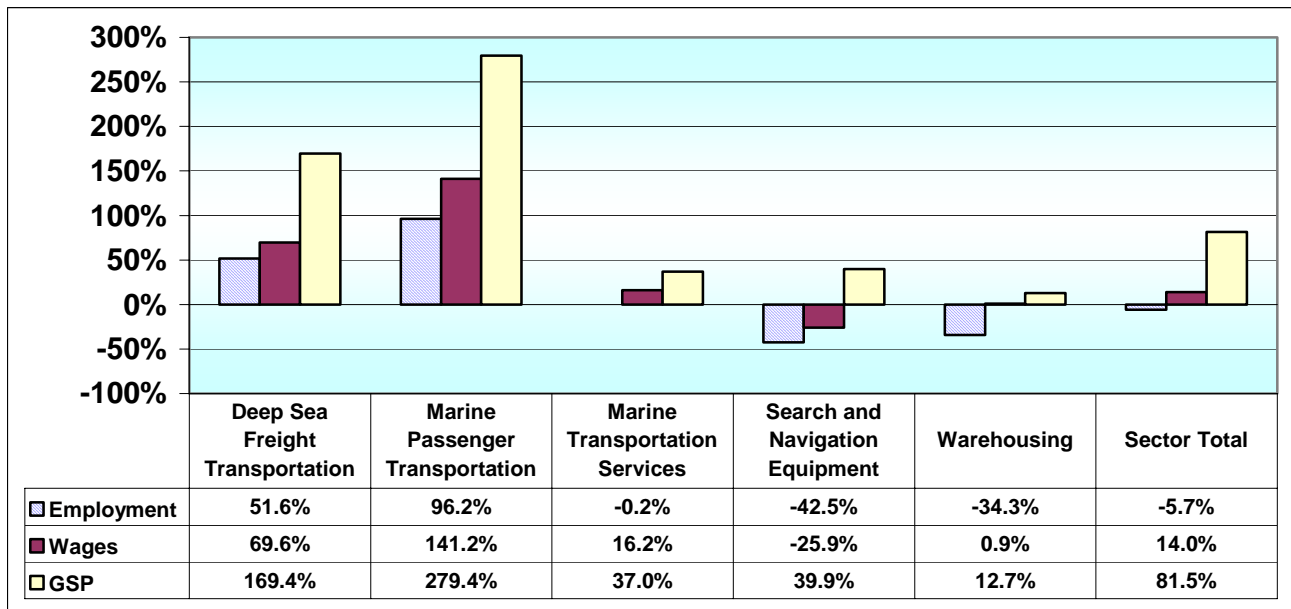
Figure 3.16: Changes in Marine Transportation Industries 1990-2003

Figure 3.17 provides an overview of the thirteen year history showing wages and employment steady and GSP taking off in 2002 possibly as a result of the upturn in the economy and a large increase in cruise industry activity. This also could indicate an increase in productivity with ports and shipping.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Employment	29,351	20,930	21,767	21,545	21,224	21,955	21,996	24,406	26,405	28,031	28,155	25,861	27,649	27,666
Wages	$1,066	$785	$846	$836	$828	$854	$864	$956	$1,114	$1,191	$1,120	$1,089	$1,145	$1,216
GSP	$1,628	$1,696	$1,798	$1,721	$1,699	$1,776	$1,784	$1,685	$1,773	$1,856	$2,099	$2,362	$2,474	$2,955
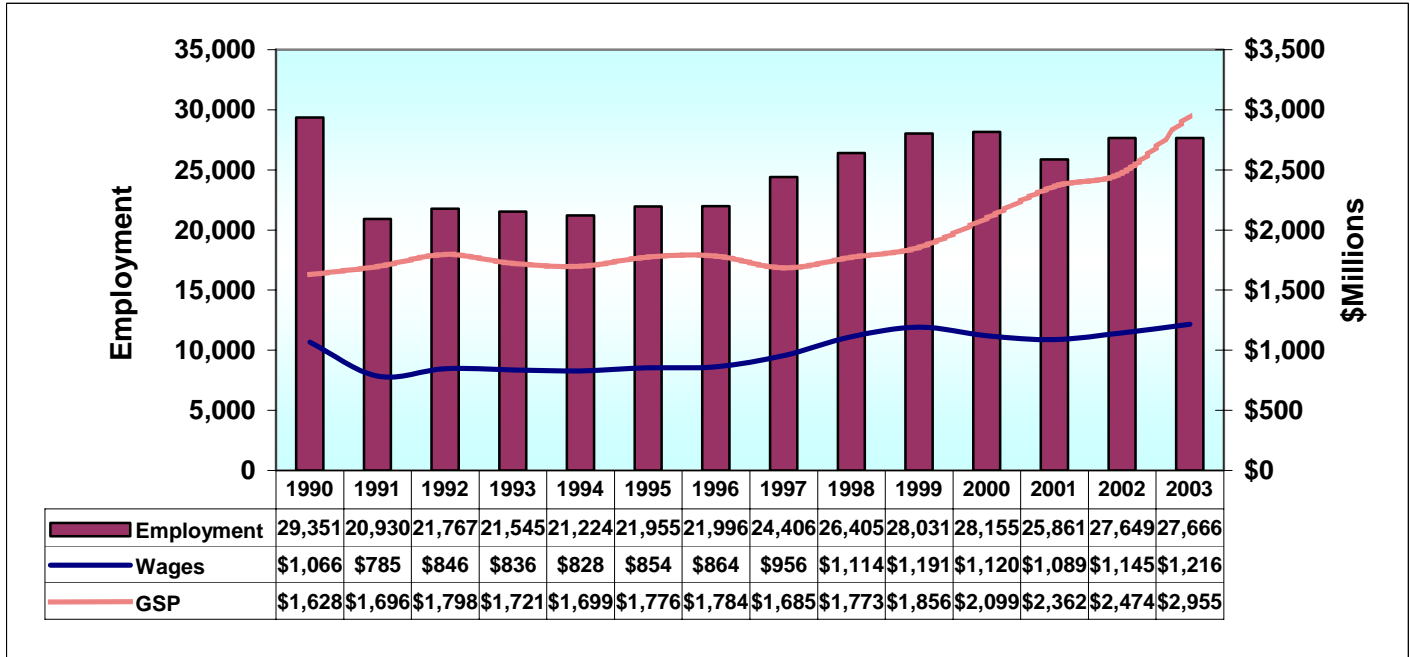
Figure 3.17: Ocean Marine Transportation History, 1990-2003

3.5 MARINE CONSTRUCTION

Employment, wages, and GSP for the Marine Construction sector increased from 1990 to 2000, but decreases from 2000 to 2003 offset these increases. Over the 13 year period Marine Construction declined. The Marine Construction sector contributions to the economy in 2003 are shown in Tables 3.21 and 3.22. Table 3.21 shows the indirect effects generated by the demand of inputs and expenses on other economic sectors. Table 3.22 compares Marine Construction employment, wages, and GSP data for 1990 and 2003. Table 3.23 displays changes in Ocean Marine Construction for the 1990-2003 period.

Table 3.21: Contribution to Florida's Economy by Ocean Construction, 2003

	Direct	Indirect & Induced	Total
Employment	3,588	6,673	10,261
Wages	$134,872,978	$247,815,611	$382,688,589
GSP	$248,112,900	$474,367,054	$722,479,954

Table 3.22: Employment, Wages, and GSP in Construction, 2003

Industry	Employment	Wages	GSP
Marine Construction	3,588	$134,872,978	$248,112,900

Table 3.23: Employment, Wages, and GSP Changes in Ocean Construction Sector 1990-2003

Industry	Employment			Wages ($Millions)			GSP ($Millions)		
	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change
Marine Construction	3,628	3,588	-1.1%	$134	$135	0.6%	284	248	-12.6%

Figure 3.18 shows a 14 year history of employment, wages and GSP in the Marine Construction sector. Employment has fluctuated while wages and GSP have remained relatively stable. This sector is often dependent on government funding and so tends to be more unpredictable and volatile.

Figure 3.18 shows that Marine Construction increased significantly between 1996 and 2000. Between 1991 and 1993 economic activity in this sector was higher than in 1990 and almost comparable to the 1998-2000 levels. Employment decreased sharply in 1991 and increased steadily until 2000. After 2000 employment and wages decreased.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Employment	3,628	2,337	2,260	2,370	2,398	2,710	2,802	3,269	3,849	4,364	4,490	4,172	3,852	3,588
Wages	$134	$97	$88	$92	$93	$100	$110	$122	$152	$160	$166	$159	$136	$135
GSP	$284	$351	$306	$302	$286	$294	$295	$294	$332	$325	$321	$301	$254	$248
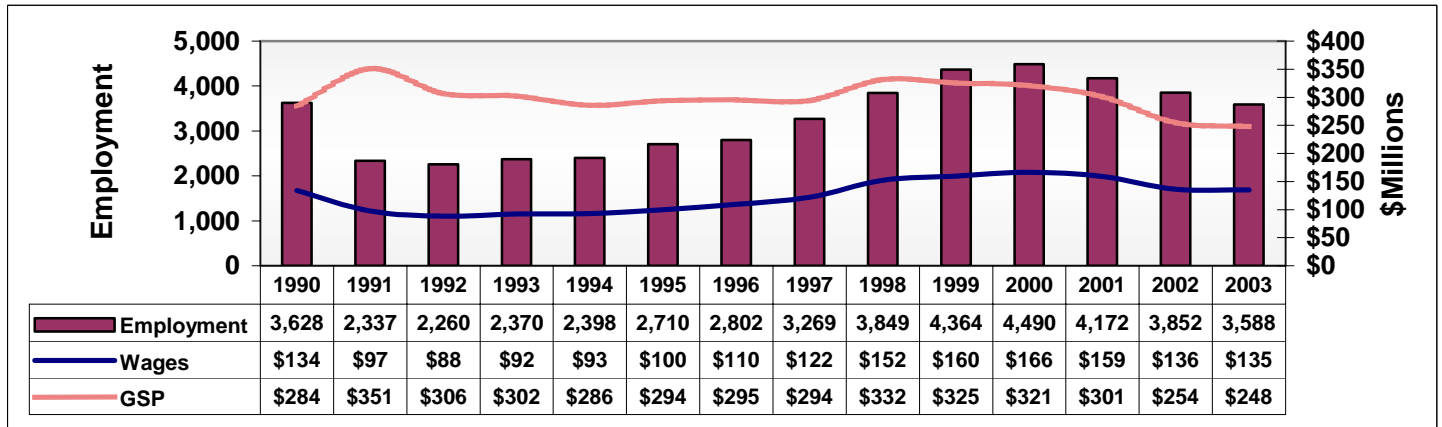
Figure 3.18: Changes in Ocean Marine Construction 1990-2003

3.6 SHIP & BOAT BUILDING

This sector includes at least two diverse sets of activities, government orders for naval ships and private recreation and commercial ship building. Each of these has very different variables affecting their markets.

The Ship & Boat Building sector contributions to the Florida economy in 2003 are shown in Tables 3.24 and 3.25. Table 3.24 shows the direct contribution to employment, wages and GSP by the sector, and the indirect contribution through demand derived effects. Table 3.25 shows the direct contribution in employment, wages and GSP by the industries that make up the Ship & Boat Building sector.

Table 3.24: Contribution to Florida's Economy by Ocean Ship & Boat Building, 2003

	Direct	Indirect & Induced	Total
Employment	11,739	22,177	33,916
Wages	$384,218,945	$650,367,408	$1,034,586,353
GSP	$516,523,300	$858,306,768	$1,374,830,068

Table 3.25: Employment, Wages, and GSP Ship & Boat Building, 2003

Industry	Employment	Wages	GSP
Boat Building & Repair	8,955	$273,218,490	$367,300,200
Ship Building & Repair	2,784	$111,000,455	$149,223,000
Ship & Boat Building Sector Total*	**11,739**	**$384,218,945**	**$516,523,300**

*Total includes suppressions

Table 3.26 displays employment, wages, and GSP data for 1990 and 2003, by Ship Building & Repair industry   The Ship & Boat Building sector GSP was 9% lower in 2003 compared to 1990, driven by a decrease in Boat Building and Repair and almost no growth in Ship Building & Repair activities. Figure 3.19 illustrates this point. Figure 3.20 shows annual employment, wages, and GSP data from 1990 through 2003, for the Ship & Boat Building Industry.

Table 3.26: Employment, Wages, and GSP Changes in Ocean Ship & Boat Building Sector 1990-2003

Industry	Employment			Wages			GSP		
	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change
Boat Building & Repair	9,842	8,955	-9.0%	$295.1	$273.2	-7.4%	$421.4	$367.3	-12.8%
Ship Building & Repair	2,690	2,784	3.5%	$100.5	$111.0	10.5%	$146.0	$149.2	2.2%
Total	**12,532**	**11,739**	**-6.3%**	**$395.5**	**$384.2**	**-2.9%**	**$567.4**	**$516.5**	**-9.0%**

	Boat Building & Repair	Ship Building & Repair	Ship & Boat Total
☐ Employment	-9.0%	3.5%	-6.3%
■ Wages	-7.4%	10.5%	-2.9%
☐ GSP	-12.8%	2.2%	-9.0%
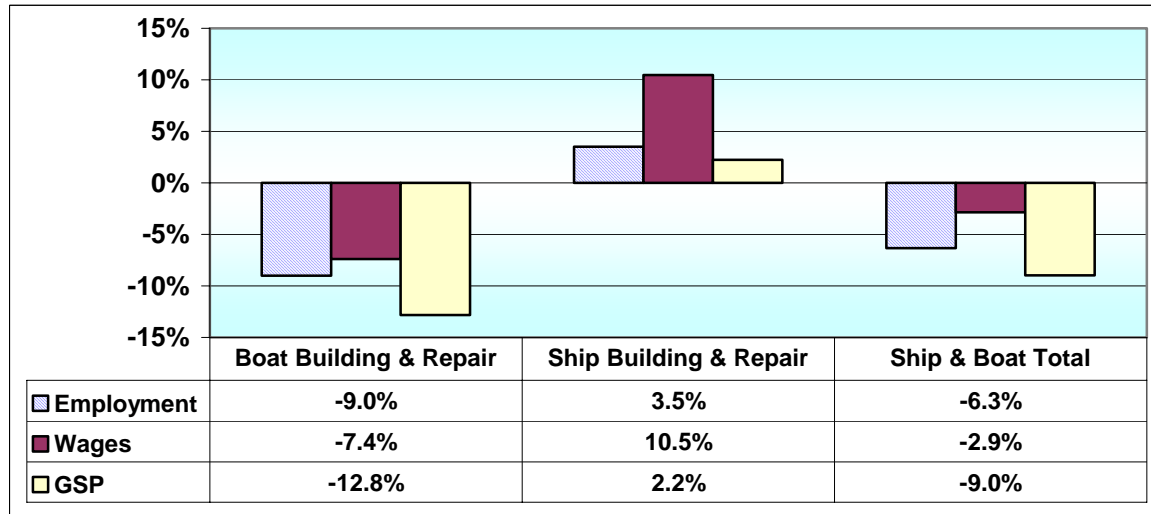
Figure 3.19: Changes in Ocean Ship & Boat Building Sector 1990-2003

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Employment	12,532	6,920	7,155	8,192	9,223	9,266	10,895	11,958	12,601	14,975	16,337	13,372	12,333	11,739
Wages	$396	$221	$220	$252	$275	$274	$318	$355	$394	$464	$507	$409	$393	$384
GSP	$567	$382	$371	$436	$463	$581	$606	$1,066	$956	$960	$1,139	$551	$589	$517
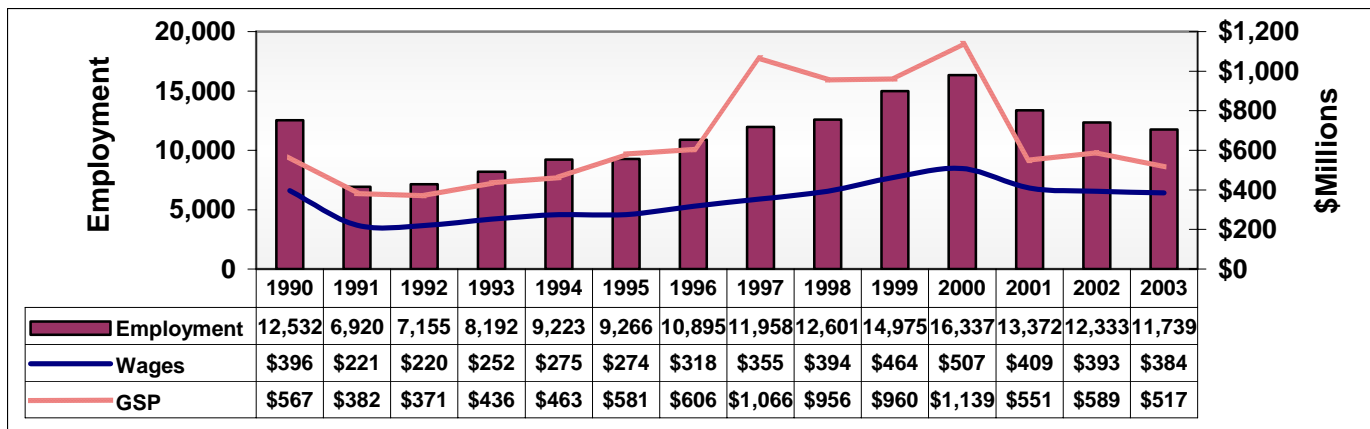
Figure 3.20: Ship & Boat Building Sector History 1990-2003

In 2003 employment was 6% lower than in 1990. Employment fell sharply in 1991. This marked the end of the Reagan naval ship building program, as well as the bottom end of a business cycle. In 2000 employment peaked reaching a 30% higher level than in 1990. This increase was completely offset by decreases experienced in the 2001 and 2003 period. Wages were also slightly lower in 2003 compared to 1990, but the average wage by employee was slightly higher. GSP followed a similar pattern. In 2000 GSP in the Ship & Boat Building and Repair sector doubled its 1990 level. This was attributable to recreational and fishing boat orders instead of the more traditional naval ship building programs. However, starting 2001, GSP decreased sharply, falling by 5.4% from its 1990 level, most likely a reflection of the overall US economy at that time.

3.7 TOURISM & RECREATION

The Tourism & Recreation sector contributions to the economy in 2003 are shown in Tables 3.27 and 3.28. Table 3.27 shows the direct and indirect contribution of the sector to the Florida's Economy. Table 3.28 shows the contribution of the industries included in Tourism & Recreation. The two industries that contribute the largest share of GSP are Hotels & Lodging and Eating & Drinking places.

Table 3.27: Contribution to Florida's Economy by Ocean Tourism & Recreation, 2003

	Direct	Indirect & Induced	Total
Employment	248,609	344,323	768,157
Wages	$3,896,076,532	$6,283,981,839	$11,725,994,387
GSP	$8,860,635,800	$24,209,915,196	$26,918,323,016

Table 3.28: Employment, Wages, and GSP in Tourism & Recreation, 2003

Industry	Employment	Wages	GSP
Amusement & Recreation Services	4,862	$86,861,922	$775,517,000
Boat Dealers	3,851	$124,057,429	$290,921,600
Eating & Drinking Places	167,014	$2,199,802,330	$3,937,389,200
Hotels & Lodging Places	65,687	$1,327,358,726	$3,514,837,500
Marinas	3,202	$72,871,814	$160,972,300
Recreational Vehicles Parks & Campsites	1,031	$18,003,705	$47,673,700
Scenic Water Tours	1,333	$25,697,900	$47,885,200
Sporting Goods	662	$19,619,260	$46,713,400
Zoos, Aquaria	968	$21,803,445	$38,725,900
Tourism & Recreation Sector Total*	**248,609**	**$3,896,076,532**	**$8,860,635,800**

*Total includes suppressions

Table 3.29 compares 1990 and 2003 employment, wages, and GSP data by industry in the Tourism & Recreation Sector, and Figure 3.21 displays 1990-2003 changes in these economic indicators.   Between 1990 and 2003, GSP in the ocean Tourism & Recreation sector almost doubled and employment increased by 56%. Employment growth was the strongest in the Amusement & Recreation Services (80%) and Boat Dealers, and Eating & Drinking Places (75%). Wages also grew between 88% and 98% in these same three industries, as well as in the Sporting Goods industry. The Tourism & Recreation Sector GSP increase was largely attributable to the Amusement & Recreation Services Industry (increasing by more than 650%).   Boat Dealers and Sporting Goods and Eating and Drinking Places also had over 100% increases in GSP.

Table 3.29: Changes in Employment, Wages, and GSP in Ocean Tourism & Recreation Sector 1990-2003

Industry	Employment			Wages ($Millions)			GSP ($Millions)		
	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change
Amusement & Recreation Services	2,704	4,862	79.8%	$43.8	$86.9	98.3%	$103.2	$775.5	651.5%
Boat Dealers	2,208	3,851	74.4%	$63.4	$124.1	95.8%	$104.1	$290.9	179.5%
Eating & Drinking Places	95,703	167,014	74.5%	$1,172.5	$2,199.8	87.6%	$1,925.6	$3,937.4	104.5%
Hotels & Lodging Places	53,130	65,687	23.6%	$874.0	$1,327.4	51.9%	$2,271.2	$3,514.8	54.8%
Marinas	2,686	3,202	19.2%	$66.4	$72.9	9.8%	$108.4	$161.0	48.5%
Recreational Vehicles Parks & Campsites	811	1,031	27.1%	$14.4	$18.0	25.4%	$55.4	$47.7	-14.0%
Scenic Water Tours	888	1,333	50.1%	$17.3	$25.7	48.1%	$37.5	$47.9	27.8%
Sporting Goods	527	662	25.6%	$10.4	$19.6	88.2%	$19.6	$46.7	138.8%
Zoos, Aquaria	929	968	4.2%	$16.7	$21.8	30.6%	$33.7	$38.7	14.9%
Total	**159,585**	**248,609**	**55.8%**	**$2,278.9**	**$3,896.1**	**71.0%**	**$4,658.6**	**$8,860.6**	**90.2%**

	Amusement and	Boat Dealers	Eating & Drinking	Hotels & Lodging	Marinas	Recreational Vehicle	Scenic Water	Sporting Goods	Zoos, Aquaria	Tourism & Recreation
Employment	79.8%	74.4%	74.5%	23.6%	19.2%	27.1%	50.1%	25.6%	4.2%	55.8%
Wages	98.3%	95.8%	87.6%	51.9%	9.8%	25.4%	48.1%	88.2%	30.6%	71.0%
GSP	651.5%	179.5%	104.5%	54.8%	48.5%	-14.0%	27.8%	138.8%	14.9%	90.2%
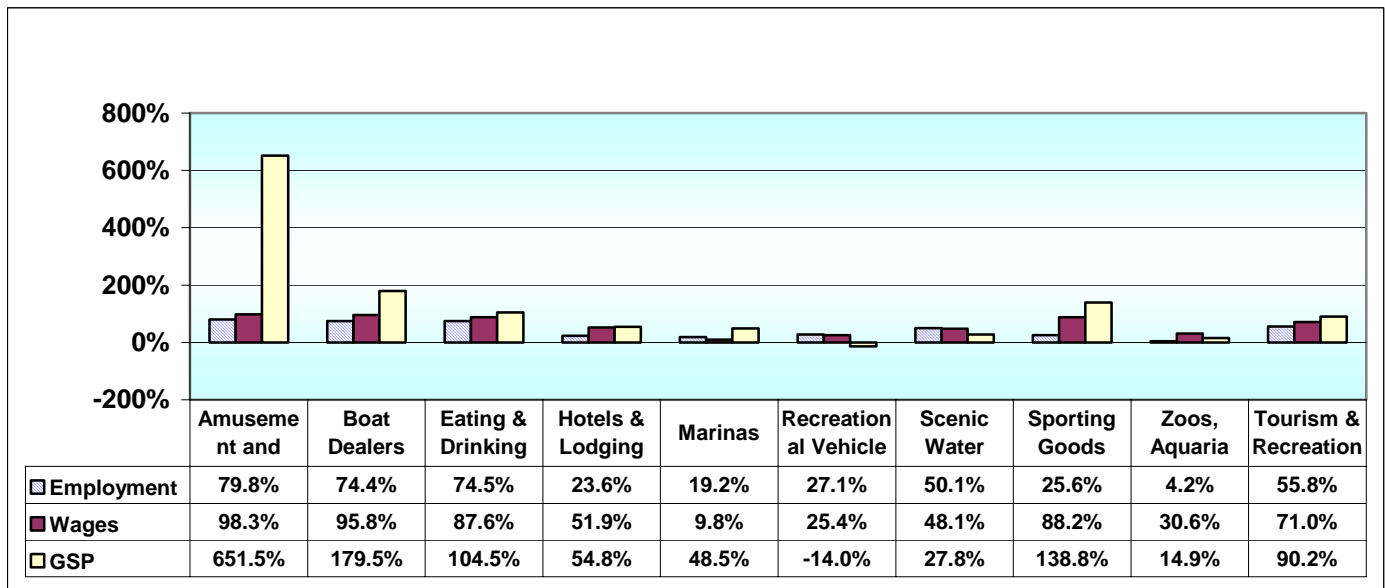
Figure 3.21: Changes in Ocean Tourism & Recreation Industries 1990-2003

Figure 3.22 shows annual data for the Tourism and Recreation sector from 1990 through 2003. From 1990 through 2003 GSP in this sector almost doubled. It increased by 60% between 1991 and 2000 and by 10% between 2000 and 2003, mostly due to significant increases during the last two years of this period. The average wage per employee was only 10% higher in 2003 compared to 1990. After a fall of more than 40% between 1990 and 1991, employment increased by 139% between 1991 and 2000 to end up in 2003 at a 56% higher level than in 1990.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Employment	212,403	127,205	141,635	161,387	174,391	187,929	213,706	236,312	260,838	278,532	278,587	281,824	292,571	296,442
Wages	$4,023	$2,533	$2,898	$3,046	$3,218	$3,441	$3,876	$4,343	$5,025	$5,421	$5,394	$5,363	$5,598	$5,762
GSP	$7,506	$7,702	$8,421	$8,304	$8,290	$8,941	$9,700	$11,312	$11,220	$11,703	$12,107	$11,705	$12,326	$13,035
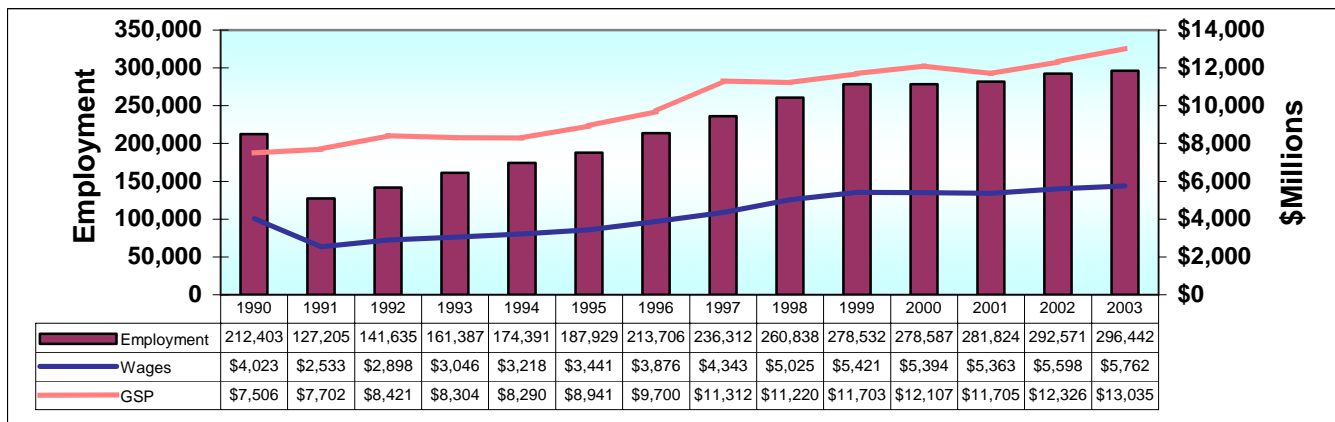
Figure 3.22: Changes in Ocean Tourism & Recreation Sector 1990-2003

Figure 3.22 provides a clear picture of steady growth in the Tourism & Recreation sector in employment and GSP for Florida. However wages have not climbed in proportion to value growth in the sector. Employment in this sector is difficult to estimate because the BLS numbers do not represent full time positions. Hence, the actual number of jobs could be inflated by people holding part-time or several part-time jobs, particularly in the lodging and restaurant industries. Wages may be understated here as well because jobs in the largest industries of lodging and restaurants include tips, a portion of which are not included in these numbers. Nevertheless, this sector dominates all other Ocean Economy sectors and deserves much closer scrutiny as it expands into the future according to our forecasts.

3.8 OCEAN ECONOMY: COMPARISONS WITH THE NATION

- Florida's share of the national Ocean Economy is almost twice its share of the total U.S. economy.

The nationally consistent measurements of the Ocean Economy, which have been developed by the NOEP, allow comparisons of Florida's Ocean Economy with other states and the nation.[19] Florida's contribution to the national Ocean Economy was almost double its contribution to the US. Economy. In 2003, Florida made up 11.6% of the U.S. Ocean Economy as measured by GSP, and over 13 % of employment (Table 3.30). During that same year, Florida had 6% of U.S. GSP and 7% of all U.S. employment. A major reason for its strong contribution to the U.S. Ocean Economy was the strength in Florida's Tourism & Recreation sector that contributed 16% to the national Tourism & Recreation sector.

Table 3.30: Florida's Share in the U.S. Ocean Economy GSP, 2003

Florida's Share in the U.S. Ocean Economy 2003			
	Employment	**Wages**	**GSP**
Total Ocean Economy	13.6%	10.7%	11.6%
Construction	12.1%	10.1%	10.0%
Living Resources	7.0%	6.9%	9.3%
Minerals	1.5%	0.7%	0.2%
Ship & Boat Building	7.6%	5.9%	5.8%
Tourism & Recreation	15.3%	14.7%	16.0%
Transportation	10.0%	7.6%	11.1%

Figures 3.23 and 3.24 display the 2003 distribution of employment and GSP in Florida and the U.S. Compared to the U.S., Florida has a significantly larger share of the Ocean Economy employment and GSP in the Tourism & Recreation sector.

	Construction	Living Resources	Minerals	Ship & Boat Bulding	Tourism & Recreation	Transportation
Florida	1.9%	3.3%	0.2%	4.0%	68.0%	22.7%
U.S.	2.2%	4.1%	12.8%	8.0%	49.3%	23.6%
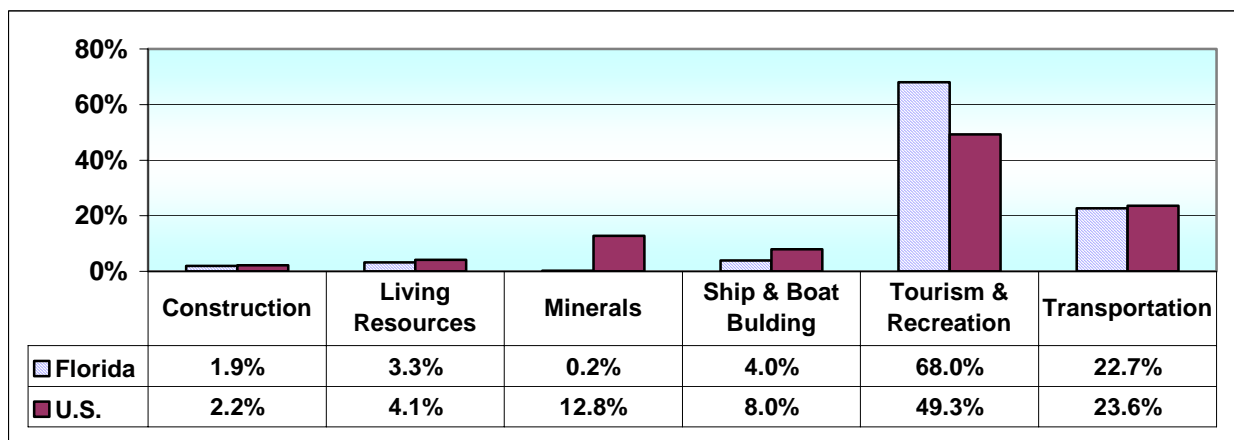
Figure 3.23: GSP: Florida versus U.S. Ocean Economy, 2003

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[19] All values reported in this part of the study are direct values, unless otherwise noted.

	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation
Florida	1.2%	1.5%	0.1%	4.0%	83.9%	9.3%
U.S.	1.4%	2.9%	1.3%	7.1%	74.7%	12.7%
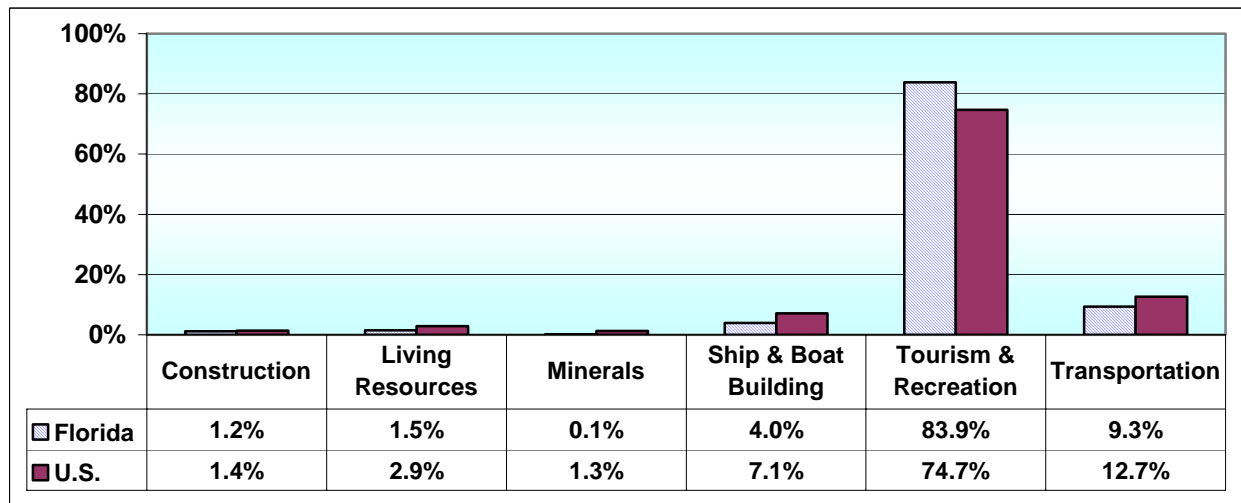
Figure 3.24: Employment: Florida versus U.S. Economy, 2003

3.8.1   Florida's Ocean Economy: Comparisons with Other States

- Florida has one of the largest Ocean Economies in the U.S. Its Ocean Economy GSP and employment ranked 2nd among all coastal states in 2003.

Table 3.31 shows Florida's ranking in 2003 by sector among the 30 coastal and Great Lake states. It ranks second overall in its Ocean Economy among all coastal states in employment and GSP. It is among the top five coastal states in Tourism & Recreation and Transportation.

Table 3.31: Florida Rank Among Coastal States 2003

Florida Rank Among Coastal States 2003			
Sector	**Employment**	**Wages**	**GSP**
Total Ocean Economy	**2**	**3**	**2**
Construction**	15	17	15
Living Resources**	7	7	9
Minerals**	18	18	18
Ship & Boat Building**	7	8	7
Tourism & Recreation	2	3	3
Transportation	2	3	2

**GSP and Employment not available for some states in this industry

Table 3.32: Ocean Economy GSP Rankings of Coastal States 1990 and 2003

Rank	State	1990	2003	State	Rank
1	California	$18,056,771,500	$25,757,525,800	California	1
2	New York	$14,552,714,600	**$13,035,087,800**	**Florida**	**2**
3	Louisiana	$8,226,789,100	$12,923,195,100	New York	3
4	**Florida**	**$7,505,683,300**	$9,576,475,500	Louisiana	4
5	Washington	$6,493,966,900	$7,172,176,200	Washington	5
6	Alaska	$6,389,519,500	$6,506,027,265	Texas	6
7	New Jersey	$3,756,787,700	$5,887,835,200	Alaska	7
8	Texas	$3,595,237,929	$4,941,612,000	New Jersey	8
9	Virginia	$3,210,182,900	$4,741,719,600	Virginia	9
10	Hawaii	$3,102,919,200	$4,440,782,700	Hawaii	10
11	Massachusetts	$2,888,663,650	$3,326,643,189	Massachusetts	11
12	Maryland	$2,704,970,700	$3,182,261,600	Illinois	12
13	Connecticut	$2,547,210,800	$2,517,656,400	Maryland	13
14	Illinois	$2,148,564,500	$2,295,064,400	Connecticut	14
15	Michigan	$1,472,079,000	$1,809,937,300	Maine	15
16	Maine	$1,382,900,200	$1,734,209,100	Michigan	16
17	Wisconsin	$1,177,398,400	$1,588,838,400	South Carolina	17
18	Mississippi	$1,083,033,700	$1,437,373,000	North Carolina	18
19	South Carolina	$1,056,811,300	$1,281,732,400	Rhode Island	19
20	Pennsylvania	$986,122,400	$1,205,391,900	Wisconsin	20

3.8.2   Ocean Economy: Statewide Summaries by Sector

- The direct market value, or GSP, of Florida's Ocean Economy was $13 billion in 2003. Total market value (with multipliers), or GSP in 2003 was $23.2 billion. (See Table 3.34)

- The ocean-related GSP grew by 74% in constant 2000 dollars between 1990 and 2003. (See Table 3.35)

- Florida's Ocean Economy directly provided over 296,000 jobs in 2003, and more than 476,000 jobs when multiplier effects are considered.

- Employment in Florida's Ocean Economy grew faster than the state's overall economy. Wage and salary jobs in the Ocean Economy grew approximately 43.2%, compared with 34% overall growth in jobs in Florida during the period 1990-2003. The increase was almost entirely due to growth in the Tourism & Recreation jobs in the coastal region.

- The coastal-related Tourism & Recreation sector dominated job growth in the Ocean Economy, from 1990 to 2003, while jobs in other ocean-related sectors declined. This trend, which also took place nationally, represents a profound shift

in how the ocean relates to the economy, towards services and away from goods-related economic activity (see Figures3.25 and 3.26); - towards lower paying jobs.

	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation
1990	$284.0	$334.6	$32.9	$567.4	$4,658.6	$1,628.2
2000	$321.0	$468.7	$50.2	$1,138.6	$8,028.6	$2,099.4
2003	$248.1	$426.4	$28.3	$516.5	$8,860.6	$2,955.2
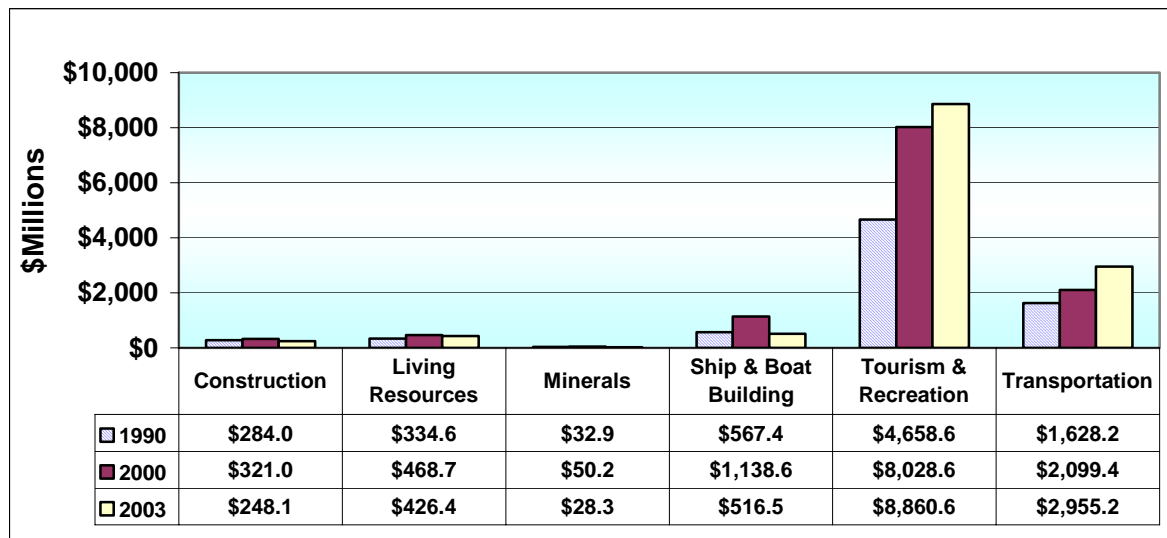
Figure 3.25: Florida Sectoral Comparisons by GSP, 2003

	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation
1990	3,628	6,956	473	12,532	159,585	29,351
2000	4,490	4,514	765	16,337	224,326	28,155
2003	3,588	4,474	431	11,739	248,609	27,666
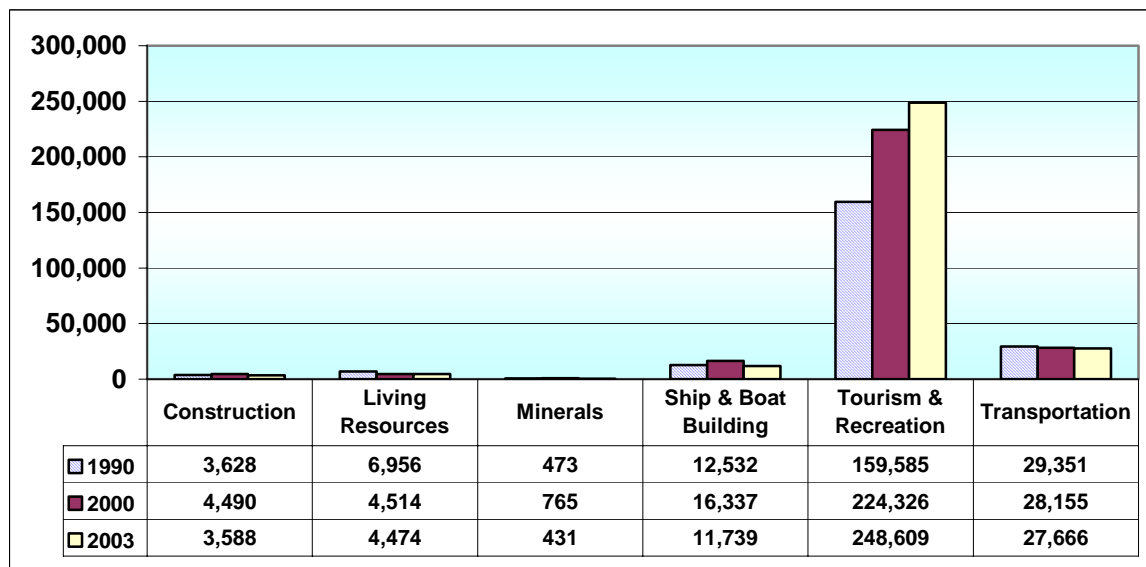
Figure 3.26: Florida Sectoral Comparison by Employment

The Tourism & Recreation sector accounted for the largest proportion of employment and GSP with 84% of the former and 68% of the latter (Figure 3.27).[20]   However, it

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[20] Tourism employment and wage data is possibly inflated due to several factors beyond the scope of this study. 1) Because the data on employment is not necessarily full time jobs, some of the Tourism and Recreation employment jobs may be part-time and some employees may have several jobs. Hence the estimated employment numbers could be overestimates. This sector is the only sector where this probably makes a significant difference; 2) The low average salary for this sector does not taken into consideration tips and other gratuities that are integral to much of the employment in the lodging and eating places that are a large portion of the Tourism and Recreation

represented the lowest average wages and GSP per employee. The Transportation sector is the second largest in terms of employment and GSP, accounting for 9.3% of employment, but almost a quarter of GSP. The Transportation sector represented much higher average wages and the Transportation and the Living Resources sector both contributed much higher GSP per employee. Average wages for the Transportation and the Construction sector were also higher than the average wage for the state economy see Table 3.33).

	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation
Employment	1.2%	1.5%	0.1%	4.0%	83.9%	9.3%
GSP	1.9%	3.3%	0.2%	4.0%	68.0%	22.7%
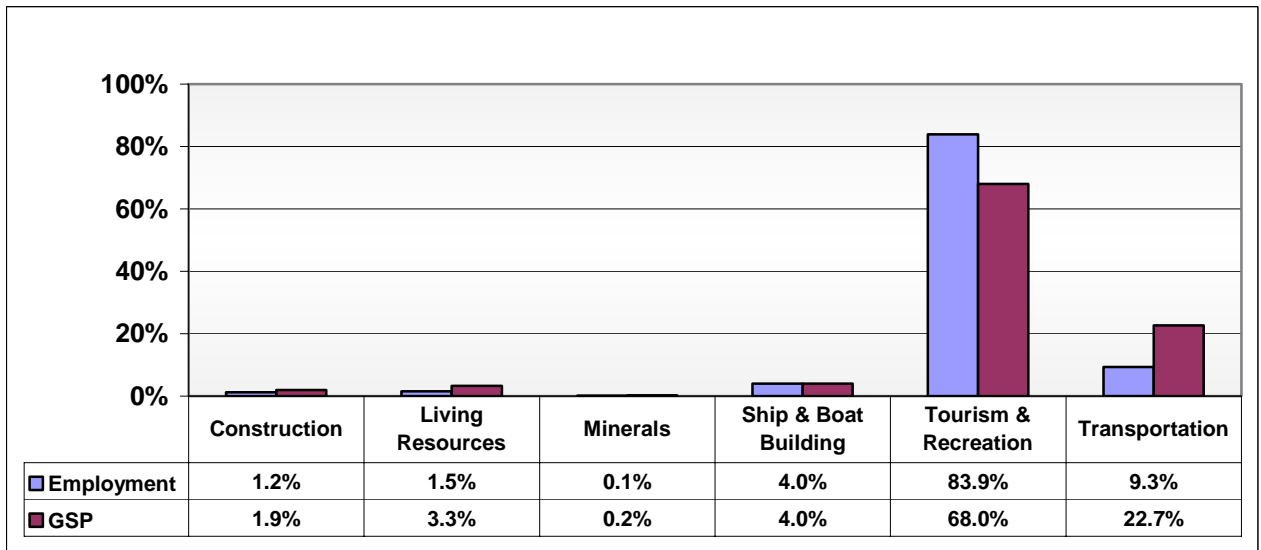
Figure 3.27: Sector Distribution of the Florida Ocean Economy, 2003

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industry. Because these are not included in any methodical way, the average wages may also be understated. Nevertheless, salaries in this sector still fall far below all other Ocean Economy sectors.

Table 3.33: Employment, Wages, and GSP in Florida's Ocean Economy 1990 and 2003

2003					
Sector	**Employment**	**Wages (millions)**	**GSP (millions)**	**Average Wages**	**GSP/ Employee**
Construction	3,588	$134.9	$248.1	$37,590	$69,151
Living Resources	4,474	$116.5	$426.4	$26,048	$95,299
Minerals	431	$13.9	$28.3	$32,339	$65,620
Ship & Boat Building	11,739	$384.2	$516.5	$32,730	$44,001
Tourism & Recreation	248,609	$3,896.1	$8,860.6	$15,672	$35,641
Transportation	27,666	$1,216.1	$2,955.2	$43,956	$106,816
TOTAL	296,442	$5,761.7	$13,035.1	$19,436	$43,972
1990					
Sector	**Employment**	**Wages (millions)**	**GSP (millions)**	**Average Wages**	**GSP/ Employee**
Construction	3,628	$134.0	$284.0	$36,948	$78,289
Living Resources	6,956	$133.5	$334.6	$19,188	$48,099
Minerals	473	$14.6	$32.9	$30,835	$69,627
Ship & Boat Building	12,532	$395.5	$567.4	$31,563	$45,273
Tourism & Recreation	159,585	$2,278.9	$4,658.6	$14,280	$29,192
Transportation	29,351	$1,066.4	$1,628.2	$36,333	$55,473
TOTAL	212,403	$4,023.0	$7,505.7	$18,940	$35,337

3.8.3   Indirect and Induced Estimates of Florida's Ocean Economy

The data presented so far tells only part of the story of the Ocean Economy – the results of economic activity directly related to the ocean. This direct economic activity generates additional economic activity, which occurs in part because ocean-related industries purchase goods and services from other industries (indirect effects), and partly because the income earned in the ocean industries is spent by employees to purchase goods and services from other industries (induced). The multiplier estimates provide a measure of the total economic activity generated within Florida for the use of ocean and coastal resources. Estimates of these effects are show in Table 3.34. The estimates were derived from a detailed analysis of the Ocean Economy industries in each of the coastal regions using IMPLAN, a standard and widely used economic impact model.

Table 3.34: Contribution of Florida's Ocean Economy 2003*

Sector	Direct Employment	Indirect and Induced Employment	Total Employment
Construction	3,588	3,085	6,673
Living Resources	4,474	4,752	9,226
Minerals	431	349	780
Ship & Boat Building	11,739	10,438	22,177
Tourism & Recreation	248,609	95,714	344,323
Transportation	27,666	65,178	92,844
Total Florida	**296,507**	**179,525**	**476,023**

Sector	Direct Wages	Indirect and Induced Wages	Total Wages
Construction	$ 134.9	$ 112.9	$ 247.8
Living Resources	$ 116.5	$ 153.8	$ 270.3
Minerals	$ 13.9	$ 57.2	$ 71.1
Ship & Boat Building	$ 384.2	$ 266.1	$ 650.4
Tourism & Recreation	$ 3,896.1	$ 2,387.9	$ 6,284.0
Transportation	$ 1,216.1	$ 1,924.0	$ 3,140.1
Total Florida	**$ 5,761.7**	**$ 4,901.5**	**$ 10,663.3**

Sector	Direct GSP	Indirect and Induced GSP	Total GSP
Construction	$ 248.1	$ 226.3	$ 474.4
Living Resources	$ 426.4	$ 351.7	$ 778.0
Minerals	$ 28.3	$ 20.2	$ 48.5
Ship & Boat Building	$ 516.5	$ 341.8	$ 858.3
Tourism & Recreation	$ 8,860.6	$ 6,488.6	$ 15,349.3
Transportation	$ 2,955.2	$ 2,799.1	$ 5,754.3
Total Florida	**$ 13,035.1**	**$ 10,184.3**	**$ 23,219.4**

* Dollars are in millions

The size of the Ocean Economy almost doubles when the estimated multiplier effects are included. Wages and contribution to GSP almost double to $10.7 billion and $23 billion, while employment more than doubles to 476,000. The Ship & Boat Building and Transportation sectors have the largest employment multiplier effects, while the Minerals sector also has a substantial wage multiplier.

3.8.4   Changes in the Florida Ocean Economy 1990-2003

Table 3.35 exhibits the profound changes that the Florida Ocean Economy underwent between 1990 and 2003.

Table 3.35: Changes in the Florida Ocean Economy 1990-2003 (Direct)

Sector	Employment		Wages		GSP	
	Change	Change %	Change (millions)	Change %	Change (millions)	Change %
Construction	-40	-1.1%	$0.8	0.6%	-$35.9	-12.6%
Living Resources	-2,482	-35.7%	-$16.9	-12.7%	$91.8	27.4%
Minerals	-42	-8.9%	-$0.6	-4.4%	-$4.7	-14.1%
Ship & Boat Building	-793	-6.3%	-$11.3	-2.9%	-$50.8	-9.0%
Tourism & Recreation	89,024	55.8%	$1,617.1	71.0%	$4,202.1	90.2%
Transportation	-1,685	-5.7%	$149.7	14.0%	$1,327.0	81.5%
All Ocean Sectors	**84,104**	**39.6%**	**$1,738.7**	**43.2%**	**$5,529.4**	**73.7%**

Only the Tourism & Recreation sector exhibited growth in employment, wages, and GSP as shown in Figure 3.28. Every other sector in the Ocean Economy declined in employment, while Transportation was the only other sector that grew in real wages. Every sector increased in GSP except Minerals. The substantial growth in Tourism & Recreation represents a significant change toward services-oriented uses and away from goods-related uses related to the ocean.

	Construction	Living Resources	Minerals	Ship & Boat Building	Tourism & Recreation	Transportation	All Ocean Sectors
Employment	-1.1%	-35.7%	-8.9%	-6.3%	55.8%	-5.7%	39.6%
Wages	0.6%	-12.7%	-4.4%	-2.9%	71.0%	14.0%	43.2%
GSP	-12.6%	27.4%	-14.1%	-9.0%	90.2%	81.5%	73.7%

Ocean Sector
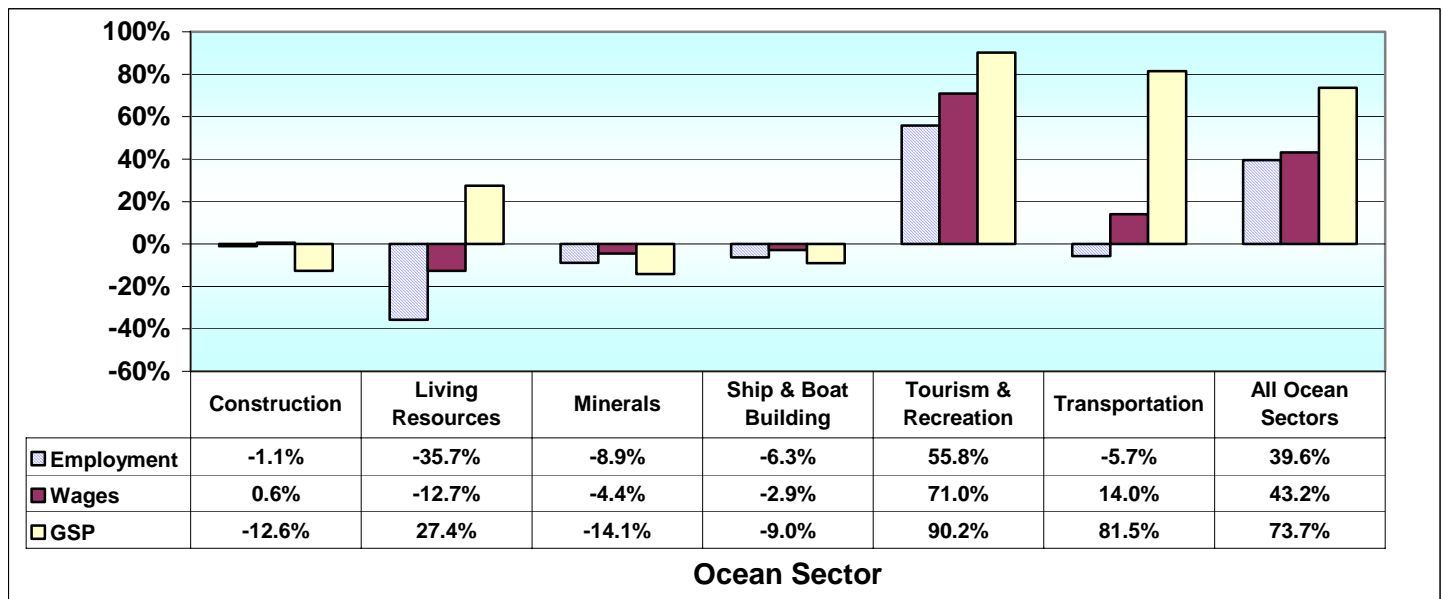
Figure 3.28: Changes in Florida's Ocean Economy 1990-2003

All indicators rose during the period measured, 1990-2003 as indicated in Figure 3.29. However, employment rose at a steady pace until 2000 when it leveled off. Meanwhile, GSP kept on an upward path throughout the period. Wages rose slightly during the 90's but climbed only slightly as of 2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Employment	212,403	127,205	141,635	161,387	174,391	187,929	213,706	236,312	260,838	278,532	278,587	281,824	292,571	296,442
Wages	$4,023	$2,533	$2,898	$3,046	$3,218	$3,441	$3,876	$4,343	$5,025	$5,421	$5,394	$5,363	$5,598	$5,762
GSP	$7,506	$7,702	$8,421	$8,304	$8,290	$8,941	$9,700	$11,312	$11,220	$11,703	$12,107	$11,705	$12,326	$13,035
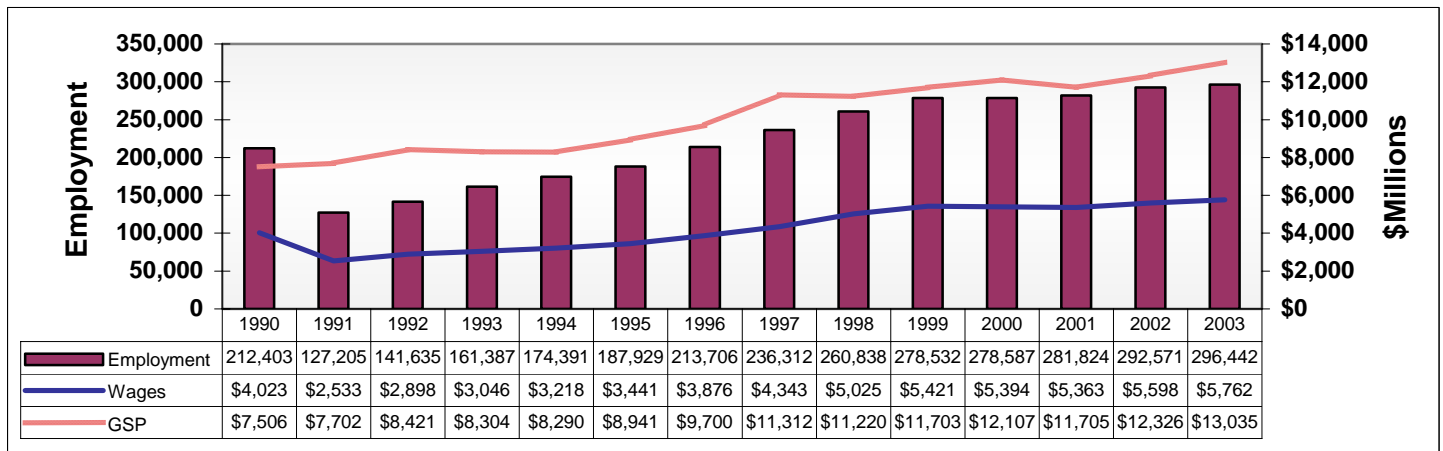
Figure 3.29: Florida's Ocean Economy 1990-2003

3.9   OCEAN ECONOMY SUMMARY

Florida's Ocean Economy was robust during the 13 years reserved, particularly in the Tourism & Recreation and Maritime Transportation sectors. The other four sectors have not faired as well. With its unique natural assets, and its warm climate, Florida's Ocean Economy is expected to see continued robust growth, led by Tourism & Recreation. Florida's ocean-based Tourism & Recreation industries will benefit, particularly over the next five years, from the effects of the 2005 hurricanes on the central Gulf of Mexico coast. Marine Transportation will also show growth over the next decade, continuing to benefit from the cruise industry and seeing growth in the cargo industry as well. The other Ocean Economy industries will show only modest growth at best.

3.10   REFERENCES

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US Department of Commerce Bureau of Economic Analysis

Chapter 4 Coastal Economy

INTRODUCTION

The measurement of economic change in coastal areas is critical to understanding how socio-economic change will affect natural resources (and vice versa). One key aspect of socio-economic change that has been identified in earlier work by NOEP is the changing distribution of economic activity between regions near or adjacent to the shoreline and regions further inland. Economic and population growth in closer proximity to the shore puts direct pressure on near shore and estuarine resources, while growth further inland results in indirect pressures on coastal resources through watersheds.

Florida's geography creates some interesting and unique challenges in measuring economic change from this perspective. The entire state can be considered coastal if watersheds are used as a criterion. Hence, it is not possible to classify counties in coastal regions, as is done in other states. The only meaningful regional distinction seems to be between shore-adjacent (or coastal) counties from inland (non-shore adjacent) counties and between Atlantic and Gulf Coast Counties. In an attempt to assess regional trends, this analysis also uses the eight regions defined by Enterprise Florida (Figure 4.1 and Table 4.1).

Legend
- Northwest Coastal
- Northwest Inland
- North Central Coast
- North Central Inland
- Central/Space Coast Coastal
- Northeast Coastal
- Northeast Inland
- Central/Space Coast Inland
- Tampa Bay Coastal
- Tampa Bay Inland
- Southwest
- Heartland
- Southeast

Source: http://www.eflorida.com/floridasregions/default.asp?level1=3&tn=&bn=
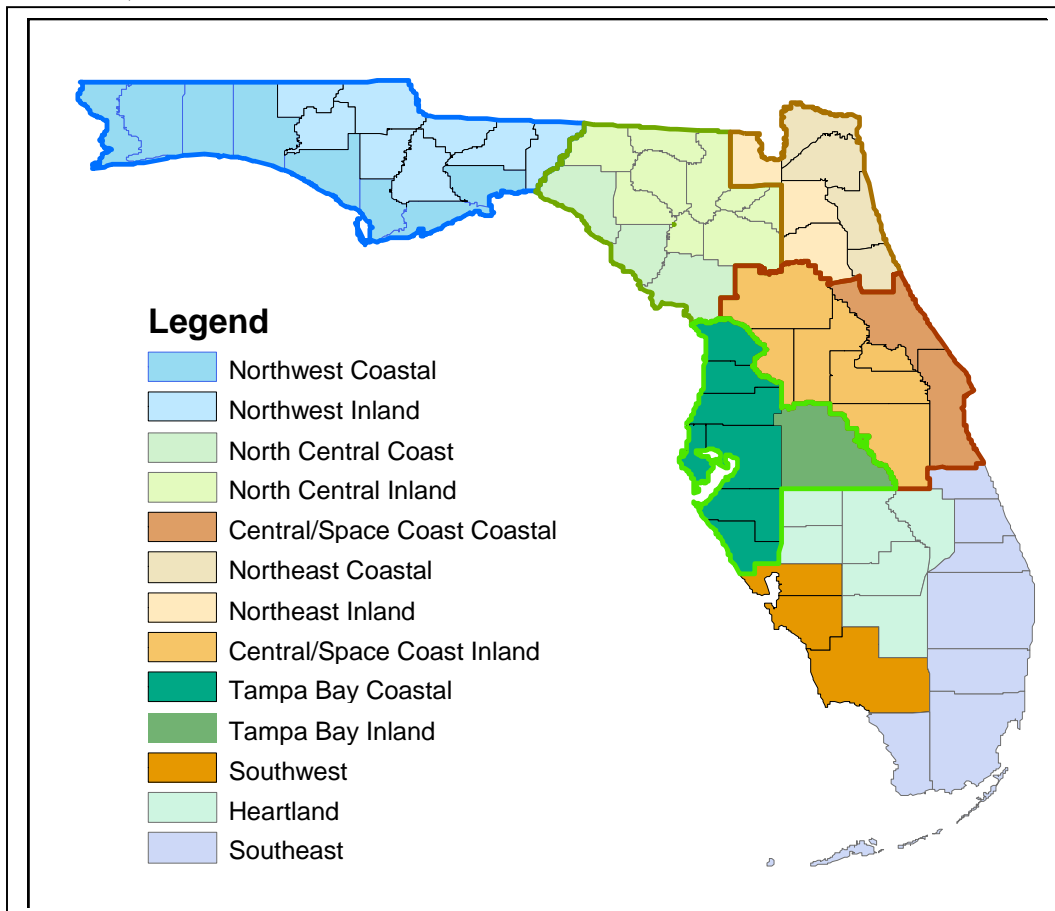
Figure 4.1: Regions for Analysis

Table 4.1: Florida Counties by Regions

Northwest (16)	Tampa Bay (8)	Northeast (7)
Bay #	Citrus #	Baker *
Calhoun *	Hernando #	Clay *
Escambia #	Hillsborough #	Duval +
Franklin #	Manatee #	Flagler +
Gadsden *	Pasco #	Nassau +
Gulf #	Pinellas #	Putnam *
Holmes *	Polk *	St. Johns +
Jackson *	Sarasota #	
Jefferson #		**Central / Space Coast (8)**
Leon *	**Southwest (3)**	Brevard +
Liberty *	Charlotte #	Lake *
Okaloosa #	Collier #	Marion *
Santa Rosa #	Lee #	Orange *
Wakulla #		Osceola *
Walton #	**Heartland (6)**	Seminole *
Washington *	Desoto*	Sumter *
	Glades*	Volusia +
North Central (12)	Hardee*	
Alachua *	Hendry*	**Southeast (7)**
Bradford *	Highlands*	Broward +
Columbia *	Okeechobee*	Indian River +
Dixie #		Martin +
Gilchrist *		Miami–Dade +
Hamilton *		Monroe #
Lafayette *		Palm Beach +
Levy #		St. Lucie +
Madison *		
Suwannee *		
Taylor #		
Union *		

+ Atlantic Coast, # Gulf Coast, * Inland Counties

This chapter represents another perspective on the value that Florida's coasts and ocean contribute to the economy. The Coastal Economy includes everything from banks and barber shops to hotels and marinas that happen to be in coastal counties or coastal zip codes, in contrast to the Ocean Economy reflecting those six categories of economic activities that derive value from the oceans as defined by the NOEP and discussed in the last chapter. Here, the Coastal Economy is measured according to Super-sectors as defined by the Department of Commerce Bureau of Economic Analysis and the Labor Department's Bureau of Labor Statistics. These Super-sectors reflect most of the economic activities that take place in the nation.

4.1 THE OUTLOOK FOR FLORIDA'S COASTAL ECONOMY TO 2015

For purposes of the forecast discussed in the first part of this chapter, five of these regions where there are both shore-adjacent and non-shore adjacent counties are divided into two sub regions. Thus, this analysis distinguishes thirteen regions. Five of the eight regions defined by Enterprise Florida located in Central and Northern Florida; the shore-adjacent counties are distinguished from the inland counties to create five additional regions. The three southern Florida regions are either completely shore-adjacent

(Southeast or Southwest) or completely inland (Heartland). These regions can also be aggregated depending on the body of water or northern, southern, or central locations.
Figure 4.2 provides an overview of employment changes in the Coastal Economy. The figure shows employment growth for the Atlantic and Gulf coastal counties versus the inland counties.

It subdivides five of these regions where there are both shore-adjacent and non-shore adjacent counties into these two sub regions.   Thus, this analysis distinguishes thirteen regions. Five of the eight regions defined by Enterprise Florida located in Central and Northern Florida; the shore-adjacent counties are distinguished from the inland counties to create five additional regions. The three southern Florida regions are either completely shore-adjacent (Southeast or Southwest) or completely inland (Heartland). These regions can also be aggregated depending on the body of water or northern, southern, or central locations.

Figure 4.2 provides an overview of employment changes in the Coastal Economy. The figure shows employment growth for the Atlantic and Gulf coastal counties versus the inland counties.

Figure 4.2: Employment Growth Rates by Coast 2000-2015

Employment fell with the 2001 recession in the three regions, but recovered afterwards. Until 2005, inland regions, dominated by the Central/Space Coast region and Polk County (Inland Tampa Bay), experienced the fastest growth. Employment growth is projected to fall off in the latter part of this decade, increasing slightly after 2010. The Gulf Coastal counties show the fastest growth through the forecast period.

The results of these trends plus forecast growth in output (GSP) are that the Gulf Coast increases its share of **employment** by 2015 from 30.1% to 31.6%, while the share of both Inland and Atlantic coastal Florida drop somewhat (23% to 22.7% in the case of inland counties, and 46 to 45% in the case of the Atlantic coastal counties). However, the high concentration of activity on the Atlantic coast, particularly in south Florida, means that the Atlantic coast's share of **GSP** increases slightly (from 47% to 47.4%) at the expense of the Inland and Gulf coast counties, which drop in share of GSP from 23% to 22.7% in the former case and from 30% to 29% in the latter.

Figure 4.3 compares employment and population growth by region using the ratio of employment growth to population growth from 2000 to 2015. Over this period, Florida population is forecast to grow by 4.8 million, while employment is forecast to grow by 2.3 million. On average across all Florida employment growth will be 55% of population growth out to 2015. In Figure 4.4, regions to the left of the Florida average will be more employment growth intensive, while those to the right will be more population growth intensive. The most population growth intensive regions are Heartland and North Central Coast. Forecasts may be conservative for the North Central Coast since there are certain development plans already initiated by the St. Joe Company, the largest landowner in this region (and in the state).
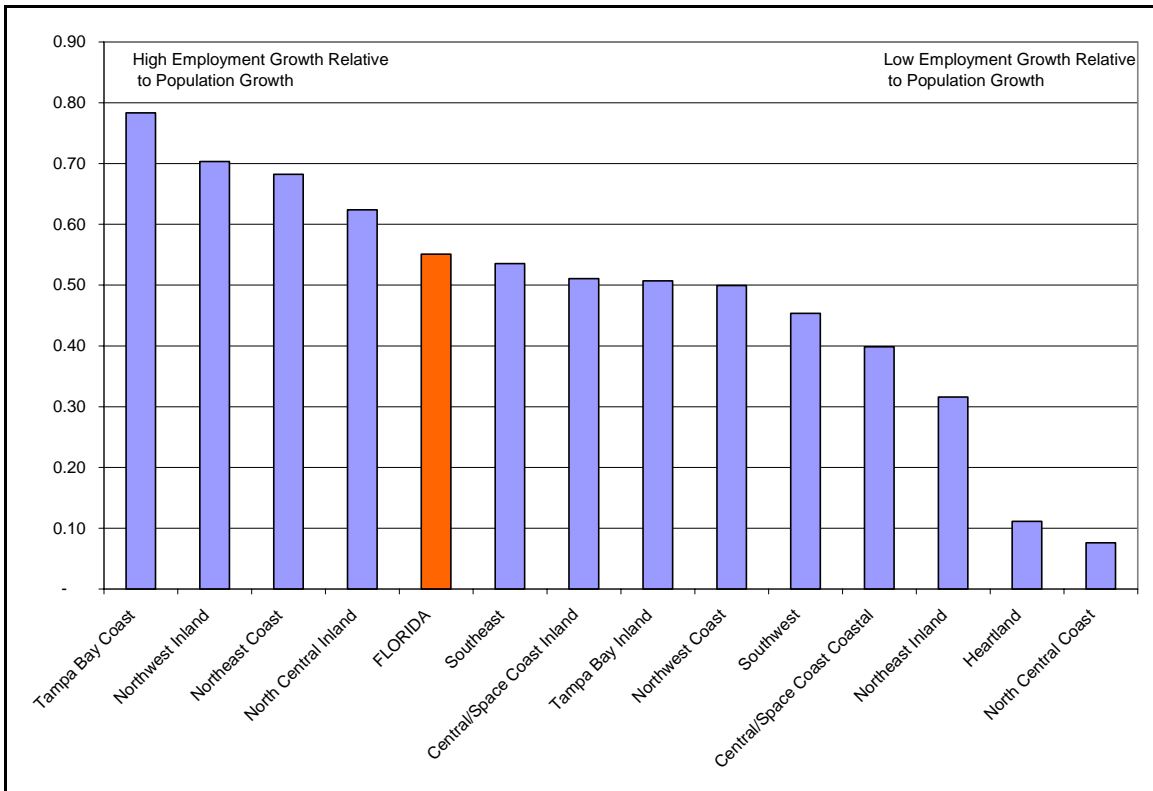
Figure 4.3: Population and Employment Change 2000-2015

While projected gains in population are larger than the gains in employment in all areas, employment is expected to grow relatively faster than population. Forecast growth

patterns in Florida can be summarized in three areas: northern, central, and southern. The comparison of growth rates is shown in Table 4.1.

- **Northern Florida** includes the Northwest, North Central and Northeast regions. Employment will grow significantly faster than population in the northeast and northwest counties, but the north central region will see a slight decline in employment growth (9% or about 1,800) unless the plans for development by the St. Joe Company significantly alter the employment picture for this region. The inland regions in the north will see a closer balance between employment and population growth rates.

- **Central Florida** regions are expected to have relatively rapid rates of both population and employment growth, but employment growth rates will significantly exceed population growth rates in all regions except the Orlando area (Central/Space Coast Inland).

- **Southern Florida** consists of two coastal regions (Southeast and Southwest) and one inland region (Heartland). Employment is expected to grow faster than population in Southern Florida coastal areas, particularly in the Southwestern region. On the other hand, the Heartland region is expected to see a drop in employment (primarily from reductions in natural resources and mining, manufacturing, and public administration), but a large growth rate in population. This suggests that employment will be increasingly concentrated in the shore-adjacent counties, while an increase in population in the inland counties occurs because they are the outer fringes of expanding urban areas. These trends will put additional strains on transportation networks connecting the inland and coastal regions.

Table 4.2: Comparing Employment and Population Growth Rates by Region 2000-2015

Region		Population	Employment
Northern	North Central Coast	17.2%	-9.3%
	North Central Inland	16.7%	23.2%
	Northeast Coast	16.8%	29.2%
	Northeast Inland	25.2%	25.5%
	Northwest Coast	25.3%	44.1%
	Northwest Inland	14.5%	21.3%
Central	Central/Space Coast Coastal	24.6%	51.0%
	Central/Space Coast Inland	47.1%	50.2%
	Tampa Bay Coast	21.5%	44.3%
	Tampa Bay Inland	19.8%	40.2%
Southern	Heartland	35.1%	-8.5%
	Southeast	36.0%	40.7%
	Southwest	19.7%	86.8%
	FLORIDA	26.0%	40.1%

The substantial diversity in sizes among the Florida regions means analysis of growth rates can provide only part of the picture of change. Figure 4.4 shows the ranking of the thirteen regions in terms of the absolute growth in employment, population, and GSP. Table 4.2 shows the data used in this figure.
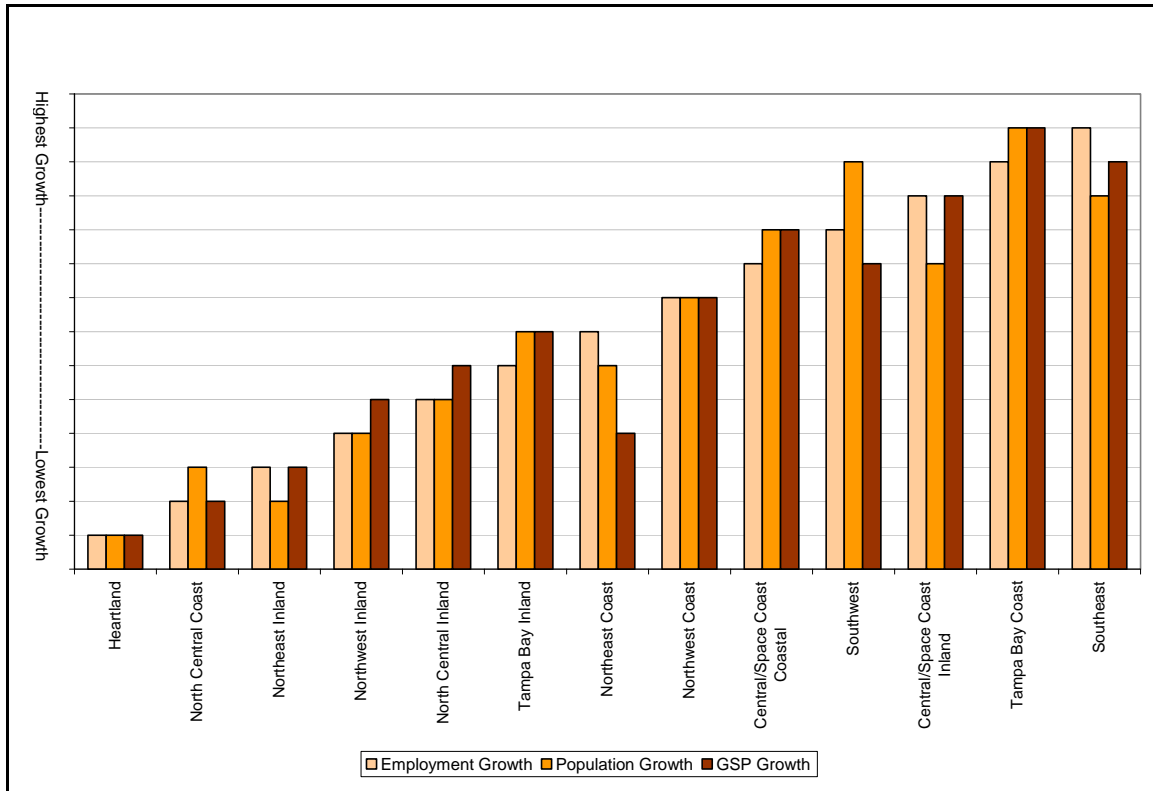
Figure 4.4: Regions Ranked by Growth (Lowest to Highest)

The Southeast region will provide Florida the largest growth by all three measures, with more than 730,000 additional jobs and 1.3 million people by 2015. On the other hand, the North Central Coast and the Heartland regions will have the slowest growth. Projections indicate that employment growth will decline in these regions and total population will increase by only 39,000 people, which is just 1% of the total population change estimated to occur in the state between 2000 and 2015.

Six of the top seven regions in terms of growth on the three variables are all coastal regions. The exception is the Central/Space Coast Inland region around Orlando. The top six coastal regions will add 1.8 million jobs and 3.1 million people by 2015. On the other hand, four of the slowest growing areas are inland; the exception is the North Central Coastal region. The four slowest growing inland regions are forecast to add 66,000 jobs and 174,000 people.

The importance of the urban centers of Miami (Southeast) Tampa (Tampa Bay), Orlando (Central/Space Coast), and Jacksonville (Northeast) is shown by these regions being the four highest in GSP growth. This matches their employment growth, except for the

northeast region (Jacksonville), which ranks seventh among the regions in employment growth, but fourth in GSP growth.

Table 4.3: Forecast Changes in Employment, Population, and GSP 2000-2015

	Employment Change (000's)	Population Change (000's)	GSP Change ($Millions)
Southeast	**731.518**	**1366.150**	**$191,913**
Tampa Bay Coast	**524.904**	**670.003**	**$117,151**
Central/Space Coast Inland	**362.676**	**710.281**	**$74,188**
Southwest	179.396	395.465	$29,788
Central/Space Coast Coastal	129.006	323.786	$23,807
Northeast Coast	115.751	169.632	$24,240
Northwest Coast	103.530	207.298	$38,838
Tampa Bay Inland	48.649	95.928	$10,513
North Central Inland	42.095	67.452	$8,854
Northwest Inland	41.520	58.722	$4,673
Northeast Inland	18.648	59.041	$24,240
Heartland	5.040	45.239	$689
North Central Coast	0.882	11.612	$2,193

For a detailed picture of employment growth in the coastal and inland regions, see Table B.1 in appendix B.

Overall economic growth in Florida will be concentrated in the shore-adjacent counties in the northern and southern parts of the state. The inland areas in the central region will show gains in both employment and population. Growth will be more balanced on the eastern (Space Coast/Central) side of Central Florida, while the western coastal (Tampa Bay) side will show faster growth in employment than population.

4.2   NATIONAL AND STATE COMPARISONS

Because the indicators are derived from a national time series, Florida's Coastal Economy can be compared with other states or estimated as a percent of national or regional economy. During the period 1990 to 2003, as shown in Table 4.4, Florida's

shoreline economy grew at a faster rate than the shoreline economies of California, the Gulf States and the nation: 31% employment growth, 48% for wages, and 63% for GSP. Florida's GSP growth during that period was 26% higher than GSP for the national shoreline. In all cases but for the combined Gulf states, shoreline economies did not grow as rapidly as the entire states or the nation, indicating that the growth rate along the shoreline is slower than other areas of the nation and the states. Since Florida's shoreline/Coastal Economy represents a large portion of the Florida economy, the rate of growth for both the state and the shoreline counties were within a few percentage points of each other. For all areas measured, wages increased more than employment, and GSP more than both. In some cases, such as national and California coastal counties, employment increased only slightly at 9% and 5%, respectively in contrast to Florida's 31%.

Table 4.4: Coastal Economy Growth 1990-2003

EMPLOYMENT	1990	2003	Growth	Percent Change
FL	5,682,989	7,521,606	1,838,617	32.4%
FL Shoreline	4,382,455	5,736,343	1,353,888	30.9%
CA	13,271,449	14,807,657	1,536,208	11.6%
CA Shoreline	9,132,267	9,590,904	458,637	5.0%
Gulf	17,871,881	21,506,036	3,634,155	20.3%
Gulf Shoreline	6,914,585	8,690,391	1,775,806	25.7%
National	108,603,565	127,795,827	19,192,262	17.7%
National Shoreline	41,959,851	45,860,788	3,900,937	9.3%
WAGES ($Millions)	1990	2003	Growth	Percent Change
FL	$162,360.0	$241,667.9	$79,307.8	48.8%
FL Shoreline	$128,149.4	$189,195.9	$61,046.5	47.6%
CA	$457,768.6	$589,983.3	$132,214.6	28.9%
CA Shoreline	$321,896.8	$386,301.6	$64,404.8	20.0%
Gulf	$519,185.4	$696,845.5	$177,660.1	34.2%
Gulf Shoreline	$204,488.1	$291,242.6	$86,754.6	42.4%
National	$3,377,568.6	$4,514,734.8	$1,137,166.3	33.7%
National Shoreline	$1,438,009.0	$1,795,332.7	$357,323.7	24.8%
GSP ($Millions)	1990	2003	Growth	Percent Change
FL	$315,282.3	$520,902.6	$205,620.2	65.2%
FL Shoreline	$246,797.8	$402,378.0	$155,580.2	63.0%
CA	$966,188.7	$1,352,928.6	$386,739.9	40.0%
CA Shoreline	$694,854.9	$916,317.6	$221,462.6	31.9%
Gulf	$1,035,436.5	$1,620,570.5	$585,134.0	56.5%
Gulf Shoreline	$445,790.1	$704,776.9	$258,986.8	58.1%
National	$7,112,492.5	$10,502,586.0	$3,390,093.5	47.7%
National Shoreline	$3,015,597.6	$4,148,843.1	$1,133,245.5	37.6%

Florida's rapid growth rate both at the state and shoreline county level stands out in Figure 4.5. As part of the Gulf States totals, Florida's growth is obviously a large part of the growth for the rest of the Gulf States, putting it far ahead of all other areas measured in every category.

Growth Rates of Shoreline Counties and States, 1990-2003

	FL	FL Shoreline	CA	CA Shoreline	Gulf States	Gulf Shoreline*	National	US Shoreline
☐ Employment	32.4%	30.9%	11.6%	5.0%	20.3%	25.7%	17.7%	9.3%
■ Wages	48.8%	47.6%	28.9%	20.0%	34.2%	42.4%	33.7%	24.8%
☐ GSP	65.2%	63.0%	40.0%	31.9%	56.5%	58.1%	47.7%	37.6%

*includes Florida Atlantic Shoreline
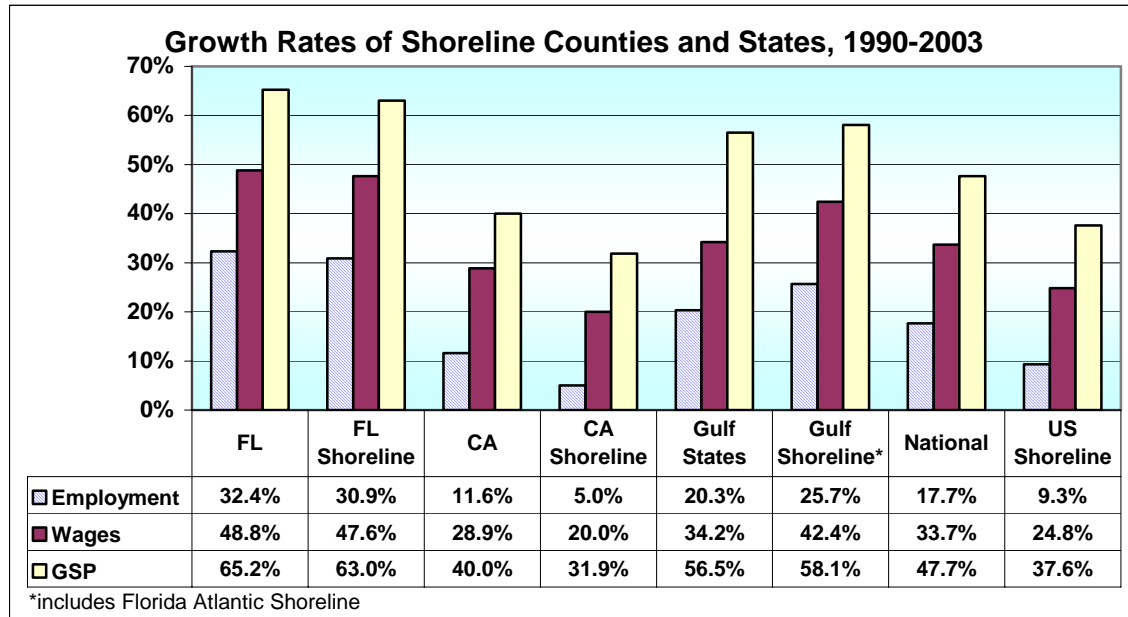
Figure 4.5: Growth Compared to California, Gulf, and National Totals and Shoreline Counties 1990-2003

When compared to the nation and the Gulf states, Florida's Coastal Economy, shown in Table 4.5, is significant. It accounts for 12.5% of the nation's coastal/shoreline county employment, 10.5% of wages and almost 10% of GSP. With a little more than 12% of the population of all coastal counties, Florida contributes about the same percent of the jobs. Counting both Atlantic and Gulf coasts, Florida's share of Gulf state (Florida, Texas, Alabama, Mississippi, and Louisiana) Coastal Economies is an overwhelming 66% of employment, 65% of wages and 57% of GSP with 63% of the population and 51% of the land.

Table 4.5: Florida Shoreline Contribution to the Gulf and National Coastline Compared to California, 2003

	National Shoreline	Florida Shoreline	% National	California Shoreline	% National
Employment	45,860,788	5,736,343	12.5%	9,590,904	20.9%
Wages ($Millions)	$1,795,333	$189,196	10.5%	$386,302	21.5%
GSP ($Millions)	$4,148,843	$402,378	9.7%	$916,318	22.1%
Land Area (sq. mi.)	621,880	29,971	4.8%	33,750	5.4%
Population	105,174,403	13,044,424	12.4%	22,223,768	21.1%

	Gulf States Shoreline*	Florida Shoreline	% Gulf
Employment	8,690,391	5,736,343	66.0%
Wages ($Millions)	$291,243	$189,196	65.0%
GSP ($Millions)	$704,777	$402,378	57.1%
Land Area (sq. mi.)	58,826	29,971	50.9%
Population	20,696,395	13,044,424	63.0%

*Includes Florida Atlantic shoreline counties

Florida's Shoreline County employment growth rate was impressive during the period 1990-2003. It doubled California's growth as a percentage of national coastal counties growth and far exceeded all other areas measured during this period as indicated in Table 4.6. Yet, Florida's percentage of national coastal growth in wages, according to Table 4.6, was just less than half of California's during the same period. While the nation's total coastal county population grew by almost over a million people during that same period, Florida's population growth was only 9.5% of that growth, while California's was 21% and the Gulf states (without Florida) was about 15%.

Table 4.6: Shoreline Growth with Population Compared to California, Gulf, and Nation 1990-2003

	National Coastal Counties	Florida Shoreline Counties	% National	California Coastal Counties	% National
Employment	1,005,328	86,897	8.6%	48,549	4.8%
Wages $	67,252,794,524	4,122,942,942	6.1%	7,423,942,952	11.0%
GSP (1990-2003) $	178,880,220,475	11,194,426,608	6.3%	20,409,257,752	11.4%
Population	1,009,513	95,897	9.5%	211,298	20.9%
	Gulf Coastline	**Florida Shoreline**	**% Gulf**		
Employment	268,306	86,897	32.4%		
Wages $	13,299,514,010	4,122,942,942	31.0%		
GSP (1990-2003) $	39,000,951,852	11,194,426,608	28.7%		
Population	388,560	95,897	24.7%		

4.3   FLORIDA'S STATE COASTAL ECONOMY

The following charts give a brief overview of Florida's State Coastal Economy. Table 4.7 shows the growth rates for employment, wages, and GSP between 1990 and 2003. Throughout the state, salaries rose faster than jobs, and GSP grew at a healthy rate.

Table 4.7: State Economic Growth 1990-2003

	1990 Values	2003 Values	Growth	% Change
Employment	5,682,989	7,521,606	1,838,617	32.4%
Wages	$162,360,028,590	$241,667,863,237	$79,307,834,646	48.8%
GSP	$315,282,322,805	$520,902,556,116	$205,620,233,311	65.2%

During the 1990's according to Figure 4.6, employment grew at a rapid rate, but leveled out from 2000-2003. However, historically during the same period, wages grew much more slowly. Yet, GSP grew rapidly during the entire period (see Figure 4.6).
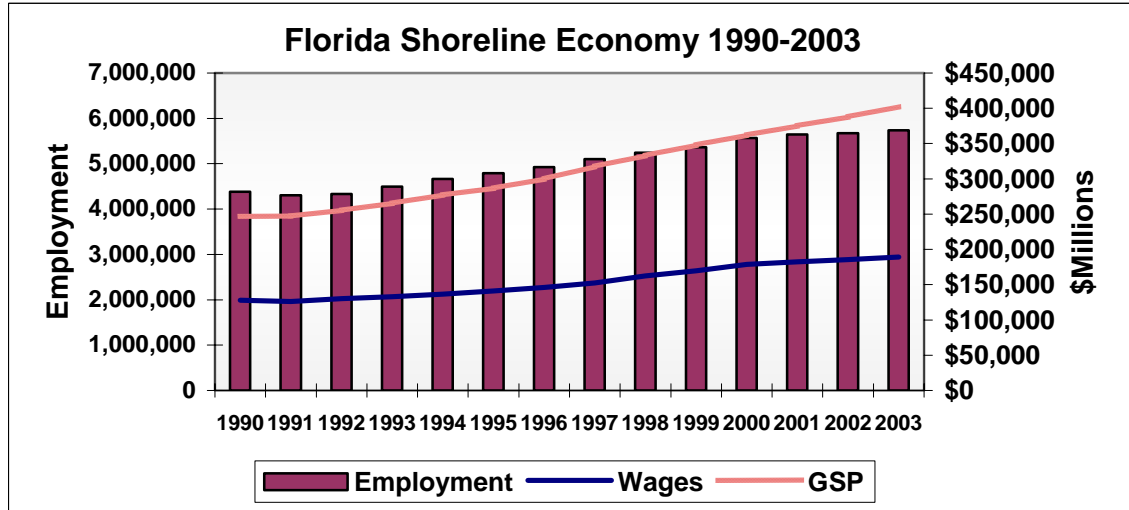
Figure 4.6: Florida Shoreline Economy 1990-2003

4.4 REGIONAL COMPARISONS

This section provides comparisons of several regions of Florida, reflecting the diversity of growth and the relative contributions of these regions to Florida's economy. Because of the size of the economy and the population differences between the Atlantic and Gulf coasts of Florida, each of those is represented as a region, with Monroe County included as part of the Gulf Coast. The Enterprise Florida (e-Florida com) regions are also estimated to allow consistent assessments for those who use those categories. Finally, Shoreline and Inland counties are separated to indicate the large differences in size and growth rates, shoreline being much larger in every respect and inland growing at a much faster pace than shoreline (see Table 4.10 and 4.11).

Florida's regions show a diversity of growth during the period 1990-2003. Employment ranged from a low of 26 percent growth in the Southeast and in the Northwest to a high of 37% in the Heartland (See Table 4.10). Population growth ranged from a low of 25% in the Tampa Bay region to a high of 56% growth in the Southwest region (see Tables 4.10 and 4.11).

Again, remember the large size of the Southeast region from which growth is occurring and the very low baseline in the Heartland area (see Tables 4.10, 4.11, and Figure 4.7).

The Atlantic Coast contributed almost half of the state's GSP with the Gulf counties next at 31% and Inland at only 23%. The Heartland region stands out for its low numbers in all categories, including GSP dollars per employee. According to Table 4.8, even the inland counties vary greatly in their contributions to the state economy by all indicators, although all together their rate of increase indicated in Tables 4.10 and 4.11 may be a good sign of growth and more prosperity inland.

Table 4.8: Region Contributions to State Totals with Population, 2003

Region	Population	% of State	Employed	% of State	Wages ($Millions)	% of State	GSP ($Millions)	% of State	GSP $/employee
	Population		**Employment**		**Wages**		**GSP**		
STATE	16,999,181	100.0%	7,521,606	100.0%	$241,667.9	100.0%	$520,902.6	100.0%	$69,254
Shoreline	13,044,424	76.7%	5,736,343	76.3%	$189,195.9	78.3%	$402,378.0	77.2%	$70,145
Inland	3,954,757	23.3%	1,785,229	23.7%	$52,471.9	21.7%	$118,524.6	22.8%	$66,392
Gulf Coast	5,244,692	30.9%	2,376,318	31.6%	$72,362.5	29.9%	$159,925.7	30.7%	$67,300
Atlantic Coast	7,799,732	45.9%	3,360,025	44.7%	$116,833.5	48.3%	$242,452.3	46.5%	$72,158
Central	3,116,154	18.3%	1,410,068	18.7%	$44,114.6	18.3%	$96,109.9	18.5%	$68,160
Heartland	238,358	1.4%	87,640	1.2%	$1,659.9	0.7%	$4,342.8	0.8%	$49,553
North Central	485,164	2.9%	205,254	2.7%	$5,294.8	2.2%	$12,614.5	2.4%	$61,458
Northeast	1,331,803	7.8%	635,038	8.4%	$21,085.2	8.7%	$43,400.4	8.3%	$68,343
Northwest	1,267,377	7.5%	572,914	7.6%	$16,275.7	6.7%	$37,016.6	7.1%	$64,611
Southeast	5,825,737	34.3%	2,475,465	32.9%	$87,475.6	36.2%	$182,839.5	35.1%	$73,861
Southwest	931,424	5.5%	355,125	4.7%	$11,237.2	4.6%	$24,829.3	4.8%	$69,917
Tampa Bay	3,803,164	22.4%	1,780,068	23.7%	$54,524.9	22.6%	$119,749.5	23.0%	$67,272

Table 4.9: Region Contributions to State Totals with Land Area, 2003

Region	Employed	% of State	Wages ($Millions)	% of State	GSP ($Millions)	% of State	Land Area (sq. miles)	% of State
	Employment		**Wages**		**GSP**		**Land Area**	
STATE	7,521,606	100.0%	$241,667.9	100.0%	$520,902.6	100.0%	53,927	100.0%
Shoreline	5,736,343	76.3%	$189,195.9	78.3%	$402,378.0	77.2%	29,971	55.6%
Inland	1,785,229	23.7%	$52,471.9	21.7%	$118,524.6	22.8%	23,956	44.4%
Gulf Coast	2,376,318	31.6%	$72,362.5	29.9%	$159,925.7	30.7%	18,574	34.4%
Atlantic Coast	3,360,025	44.7%	$116,833.5	48.3%	$242,452.3	46.5%	11,398	21.1%
Northwest	572,914	7.6%	$16,275.7	6.7%	$37,016.6	7.1%	11,304	21.0%
North Central	205,254	2.7%	$5,294.8	2.2%	$12,614.5	2.4%	7,855	14.6%
Southeast	2,475,465	32.9%	$87,475.6	36.2%	$182,839.5	35.1%	7,754	14.4%
Central	1,410,068	18.7%	$44,114.6	18.3%	$96,109.9	18.5%	7,737	14.3%
Tampa Bay	1,780,068	23.7%	$54,524.9	22.6%	$119,749.5	23.0%	6,325	11.7%
Heartland	87,640	1.2%	$1,659.9	0.7%	$4,342.8	0.8%	5,003	9.3%
Northeast	635,038	8.4%	$21,085.2	8.7%	$43,400.4	8.3%	4,427	8.2%
Southwest	355,125	4.7%	$11,237.2	4.6%	$24,829.3	4.8%	3,523	6.5%

The large differences among regions are strongly depicted in Figure 4.7, showing the enormity of the shoreline contribution to the state. The large contributions of the Southeast region are evidence it plays a large role in the high contributions of the Atlantic region.

The negligible size of the Heartland and North Central areas is also clearly indicated in Figure 4.7. Tampa Bay also seems to be a large contributor close behind the Southeast region.
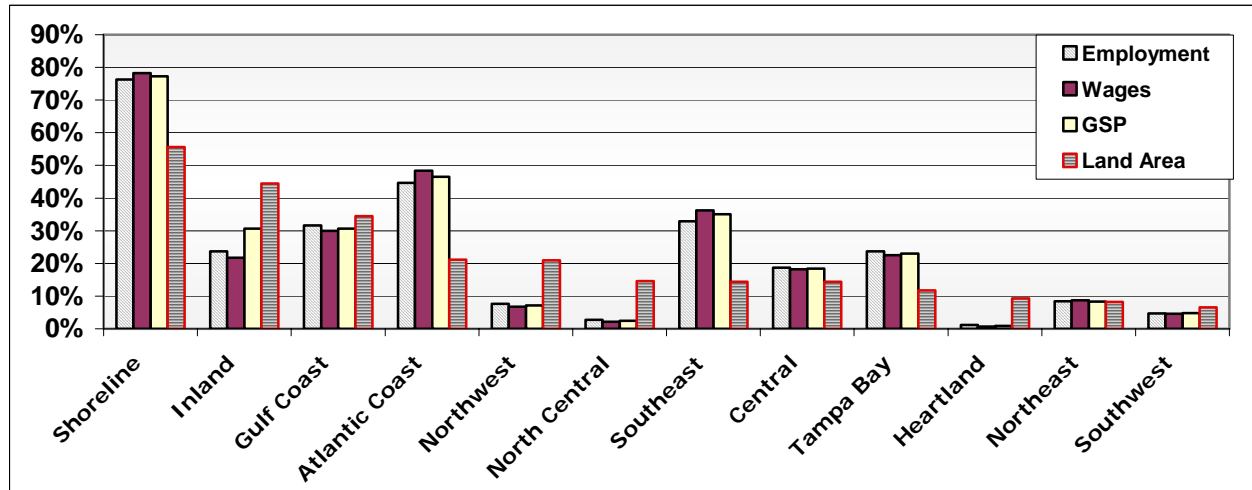
Figure 4.7: Regional Contributions to State Totals, 2003

Although the relative contributions of the shoreline counties to Florida's economy and demography are disproportionately large, growth rates along the shore relative to overall state growth are actually slightly lower. Between 1990 and 2003 Florida's total population and employment increased by 32%, wages by 49%, and GSP by 65%, while the shoreline counties grew 31%, 30%, 48% and 63% respectively, just slightly lower (see Table 4.8). The rate of inland county growth, beginning at a much smaller base, is much higher overall than the shoreline county growth by as much as 10%, as in the case of GSP (see Tables 4.10 and 4.11).

Across the board among regions there was a general trend of increasing economic and demographic values from 1990-2003. Along the shore, population and employment kept pace with each other during this period, increasing by about 30% each. The same balance between population and employment is indicated for inland counties as well as the entire State of Florida (see Tables 4.10 and 4.11).

Table 4.10: Regional Economic Growth 1990-2003

| Region | Employment | | | Percent |
	1990	2003	Change	Change
STATE	5,682,989	7,521,606	1,838,617	32.4%
Shoreline	4,382,455	5,736,343	1,353,888	30.9%
Inland	1,300,506	1,785,229	484,723	37.3%
Gulf Coast	1,705,127	2,376,318	671,191	39.4%
Atlantic Coast	2,677,328	3,360,025	682,697	25.5%
Southeast	1,961,346	2,475,465	514,119	26.2%
Tampa Bay	1,291,730	1,780,068	488,338	37.8%
Central	1,017,519	1,410,068	392,549	38.6%
Southwest	233,309	355,125	121,816	52.2%
Northeast	497,929	635,038	137,109	27.5%
Northwest	454,068	572,914	118,846	26.2%
North Central	158,531	205,254	46,723	29.5%
Heartland	68,529	87,640	19,111	27.9%

| Region | Wages ($Millions) | | | Percent |
	1990	2003	Change	Change
STATE	$162,360.0	$241,667.9	$79,307.8	48.8%
Shoreline	$128,149.4	$189,195.9	$61,046.5	47.6%
Inland	$34,210.6	$52,471.9	$18,261.4	53.4%
Gulf Coast	$45,830.2	$72,362.5	$26,532.2	57.9%
Atlantic Coast	$82,319.2	$116,833.5	$34,514.3	41.9%
Southeast	$61,302.1	$87,475.6	$26,173.5	42.7%
Tampa Bay	$35,265.0	$54,524.9	$19,259.9	54.6%
Central	$28,543.5	$44,114.6	$15,571.2	54.6%
Northeast	$14,597.9	$21,085.2	$6,487.3	44.4%
Southwest	$5,993.8	$11,237.2	$5,243.4	87.5%
Northwest	$11,599.6	$16,275.7	$4,676.0	40.3%
North Central	$3,893.8	$5,294.8	$1,401.0	36.0%
Heartland	$1,164.3	$1,659.9	$495.6	42.6%

| Region | GSP ($Millions) | | | Percent |
	1990	2003	Change	Change
STATE	$315,282.3	$520,902.6	$205,620.2	65.2%
Shoreline	$246,797.8	$402,378.0	$155,580.2	63.0%
Inland	$68,484.5	$118,524.6	$50,040.0	73.1%
Gulf Coast	$93,793.6	$159,925.7	$66,132.1	70.5%
Atlantic Coast	$153,004.2	$242,452.3	$89,448.1	58.5%
Southeast	$114,391.4	$182,839.5	$68,448.1	59.8%
Tampa Bay	$71,523.8	$119,749.5	$48,225.7	67.4%
Central	$53,689.6	$96,109.9	$42,420.3	79.0%
Northwest	$23,533.4	$37,016.6	$13,483.3	57.3%
Northeast	$27,103.3	$43,400.4	$16,297.1	60.1%
Southwest	$13,742.2	$24,829.3	$11,087.1	80.7%
North Central	$8,278.8	$12,614.5	$4,335.8	52.4%
Heartland	$3,019.9	$4,342.8	$1,322.9	43.8%

Table 4.11: Regional Growth in Population 1990-2003

Region	Population 1990	2003	Change	Percent Change
STATE	12,938,071	16,999,181	4,061,110	31.39%
Shoreline	10,066,343	13,044,424	2,978,081	29.58%
Inland	2,871,728	3,954,757	1,083,029	37.71%
Gulf Coast	4,069,679	5,244,692	1,175,013	28.87%
Atlantic Coast	5,996,664	7,799,732	1,803,068	30.07%
Southwest	598,187	931,424	333,237	55.71%
Central	2,220,971	3,116,154	895,183	40.31%
Heartland	174,787	238,358	63,571	36.37%
Northeast	1,018,984	1,331,803	312,819	30.70%
Southeast	4,475,531	5,825,737	1,350,206	30.17%
North Central	380,108	485,164	105,056	27.64%
Northwest	1,013,166	1,267,377	254,211	25.09%
Tampa Bay	3,056,337	3,803,164	746,827	24.44%

The growth rates of the major regions are clearly indicated in Figure 4.8 where inland county growth is the highest. Employment and population appear to be about the same in all regions but the Gulf Coast where population growth is almost 10% higher than employment growth.

	Florida State	Shoreline Counties	Inland Counties	Gulf Coast Counties	Atlantic Coast Counties
Employment	32.4%	30.9%	37.3%	39.4%	25.5%
Wages	48.8%	47.6%	53.4%	57.9%	41.9%
GSP	65.2%	63.0%	73.1%	70.5%	58.5%
Population	31.4%	29.6%	37.7%	28.9%	30.1%
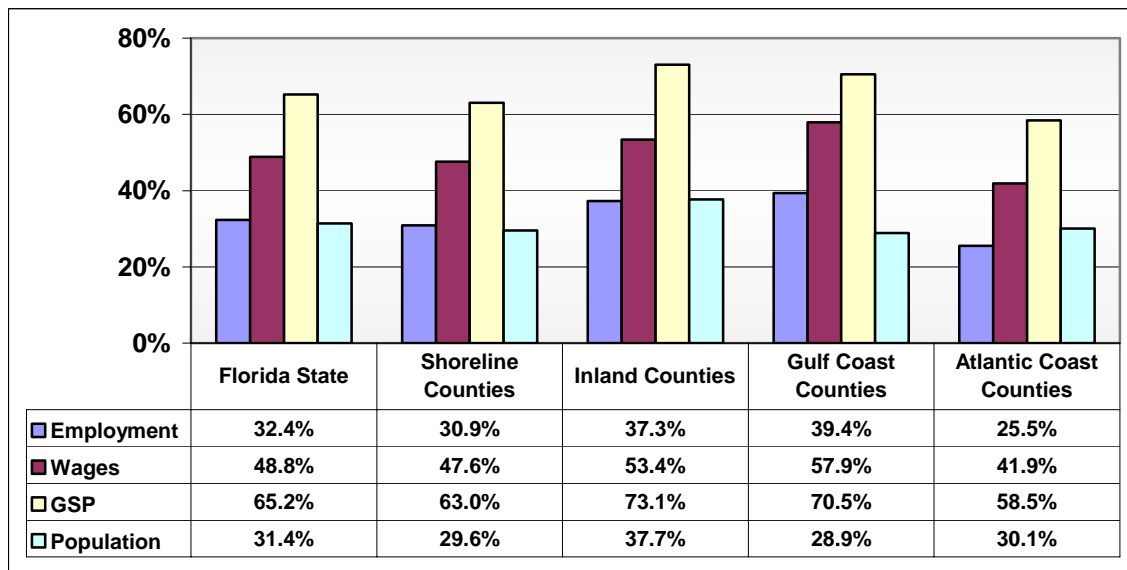
Figure 4.8: Regional Economic and Population Growth Rates 1990-2003

Shoreline growth during this period, shown in Figure 4.8, was slightly lower than state-wide growth with inland counties growing at a significantly higher rate than either. Figure 4.8 shows population growth for shoreline counties during this period at less than 30% while inland population grew at almost 38%. This should dispel some of the myth that everyone is moving to the shore. The difference in growth rates might be a result of a

lower baseline inland from which growth occurred, along with more less expensive land availability inland. This can be more clearly seen in Tables 4.10 and 4.11. It is also interesting to note that the Gulf coast, also with a lower population and economic base, grew at a significantly faster rate than the Atlantic coast. Figure 4.8 also suggests that population is not always the best indicator to track changes in coastal areas. Note that GSP, wages and employment grew at a much faster rate than population in the fastest growing part of Florida, the Gulf coast.

The Southeast region of Florida greatly surpasses all others in size and value. Southern coastal Florida with its beaches and large tourist areas made the largest contribution to Florida's economy. Table 4.7 highlights the dominance of the shoreline counties, the Atlantic shoreline and the Southeast Region for all indicators measured. It also reflects the broad spectrum and diversity of Florida's regions regarding size and relative wealth.

Although the shoreline counties don't appear to be growing as fast as inland counties or even the state, their very size by all indicators accounts for the relative difference in growth rate. With about 56% of the land, shoreline counties accounted for more than 76% of state employment, 78% of wages and 77% of the State's GSP in 2003. Obviously shoreline counties are a powerful economic force in Florida. The Southeast region dominates both shoreline size and growth in Tables 4.8 and 4.9, accounting for 33% of state employment, 36% of wages and 35% of the state's GSP with only 14.4% of the land. The Heartland region, made up entirely of inland counties, in contrast, with almost 10% of the land and 1.4% of the population, contributed less than 1% to Florida's Economy in 2003.

The relative sizes of primary indicators for each region, shown in Figure 4.7, stand out. The Atlantic Coast, the Southeast and to some extent, the Tampa Bay regions reflect intense use of land with balance among the economic indicators, whereas the Southwest and Northeast regions reflect a balanced use of land with balanced economic indicators. In contrast, all inland areas

4.5   COUNTY COMPARISONS

County growth from 1990 through 2003 ranged from as low as a 22% decrease in wages in Hamilton County to as high as a 183% increase in GSP in Franklin County. The top three counties contributing to the overall state economy and with the highest population in 2003 were all shoreline counties: (1) Miami-Dade, (2) Broward, and (3) Hillsborough. Miami-Dade, the top county, contributed to between 13% and 16% of Florida's economy and around 14% of the state population. Broward, coming in second, contributed to 10% of the population and around 10% of the economy. Finally, Hillsborough contributed to approximately 9% of the economy and approximately 6% of the state. These three counties combined make up around 36% of the total state economy and 30% of Florida's population. And yet all three counties combined only make up 3.1% of the total state land area.

In 2003, the three counties with the largest economies in Florida accounted for 36% of the state economy and 30% of its population, with only 3% of the land (see Tables 4.8 and 4.9). These three counties were all shoreline counties, two of them in the Southeast, Miami-Dade and Broward, and one in the Tampa Bay Region:, Hillsborough. Miami-Dade, the top county, contributed approximately 15% to Florida's economy with 14% of the state population. Broward, with the second largest economy and 10% of the population, contributed an estimated 10% to the Florida economy. Finally, Hillsborough contributed 9% of the Florida economy with 6% of the state population.

Inland counties including the Heartland and North Central regions are the least populated and represent the smallest economies in the state. The Southeast region, by far the largest and richest by every indicator, is a dominant force in the state. Miami-Dade County, its richest county, appears also to have the highest salary per employ at more than $75,000 per year while Lafayette county in the North Central Region registers $41,000 per employee per year, indicating a wide range of standards of living in Florida. The counties with the highest populations produce the largest economies and seemingly the highest salaries (see Table 4.12).

Some of the top counties for economic growth according to Table 4.13 include Flagler, Franklin, Saint Johns, Seminole, Sumter, Wakulla, and Walton counties, all of which have relatively smaller populations than the heavily populated shoreline counties. Some of the lowest counties, which even had some decreasing economic indicators, include Desoto, Gulf, Taylor, and Union counties. Hamilton County was the sole county to have obvious losses during the period studied.

Counties with large populations that experienced high growth are probably the ones to watch, such as Broward County. Otherwise, those with the highest growth rates appear to be the smaller populated areas. Those with moderate and lower growth rates are mostly those with large populations, and already booming economies along the shore (see Table 4.13).

Table 4.12: County Comparisons of Economic Indicators and Population

County	Population	% State	Employed	% State	Wages ($Millions)	% State	GSP ($Millions)	% of State	GSP $/employee
STATE	16,999,181	100.00%	7,521,606	100.00%	$241,667.9	100.00%	$520,902.6	100.00%	$69,254
Alachua	221,717	1.30%	125,902	1.67%	$3,481.1	1.44%	$8,207.5	1.58%	$65,190
Baker	23,435	0.14%	6,804	0.09%	$151.5	0.06%	$398.5	0.08%	$58,566
Bay	154,888	0.91%	72,448	0.96%	$2,059.1	0.85%	$4,835.1	0.93%	$66,740
Bradford	26,969	0.16%	7,876	0.10%	$189.1	0.08%	$394.8	0.08%	$50,130
Brevard	505,756	2.98%	198,907	2.64%	$6,875.8	2.85%	$12,894.5	2.48%	$64,827
Broward	1,728,916	10.17%	706,774	9.40%	$25,116.5	10.39%	$52,896.9	10.15%	$74,843
Calhoun	12,987	0.08%	3,502	0.05%	$70.2	0.03%	$197.7	0.04%	$56,451
Charlotte	152,810	0.90%	39,296	0.52%	$1,245.5	0.52%	$2,636.6	0.51%	$67,097
Citrus	126,678	0.75%	32,440	0.43%	$816.9	0.34%	$2,277.0	0.44%	$70,190
Clay	156,995	0.92%	40,313	0.54%	$1,019.6	0.42%	$2,537.6	0.49%	$62,948
Collier	286,125	1.68%	122,193	1.62%	$3,973.6	1.64%	$8,263.6	1.59%	$67,628
Columbia	60,281	0.35%	21,803	0.29%	$526.9	0.22%	$1,282.9	0.25%	$58,841
DeSoto	33,972	0.20%	11,835	0.16%	$220.4	0.09%	$652.3	0.13%	$55,118
Dixie	13,967	0.08%	2,874	0.04%	$59.0	0.02%	$146.1	0.03%	$50,848
Duval	812,321	4.78%	482,575	6.42%	$17,073.7	7.06%	$33,639.3	6.46%	$69,708
Escambia	297,035	1.75%	144,629	1.92%	$4,115.0	1.70%	$8,922.9	1.71%	$61,695
Flagler	62,696	0.37%	15,861	0.21%	$412.4	0.17%	$1,334.1	0.26%	$84,112
Franklin	10,090	0.06%	3,607	0.05%	$77.0	0.03%	$316.1	0.06%	$87,622
Gadsden	45,255	0.27%	16,936	0.23%	$374.5	0.15%	$1,013.3	0.19%	$59,832
Gilchrist	15,628	0.09%	3,609	0.05%	$68.0	0.03%	$181.8	0.03%	$50,377
Glades	11,010	0.06%	1,708	0.02%	$35.8	0.01%	$77.2	0.01%	$45,209
Gulf	13,580	0.08%	4,105	0.05%	$100.8	0.04%	$318.7	0.06%	$77,635
Hamilton	14,009	0.08%	4,225	0.06%	$110.6	0.05%	$226.2	0.04%	$53,540
Hardee	27,657	0.16%	10,447	0.14%	$183.1	0.08%	$458.6	0.09%	$43,901
Hendry	37,130	0.22%	17,513	0.23%	$318.5	0.13%	$854.0	0.16%	$48,765
Hernando	143,514	0.84%	36,817	0.49%	$888.8	0.37%	$2,165.6	0.42%	$58,822
Highlands	91,052	0.54%	33,655	0.45%	$652.2	0.27%	$1,672.0	0.32%	$49,681
Hillsborough	1,073,450	6.31%	664,958	8.84%	$22,181.5	9.18%	$45,765.7	8.79%	$68,825
Holmes	19,028	0.11%	4,224	0.06%	$74.1	0.03%	$195.0	0.04%	$46,157
Indian River	120,246	0.71%	47,827	0.64%	$1,407.2	0.58%	$3,191.2	0.61%	$66,725
Jackson	46,865	0.28%	16,407	0.22%	$362.8	0.15%	$931.3	0.18%	$56,760
Jefferson	14,073	0.08%	3,739	0.05%	$72.5	0.03%	$211.9	0.04%	$56,673

Table 4.12: County Contributions to State Totals in 2003 (continued)

County	Population	% State	Employed	% State	Wages ($Millions)	% State	GSP ($Millions)	% of State	GSP $/employee
Lafayette	7,338	0.04%	1,539	0.02%	$38.4	0.02%	$64.3	0.01%	$41,752
Lake	246,844	1.45%	78,529	1.04%	$1,987.0	0.82%	$5,134.5	0.99%	$65,383
Lee	492,489	2.90%	193,636	2.57%	$6,018.1	2.49%	$13,929.0	2.67%	$71,934
Leon	242,099	1.42%	144,924	1.93%	$4,539.5	1.88%	$9,483.0	1.82%	$65,434
Levy	36,358	0.21%	9,777	0.13%	$194.8	0.08%	$540.1	0.10%	$55,245
Liberty	7,320	0.04%	2,333	0.03%	$56.3	0.02%	$127.9	0.02%	$54,807
Madison	18,791	0.11%	6,604	0.09%	$116.4	0.05%	$352.3	0.07%	$53,345
Manatee	287,569	1.69%	130,062	1.73%	$3,508.6	1.45%	$7,851.4	1.51%	$60,367
Marion	281,152	1.65%	92,441	1.23%	$2,452.1	1.01%	$5,830.0	1.12%	$63,068
Martin	134,999	0.79%	53,859	0.72%	$1,662.7	0.69%	$3,489.9	0.67%	$64,796
Miami-Dade	2,336,140	13.74%	1,020,345	13.57%	$36,693.2	15.18%	$76,542.6	14.69%	$75,016
Monroe	79,010	0.46%	42,403	0.56%	$1,146.1	0.47%	$2,631.9	0.51%	$62,068
Nassau	61,632	0.36%	18,704	0.25%	$527.0	0.22%	$1,168.1	0.22%	$62,453
Okaloosa	177,838	1.05%	97,209	1.29%	$2,954.5	1.22%	$6,715.3	1.29%	$69,081
Okeechobee	37,537	0.22%	12,482	0.17%	$250.0	0.10%	$628.6	0.12%	$50,358
Orange	964,073	5.67%	647,275	8.61%	$21,594.3	8.94%	$45,524.8	8.74%	$70,333
Osceola	205,993	1.21%	61,080	0.81%	$1,573.9	0.65%	$4,397.5	0.84%	$71,996
Palm Beach	1,212,395	7.13%	540,741	7.19%	$19,703.5	8.15%	$39,817.1	7.64%	$73,634
Pasco	388,224	2.28%	89,595	1.19%	$2,248.3	0.93%	$5,750.3	1.10%	$64,181
Pinellas	925,997	5.45%	466,190	6.20%	$14,494.9	6.00%	$32,267.8	6.19%	$69,216
Polk	510,841	3.01%	198,931	2.64%	$5,634.8	2.33%	$13,121.4	2.52%	$65,959
Putnam	71,775	0.42%	22,239	0.30%	$548.2	0.23%	$1,336.2	0.26%	$60,084
Santa Rosa	132,266	0.78%	31,712	0.42%	$820.1	0.34%	$1,934.4	0.37%	$61,000
Sarasota	346,891	2.04%	161,075	2.14%	$4,751.1	1.97%	$10,550.3	2.03%	$65,499
Seminole	385,395	2.27%	157,017	2.09%	$5,064.2	2.10%	$11,290.7	2.17%	$71,907
St. Johns	142,949	0.84%	48,542	0.65%	$1,352.8	0.56%	$2,986.7	0.57%	$61,527
St. Lucie	214,031	1.26%	63,516	0.84%	$1,746.5	0.72%	$4,269.8	0.82%	$67,225
Sumter	59,290	0.35%	12,445	0.17%	$305.1	0.13%	$815.8	0.16%	$65,554
Suwannee	36,783	0.22%	11,652	0.15%	$220.8	0.09%	$692.4	0.13%	$59,423
Taylor	19,380	0.11%	7,241	0.10%	$181.3	0.08%	$429.6	0.08%	$59,331
Union	13,943	0.08%	2,152	0.03%	$108.3	0.04%	$96.4	0.02%	$44,807
Volusia	467,651	2.75%	162,374	2.16%	$4,262.2	1.76%	$10,222.0	1.96%	$62,954
Wakulla	26,072	0.15%	4,717	0.06%	$115.9	0.05%	$312.1	0.06%	$66,161
Walton	46,388	0.27%	15,595	0.21%	$339.2	0.14%	$1,154.0	0.22%	$73,999
Washington	21,593	0.13%	6,827	0.09%	$144.4	0.06%	$348.0	0.07%	$50,977

Table 4.13: County Growth Rates for all Indicators 1990-2003

County	Population			Employment			Wages ($Millions)			GSP ($Millions)		
	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change
Florida State	12,938,071	16,999,181	31.4%	5,682,989	7,521,606	32.4%	$162,360.0	$241,667.9	48.8%	$315,282.3	$520,902.6	65.2%
Alachua	181,596	221,717	22.1%	97,851	125,902	28.7%	$2,502.4	$3,481.1	39.1%	$5,320.3	$8,207.5	54.3%
Baker	18,486	23,435	26.8%	4,025	6,804	69.0%	$108.5	$151.5	39.6%	$197.1	$398.5	102.2%
Bay	126,994	154,888	22.0%	59,396	72,448	22.0%	$1,422.9	$2,059.1	44.7%	$2,920.0	$4,835.1	65.6%
Bradford	22,515	26,969	19.8%	5,968	7,876	32.0%	$128.0	$189.1	47.8%	$271.4	$394.8	45.5%
Brevard	398,978	505,756	26.8%	171,646	198,907	15.9%	$5,429.5	$6,875.8	26.6%	$9,115.2	$12,894.5	41.5%
Broward	1,255,531	1,728,916	37.7%	520,769	706,774	35.7%	$15,995.4	$25,116.5	57.0%	$29,606.1	$52,896.9	78.7%
Calhoun	11,011	12,987	17.9%	2,999	3,502	16.8%	$58.8	$70.2	19.5%	$147.0	$197.7	34.5%
Charlotte	110,975	152,810	37.7%	29,038	39,296	35.3%	$687.6	$1,245.5	81.1%	$1,667.9	$2,636.6	58.1%
Citrus	93,513	126,678	35.5%	21,894	32,440	48.2%	$553.7	$816.9	47.5%	$1,316.3	$2,277.0	73.0%
Clay	105,986	156,995	48.1%	27,983	40,313	44.1%	$638.9	$1,019.6	59.6%	$1,447.5	$2,537.6	75.3%
Collier	152,099	286,125	88.1%	73,329	122,193	66.6%	$1,888.4	$3,973.6	110.4%	$4,084.5	$8,263.6	102.3%
Columbia	42,613	60,281	41.5%	14,323	21,803	52.2%	$330.9	$526.9	59.2%	$738.0	$1,282.9	73.8%
DeSoto	23,865	33,972	42.4%	10,161	11,835	16.5%	$163.4	$220.4	34.8%	$471.9	$652.3	38.2%
Dixie	10,585	13,967	32.0%	2,569	2,874	11.9%	$59.4	$59.0	-0.7%	$114.3	$146.1	27.8%
Duval	672,971	812,321	20.7%	399,072	482,575	20.9%	$12,226.9	$17,073.7	39.6%	$21,739.6	$33,639.3	54.7%
Escambia	262,798	297,035	13.0%	124,867	144,629	15.8%	$3,424.0	$4,115.0	20.2%	$6,805.7	$8,922.9	31.1%
Flagler	28,701	62,696	118.4%	7,695	15,861	106.1%	$178.5	$412.4	131.0%	$695.1	$1,334.1	91.9%
Franklin	8,967	10,090	12.5%	2,100	3,607	71.8%	$44.5	$77.0	73.2%	$111.5	$316.1	183.4%
Gadsden	41,116	45,255	10.1%	15,893	16,936	6.6%	$313.3	$374.5	19.5%	$847.6	$1,013.3	19.5%
Gilchrist	9,667	15,628	61.7%	2,393	3,609	50.8%	$40.7	$68.0	67.2%	$99.3	$181.8	83.1%
Glades	7,591	11,010	45.0%	1,030	1,708	65.8%	$25.7	$35.8	39.1%	$39.6	$77.2	94.8%
Gulf	11,504	13,580	18.0%	3,501	4,105	17.3%	$102.6	$100.8	-1.7%	$236.6	$318.7	34.7%
Hamilton	10,930	14,009	28.2%	4,941	4,225	-14.5%	$151.7	$110.6	-27.1%	$242.1	$226.2	-6.6%
Hardee	19,499	27,657	41.8%	10,273	10,447	1.7%	$128.9	$183.1	42.0%	$367.4	$458.6	24.8%
Hendry	25,773	37,130	44.1%	13,911	17,513	25.9%	$225.4	$318.5	41.3%	$622.9	$854.0	37.1%
Hernando	101,115	143,514	41.9%	21,481	36,817	71.4%	$491.1	$888.8	81.0%	$993.6	$2,165.6	118.0%
Highlands	68,432	91,052	33.1%	23,909	33,655	40.8%	$446.0	$652.2	46.2%	$1,097.6	$1,672.0	52.3%
Hillsborough	834,054	1,073,450	28.7%	464,864	664,958	43.0%	$13,433.5	$22,181.5	65.1%	$26,847.1	$45,765.7	70.5%
Holmes	15,778	19,028	20.6%	3,824	4,224	10.5%	$62.0	$74.1	19.5%	$152.6	$195.0	27.7%
Indian River	90,208	120,246	33.3%	36,387	47,827	31.4%	$952.9	$1,407.2	47.7%	$2,130.6	$3,191.2	49.8%
Jackson	41,375	46,865	13.3%	14,513	16,407	13.1%	$304.2	$362.8	19.3%	$713.0	$931.3	30.6%
Jefferson	11,296	14,073	24.6%	3,586	3,739	4.3%	$58.3	$72.5	24.2%	$164.4	$211.9	28.9%

Table 4.13: County Growth Rates for all Indicators 1990-2003 (continued)

County	Population			Employment			Wages ($Millions)			GSP ($Millions)		
	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change	1990	2003	% Change
Lafayette	5,578	7,338	31.6%	1,044	1,539	47.4%	$22.7	$38.4	68.9%	$31.7	$64.3	102.8%
Lake	152,104	246,844	62.3%	48,933	78,529	60.5%	$1,086.9	$1,987.0	82.8%	$2,666.6	$5,134.5	92.5%
Lee	335,113	492,489	47.0%	130,942	193,636	47.9%	$3,417.9	$6,018.1	76.1%	$7,989.8	$13,929.0	74.3%
Leon	192,493	242,099	25.8%	112,877	144,924	28.4%	$3,094.0	$4,539.5	46.7%	$6,034.2	$9,483.0	57.2%
Levy	25,912	36,358	40.3%	6,274	9,777	55.8%	$115.4	$194.8	68.8%	$303.6	$540.1	77.9%
Liberty	5,569	7,320	31.4%	1,653	2,333	41.1%	$32.7	$56.3	72.0%	$81.1	$127.9	57.7%
Madison	16,569	18,791	13.4%	5,483	6,604	20.4%	$102.6	$116.4	13.5%	$278.1	$352.3	26.7%
Manatee	211,707	287,569	35.8%	77,783	130,062	67.2%	$1,914.8	$3,508.6	83.2%	$4,699.9	$7,851.4	67.1%
Marion	194,835	281,152	44.3%	67,089	92,441	37.8%	$1,547.1	$2,452.1	58.5%	$3,478.5	$5,830.0	67.6%
Martin	100,900	134,999	33.8%	38,768	53,859	38.9%	$1,134.7	$1,662.7	46.5%	$2,158.5	$3,489.9	61.7%
Miami-Dade	1,937,194	2,336,140	20.6%	905,162	1,020,345	12.7%	$29,001.1	$36,693.2	26.5%	$54,638.2	$76,542.6	40.1%
Monroe	78,024	79,010	1.3%	33,548	42,403	26.4%	$864.5	$1,146.1	32.6%	$1,544.6	$2,631.9	70.4%
Nassau	43,941	61,632	40.3%	13,556	18,704	38.0%	$362.3	$527.0	45.5%	$721.9	$1,168.1	61.8%
Okaloosa	143,777	177,838	23.7%	71,803	97,209	35.4%	$1,841.0	$2,954.5	60.5%	$3,543.9	$6,715.3	89.5%
Okeechobee	29,627	37,537	26.7%	9,245	12,482	35.0%	$174.9	$250.0	43.0%	$420.5	$628.6	49.5%
Orange	677,491	964,073	42.3%	461,422	647,275	40.3%	$13,877.7	$21,594.3	55.6%	$24,712.3	$45,524.8	84.2%
Osceola	107,728	205,993	91.2%	38,330	61,080	59.4%	$869.9	$1,573.9	80.9%	$1,966.8	$4,397.5	123.6%
Palm Beach	863,503	1,212,395	40.4%	377,141	540,741	43.4%	$12,156.5	$19,703.5	62.1%	$21,560.7	$39,817.1	84.7%
Pasco	281,131	388,224	38.1%	67,335	89,595	33.1%	$1,470.5	$2,248.3	52.9%	$3,260.6	$5,750.3	76.4%
Pinellas	851,659	925,997	8.7%	358,319	466,190	30.1%	$9,974.2	$14,494.9	45.3%	$19,960.6	$32,267.8	61.7%
Polk	405,382	510,841	26.0%	166,831	198,931	19.2%	$4,289.1	$5,634.8	31.4%	$9,160.3	$13,121.4	43.2%
Putnam	65,070	71,775	10.3%	17,028	22,239	30.6%	$418.7	$548.2	30.9%	$903.2	$1,336.2	47.9%
Santa Rosa	81,608	132,266	62.1%	21,264	31,712	49.1%	$519.5	$820.1	57.9%	$975.1	$1,934.4	98.4%
Sarasota	277,776	346,891	24.9%	113,223	161,075	42.3%	$3,138.1	$4,751.1	51.4%	$5,285.3	$10,550.3	99.6%
Seminole	287,521	385,395	34.0%	93,847	157,017	67.3%	$2,570.0	$5,064.2	97.0%	$4,896.3	$11,290.7	130.6%
St. Johns	83,829	142,949	70.5%	28,570	48,542	69.9%	$664.1	$1,352.8	103.7%	$1,398.8	$2,986.7	113.5%
St. Lucie	150,171	214,031	42.5%	49,571	63,516	28.1%	$1,196.9	$1,746.5	45.9%	$2,752.7	$4,269.8	55.1%
Sumter	31,577	59,290	87.8%	7,261	12,445	71.4%	$141.9	$305.1	115.0%	$367.3	$815.8	122.1%
Suwannee	26,780	36,783	37.4%	8,780	11,652	32.7%	$165.3	$220.8	33.6%	$421.4	$692.4	64.3%
Taylor	17,111	19,380	13.3%	6,952	7,241	4.2%	$185.8	$181.3	-2.4%	$374.2	$429.6	14.8%
Union	10,252	13,943	36.0%	1,953	2,152	10.2%	$88.9	$108.3	21.8%	$84.4	$96.4	14.3%
Volusia	370,737	467,651	26.1%	128,991	162,374	25.9%	$3,020.4	$4,262.2	41.1%	$6,486.6	$10,222.0	57.6%
Wakulla	14,202	26,072	83.6%	2,750	4,717	71.5%	$62.8	$115.9	84.4%	$130.0	$312.1	140.1%
Walton	27,759	46,388	67.1%	8,309	15,595	87.7%	$159.7	$339.2	112.4%	$463.9	$1,154.0	148.8%
Washington	16,919	21,593	27.6%	4,733	6,827	44.2%	$99.2	$144.4	45.5%	$206.8	$348.0	68.3%

4.6   COASTAL ECONOMY SUMMARY

While shoreline counties only make up 56% of the land, they contributed around 75% to the Coastal Economy in 2003. In addition, the Southeast region (which is made up entirely of shoreline counties) accounts for only 14.5% of the land, but contributed around 35% to the Coastal Economy. However, although shoreline counties contribute more to the Coastal Economy, inland counties are growing more extensively in both population and value. Perhaps the most telling observation in Table 4.8 is the vulnerability of Florida's economy to natural coastal hazards. With 77% of the state's population, employees and GSP exposed to hurricanes, storm surges and often accompanying tornadoes, Florida shoreline counties are not only Florida's largest asset, but may also be the state's greatest economic risk.

4.7   REFERENCES

NOEP database and website. <http://www.OceanEconomics.org>

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U.S. Census Bureau Data. Annual Estimates of the Population for Counties: April 1, 2005. <http://www.census.gov/popest/counties/CO-EST2005-01.html>

Chapter 5   Population and Housing

5.1   INTRODUCTION

While economic indicators provide a picture of economic health in Florida, it is also important to know the context in which that growth or decline occurs. This chapter on population and housing patterns, growth and status gives that perspective. Some states such as California have an imbalance between population, employment and housing in coastal areas, resulting in inflated housing prices due to shortages in affordable housing. Florida's situation appears quite different.   While housing and population changed significantly between 1990 and 2004 in Florida,[21] the growth in the state kept pace with the economy, although shoreline counties show a lag of housing compared to population growth by about 4% (see Tables 5.2 and 5.3 for housing and population balance). However, that does not mean that there was uniformity in this balance. Rather, it does say that the economic growth and population and housing growth kept paces relatively well with each other generally in the state. Florida's total population increased 34%, with housing not far behind at 31%, as shown in Table 5.1. During this time, population and housing increased at an average annual rate of 2.2% and 1.8% respectively.

Similar to economic growth, inland counties grew faster than shoreline counties with inland population growing 42%, versus Shoreline at about 32%, as shown by Table 5.1. However, density for both population and housing almost triple in shoreline counties compared to inland. Density can indicate large cities, however, which are characteristic of the highest populated areas of Florida. Again diversity of open space and land availability becomes clearer when these figures are compared with economic growth.

Table 5.1: Florida Regional Population and Housing 1990-2004

Region	Population					Housing				
	1990 Population	1990 Density	2004 Population	2004 Density	Population Growth	1990 Housing	1990 Density	2004 Housing	2004 Density	Housing Growth
Shoreline	10,066,343	336	13,320,811	444	32.3%	4,889,752	163	6,285,851	210	28.6%
Inland	2,871,728	120	4,064,619	170	41.5%	1,210,510	51	1,723,576	72	42.4%
Atlantic	5,996,664	526	7,947,569	697	32.5%	2,837,562	249	3,584,174	314	26.3%
Gulf	4,069,679	219	5,373,242	289	32.0%	2,052,190	110	2,701,677	145	31.6%
Florida	12,938,071	240	17,385,430	322	34.4%	6,100,262.00	113	8,009,427	149	31.3%

The majority, 77%, of Florida's population lived in shoreline counties in 2004; 46% along the Atlantic Coast; and 31% along the Gulf Coast. The remaining 33% lived within the inland county region, as shown in Table 5.2.

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[21] Population figures in Chapter 4 are for 2003 and therefore smaller than those reported in Chapter 5. The earlier year was used in Chapter 4 for purposes of comparison with GSP values, unavailable from the federal government for 2004 to date.

Table 5.2: Distribution of Florida's Population, 2004

Region	Population	Percent
Florida Shoreline	13,320,811	76.6%
Inland	4,064,619	23.4%
Atlantic	7,947,569	45.7%
Gulf	5,373,242	30.9%

The majority, 79%, of Florida's housing was in shoreline counties in 2004; 46% along the Atlantic Coast, and 31% along the Gulf Coast. The remaining 33% were within the inland county region, as shown in Table 5.3.

Table 5.3: Distribution of Florida's Housing, 2004

Region	Housing	Percent
Florida Shoreline	6,285,851	78.5%
Inland	1,723,576	21.5%
Atlantic	3,584,174	44.7%
Gulf	2,701,677	33.7%

5.2 POPULATION AND HOUSING BY COUNTY

Many counties in Florida are able to continue fostering a growing population. High growth between 1990 and 2004, low densities in 2004, and large land area within a single county indicate that future growth is likely, particularly in inland areas as indicated.

The five most populous and five most densely populated counties (Miami-Dade, Broward, Palm Beach, Hillsborough, Orange, Pinellas, and Seminole) were not among the top 18 counties with the fastest growing populations in Florida, 1990 through 2004. Hence, the largest counties were no longer the fastest growing (see Table 5.4 and Table 5.5).

Between 1990 and 2004, six of the ten fastest growing counties were shoreline counties. While Florida's overall growth rate was slowing up to 2004, and the inland region experienced the most growth of the three regions, the fastest growing counties were located in the shoreline region.

Thirteen counties in Florida grew by 50% or more between 1990 and 2004, two of which more than doubled in size (Flagler, Osceola). Monroe County experienced virtually no growth at all (see Table 5.4 and Table 5.5). All shoreline counties are shown in bold.

Table 5.4: Florida Counties Population and Growth 1990-2004

Rank	County	1990 Population	County	2004 Population	County	1990 - 2004 Population Growth	Rank
1	Miami-Dade	1,937,194	Miami-Dade	2,358,714	Flagler	140.5%	1
2	Broward	1,255,531	Broward	1,753,000	Osceola	104.3%	2
3	Palm Beach	863,503	Palm Beach	1,244,189	Collier	95.1%	3
4	Pinellas	851,659	Hillsborough	1,100,333	Sumter	91.8%	4
5	Hillsborough	834,054	Orange	989,873	Wakulla	90.6%	5
6	Orange	677,491	Pinellas	927,498	St. Johns	82.2%	6
7	Duval	672,971	Duval	819,623	Walton	74.2%	7
8	Polk	405,382	Polk	524,286	Lake	72.1%	8
9	Brevard	398,978	Brevard	518,812	Santa Rosa	69.2%	9
10	Volusia	370,737	Lee	514,923	Gilchrist	64.7%	10
11	Lee	335,113	Volusia	478,951	Clay	55.1%	11
12	Seminole	287,521	Pasco	408,046	Lee	53.7%	12
13	Pasco	281,131	Seminole	391,241	St. Lucie	51.2%	13
14	Sarasota	277,776	Sarasota	355,722	Marion	49.8%	14
15	Escambia	262,798	Escambia	296,739	Hernando	48.9%	15
16	Manatee	211,707	Collier	296,675	Hendry	47.9%	16
17	Marion	194,835	Manatee	295,974	Glades	46.8%	17
18	Leon	192,493	Marion	291,768	Orange	46.1%	18
19	Alachua	181,596	Lake	261,845	DeSoto	46.0%	19
20	Lake	152,104	Leon	243,703	Pasco	45.1%	20
21	Collier	152,099	St. Lucie	227,110	Columbia	44.8%	21
22	St. Lucie	150,171	Alachua	222,568	Palm Beach	44.1%	22
23	Okaloosa	143,777	Osceola	220,127	Hardee	43.7%	23
24	Bay	126,994	Okaloosa	180,910	Levy	43.7%	24
25	Charlotte	110,975	Clay	164,387	Nassau	43.5%	25
26	Osceola	107,728	Bay	157,811	Union	43.0%	26
27	Clay	105,986	Charlotte	157,324	Charlotte	41.8%	27
28	Hernando	101,115	St. Johns	152,724	Suwannee	40.4%	28
29	Martin	100,900	Hernando	150,540	Manatee	39.8%	29
30	Citrus	93,513	Santa Rosa	138,073	Broward	39.6%	30
31	Indian River	90,208	Martin	137,693	Citrus	39.3%	31
32	St. Johns	83,829	Citrus	130,273	Indian River	38.2%	32
33	Santa Rosa	81,608	Indian River	124,676	Martin	36.5%	33
34	Monroe	78,024	Highlands	93,133	Highlands	36.1%	34
35	Highlands	68,432	Monroe	78,016	Seminole	36.1%	35
36	Putnam	65,070	Putnam	72,574	Dixie	34.8%	36
37	Nassau	43,941	Flagler	69,016	Lafayette	34.5%	37
38	Columbia	42,613	Nassau	63,061	Liberty	33.6%	38
39	Jackson	41,375	Columbia	61,710	Hillsborough	31.9%	39
40	Gadsden	41,116	Sumter	60,569	Okeechobee	31.7%	40
41	Sumter	31,577	Walton	48,368	Brevard	30.0%	41
42	Okeechobee	29,627	Jackson	47,712	Washington	30.0%	42
43	Flagler	28,701	Gadsden	46,083	Baker	29.5%	43
44	Walton	27,759	Okeechobee	39,006	Polk	29.3%	44

Rank	County	1990 Population	County	2004 Population	County	1990 - 2004 Population Growth	Rank
45	Suwannee	26,780	Hendry	38,113	**Volusia**	**29.2%**	45
46	**Levy**	**25,912**	Suwannee	37,612	Hamilton	28.8%	46
47	Hendry	25,773	**Levy**	**37,230**	**Sarasota**	**28.1%**	47
48	DeSoto	23,865	DeSoto	34,842	**Jefferson**	**27.4%**	48
49	Bradford	22,515	Hardee	28,022	Leon	26.6%	49
50	Hardee	19,499	Bradford	27,623	**Okaloosa**	**25.8%**	50
51	Baker	18,486	**Wakulla**	**27,074**	**Bay**	**24.3%**	51
52	**Taylor**	**17,111**	Baker	23,946	Bradford	22.7%	52
53	Washington	16,919	Washington	21,987	Alachua	22.6%	53
54	Madison	16,569	**Taylor**	**19,268**	**Duval**	**21.8%**	54
55	Holmes	15,778	Madison	19,067	**Miami-Dade**	**21.8%**	55
56	**Wakulla**	**14,202**	Holmes	19,031	Holmes	20.6%	56
57	**Gulf**	**11,504**	Gilchrist	15,921	**Gulf**	**19.1%**	57
58	**Jefferson**	**11,296**	Union	14,660	Calhoun	18.5%	58
59	Calhoun	11,011	**Jefferson**	**14,392**	Jackson	15.3%	59
60	Hamilton	10,930	**Dixie**	**14,266**	Madison	15.1%	60
61	**Dixie**	**10,585**	Hamilton	14,076	**Escambia**	**12.9%**	61
62	Union	10,252	**Gulf**	**13,703**	**Taylor**	**12.6%**	62
63	Gilchrist	9,667	Calhoun	13,043	**Franklin**	**12.5%**	63
64	**Franklin**	**8,967**	Glades	11,146	Gadsden	12.1%	64
65	Glades	7,591	**Franklin**	**10,084**	Putnam	11.5%	65
66	Lafayette	5,578	Lafayette	7,503	**Pinellas**	**8.9%**	66
67	Liberty	5,569	Liberty	7,442	**Monroe**	**0.0%**	67

The three counties with the fastest population growth during the observed 15 years (Flagler, Osceola, Collier), were not among the most dense counties in Florida in 2004, ranked 31, 32, and 33 (Osceola, Collier, Flagler) as shown in Table 5.5. These counties have relatively small land areas compared to the other counties. This implies these counties don't have much room to continue growing. However, seven of the ten densest counties may have room to grow since they have relatively large land areas compared to the other counties (Broward, 1,205 sq. mi.; Miami-Dade, 1,946 sq. mi.; Orange, 907 sq. mi.; Duval, 774 sq. mi.; Hillsborough, 1,051 sq. mi.; Lee, 804 sq. mi.; Palm Beach, 1,974 sq. mi.).

Table 5.5: Florida Counties Population Density and Population Growth 1990-2004

Rank	County	1990 Population Density*	County	2004 Population Density*	County	1990 - 2004 Population Density Growth*	Rank
1	Pinellas	3,043	Pinellas	3,313	Flagler	140.5%	1
2	Broward	1,042	Broward	1,454	Osceola	104.3%	2
3	Miami-Dade	995	Seminole	1,269	Collier	95.1%	3
4	Seminole	933	Miami-Dade	1,212	Sumter	91.8%	4
5	Duval	870	Orange	1,091	Wakulla	90.6%	5
6	Hillsborough	794	Duval	1,059	St. Johns	82.2%	6
7	Orange	747	Hillsborough	1,047	Walton	74.2%	7
8	Sarasota	486	Lee	641	Lake	72.1%	8
9	Palm Beach	437	Palm Beach	630	Santa Rosa	69.2%	9
10	Lee	417	Sarasota	622	Gilchrist	64.7%	10
11	Escambia	397	Pasco	548	Clay	55.1%	11
12	Brevard	392	Brevard	510	Lee	53.7%	12
13	Pasco	377	Escambia	448	St. Lucie	51.2%	13
14	Volusia	336	Volusia	434	Marion	49.8%	14
15	Leon	289	Manatee	399	Hernando	48.9%	15
16	Manatee	286	St. Lucie	397	Hendry	47.9%	16
17	St. Lucie	262	Leon	366	Glades	46.8%	17
18	Polk	216	Hernando	315	Orange	46.1%	18
19	Hernando	211	Polk	280	DeSoto	46.0%	19
20	Alachua	208	Lake	275	Pasco	45.1%	20
21	Martin	182	Clay	273	Columbia	44.8%	21
22	Indian River	179	Alachua	255	Palm Beach	44.1%	22
23	Clay	176	St. Johns	251	Hardee	43.7%	23
24	Bay	166	Martin	248	Levy	43.7%	24
25	Citrus	160	Indian River	248	Nassau	43.5%	25
26	Charlotte	160	Charlotte	227	Union	43.0%	26
27	Lake	160	Citrus	223	Charlotte	41.8%	27
28	Okaloosa	154	Bay	207	Suwannee	40.4%	28
29	St. Johns	138	Okaloosa	193	Manatee	39.8%	29
30	Marion	123	Marion	185	Broward	39.6%	30
31	Putnam	90	Osceola	167	Citrus	39.3%	31
32	Osceola	81	Collier	146	Indian River	38.2%	32
33	Santa Rosa	80	Flagler	142	Martin	36.5%	33
34	Gadsden	80	Santa Rosa	136	Highlands	36.1%	34
35	Monroe	78	Sumter	111	Seminole	36.1%	35
36	Bradford	77	Putnam	101	Dixie	34.8%	36
37	Collier	75	Nassau	97	Lafayette	34.5%	37
38	Nassau	67	Bradford	94	Liberty	33.6%	38
39	Highlands	67	Highlands	91	Hillsborough	31.9%	39
40	Flagler	59	Gadsden	89	Okeechobee	31.7%	40
41	Sumter	58	Monroe	78	Brevard	30.0%	41
42	Columbia	53	Columbia	77	Washington	30.0%	42
43	Jackson	45	Union	61	Baker	29.5%	43

Rank	County	1990 Population Density*	County	2004 Population Density*	County	1990 - 2004 Population Density Growth*	Rank
44	Union	43	Suwannee	55	Polk	29.3%	44
45	Suwannee	39	DeSoto	55	**Volusia**	**29.2%**	45
46	Okeechobee	38	Jackson	52	Hamilton	28.8%	46
47	DeSoto	37	Okeechobee	50	**Sarasota**	**28.1%**	47
48	Holmes	33	**Walton**	**46**	**Jefferson**	**27.4%**	48
49	Baker	32	Gilchrist	46	Leon	26.6%	49
50	Hardee	31	**Wakulla**	**45**	**Okaloosa**	**25.8%**	50
51	Washington	29	Hardee	44	**Bay**	**24.3%**	51
52	Gilchrist	28	Baker	41	Bradford	22.7%	52
53	**Walton**	**26**	Holmes	39	Alachua	22.6%	53
54	Madison	24	Washington	38	**Duval**	**21.8%**	54
55	**Wakulla**	**23**	**Levy**	**33**	**Miami-Dade**	**21.8%**	55
56	**Levy**	**23**	Hendry	33	Holmes	20.6%	56
57	Hendry	22	Madison	28	**Gulf**	**19.1%**	57
58	Hamilton	21	Hamilton	27	Calhoun	18.5%	58
59	**Gulf**	**21**	**Gulf**	**25**	Jackson	15.3%	59
60	Calhoun	19	**Jefferson**	**24**	Madison	15.1%	60
61	**Jefferson**	**19**	Calhoun	23	**Escambia**	**12.9%**	61
62	**Franklin**	**16**	**Dixie**	**20**	**Taylor**	**12.6%**	62
63	**Taylor**	**16**	**Franklin**	**19**	**Franklin**	**12.5%**	63
64	**Dixie**	**15**	**Taylor**	**18**	Gadsden	12.1%	64
65	Lafayette	10	Glades	14	Putnam	11.5%	65
66	Glades	10	Lafayette	14	**Pinellas**	**8.9%**	66
67	Liberty	7	Liberty	9	Monroe	0.0%	67

*Density per square mile

The large size of the shoreline counties and their slower growth rates are more apparent. Table 5.6 shows that the five most populous and five most housing dense counties (Miami-Dade, Broward, Palm Beach, Hillsborough, Pinellas and Duval) were not among the top 35 counties with the fastest housing growth in Florida, 1990 through 2004. Hence, the largest counties were no longer constructing housing units as quickly as smaller counties. Six of the 10 fastest growing counties were shoreline.

Housing in 13 counties in Florida grew by 50% or more between 1990 and 2004, two of which more than doubled in size (Flagler, Sumter).

Flagler was the only county that doubled both its population and housing between 1990 and 2004 (see Table 5.4 and 5.6).

Table 5.6: Florida Counties Housing Growth 1990-2004

Rank	County	1990 Housing	County	2004 Housing	County	1990 - 2004 Housing Growth	Rank
1	**Miami-Dade**	**771,288**	**Miami-Dade**	**906,877**	**Flagler**	**125.0%**	1
2	**Broward**	**628,660**	**Broward**	**782,384**	Sumter	107.3%	2
3	**Palm Beach**	**461,665**	**Palm Beach**	**605,650**	Osceola	94.6%	3
4	**Pinellas**	**458,341**	**Pinellas**	**492,041**	**Walton**	**86.3%**	4
5	**Hillsborough**	**367,740**	**Hillsborough**	**477,626**	**Collier**	**85.4%**	5
6	**Duval**	**284,673**	Orange	409,685	**Wakulla**	**74.3%**	6
7	Orange	282,686	**Duval**	**357,721**	**Sarasota**	**71.9%**	7
8	**Lee**	**189,051**	**Lee**	**292,830**	**St. Johns**	**66.9%**	8
9	Polk	186,225	Polk	246,661	Lake	60.6%	9
10	**Brevard**	**185,150**	**Brevard**	**243,652**	Clay	55.3%	10
11	**Volusia**	**180,972**	**Volusia**	**230,718**	**Nassau**	**55.0%**	11
12	**St. Lucie**	**157,055**	**St. Lucie**	**201,379**	Lee	54.9%	12
13	**Pasco**	**148,965**	**Pasco**	**194,333**	Gilchrist	52.0%	13
14	**Santa Rosa**	**117,845**	**Collier**	**174,564**	Liberty	48.5%	14
15	**Manatee**	**115,245**	**Santa Rosa**	**162,185**	Marion	48.4%	15
16	**Escambia**	**112,230**	**Manatee**	**154,424**	Seminole	46.4%	16
17	Marion	94,567	Marion	140,344	Orange	44.9%	17
18	**Collier**	**94,165**	**Escambia**	**132,017**	**Indian River**	**40.4%**	18
19	Leon	81,325	Lake	121,564	**Hernando**	**39.9%**	19
20	Alachua	79,022	Leon	113,554	Leon	39.6%	20
21	Lake	75,707	Seminole	108,130	**Levy**	**39.2%**	21
22	Seminole	73,843	Alachua	102,700	Columbia	37.9%	22
23	**Bay**	**65,999**	Osceola	93,352	Suwannee	37.9%	23
24	**Charlotte**	**64,641**	**Charlotte**	**87,954**	**Santa Rosa**	**37.6%**	24
25	**Okaloosa**	**62,569**	**Bay**	**86,013**	DeSoto	36.1%	25
26	**Martin**	**54,199**	**Okaloosa**	**85,065**	**Charlotte**	**36.1%**	26
27	**Hernando**	**50,018**	**Martin**	**71,572**	**Okaloosa**	**36.0%**	27
28	**Citrus**	**49,854**	**Hernando**	**69,984**	**Citrus**	**35.7%**	28
29	Osceola	47,959	**Sarasota**	**69,964**	Baker	35.1%	29
30	**Indian River**	**47,128**	**Citrus**	**67,629**	**Manatee**	**34.0%**	30
31	**Monroe**	**46,215**	**Indian River**	**66,177**	**Franklin**	**32.7%**	31
32	**Sarasota**	**40,712**	Clay	62,501	Polk	32.5%	32
33	Clay	40,249	**St. Johns**	**54,785**	**Martin**	**32.1%**	33
34	Highlands	40,114	**Monroe**	**52,536**	**Brevard**	**31.6%**	34
35	**St. Johns**	**32,831**	Highlands	50,921	**Gulf**	**31.2%**	35
36	Putnam	31,840	**Walton**	**34,889**	**Palm Beach**	**31.2%**	36
37	**Walton**	**18,728**	Putnam	34,701	**Pasco**	**30.5%**	37
38	**Nassau**	**18,726**	**Flagler**	**34,231**	**Bay**	**30.3%**	38
39	Columbia	17,818	Sumter	31,715	Alachua	30.0%	39
40	Jackson	16,320	**Nassau**	**29,028**	**Hillsborough**	**29.9%**	40
41	Sumter	15,298	Columbia	24,573	Union	29.2%	41
42	**Flagler**	**15,215**	Jackson	20,135	**St. Lucie**	**28.2%**	42
43	Gadsden	14,859	Gadsden	18,033	Madison	27.9%	43
44	Okeechobee	13,266	**Levy**	**17,126**	**Volusia**	**27.5%**	44

Rank	County	1990 Housing	County	2004 Housing	County	1990 - 2004 Housing Growth	Rank
45	**Levy**	**12,307**	Suwannee	16,132	Washington	27.4%	45
46	Suwannee	11,699	Okeechobee	15,994	Hardee	27.4%	46
47	DeSoto	10,310	DeSoto	14,032	Glades	27.1%	47
48	Hendry	9,945	Hendry	12,525	Highlands	26.9%	48
49	Bradford	8,099	**Wakulla**	**11,484**	Hendry	25.9%	49
50	Hardee	7,941	Hardee	10,114	**Duval**	**25.7%**	50
51	**Taylor**	**7,908**	Bradford	9,848	**Jefferson**	**25.2%**	51
52	Washington	7,703	**Taylor**	**9,824**	**Broward**	**24.5%**	52
53	Holmes	6,785	Washington	9,812	**Taylor**	**24.2%**	53
54	**Wakulla**	**6,587**	**Gulf**	**8,319**	Hamilton	23.6%	54
55	**Dixie**	**6,445**	Holmes	8,164	Jackson	23.4%	55
56	**Gulf**	**6,339**	Baker	8,074	Bradford	21.6%	56
57	Madison	6,275	Madison	8,025	Gadsden	21.4%	57
58	Baker	5,975	**Franklin**	**7,816**	Lafayette	21.2%	58
59	**Franklin**	**5,891**	**Dixie**	**7,553**	Okeechobee	20.6%	59
60	Glades	4,624	Gilchrist	6,188	Holmes	20.3%	60
61	Calhoun	4,468	Glades	5,878	Calhoun	19.4%	61
62	**Jefferson**	**4,395**	**Jefferson**	**5,501**	**Escambia**	**17.6%**	62
63	Hamilton	4,119	Calhoun	5,336	**Miami-Dade**	**17.6%**	63
64	Gilchrist	4,071	Hamilton	5,092	**Dixie**	**17.2%**	64
65	Union	2,975	Union	3,844	**Monroe**	**13.7%**	65
66	Lafayette	2,266	Liberty	3,203	Putnam	9.0%	66
67	Liberty	2,157	Lafayette	2,746	**Pinellas**	**7.4%**	67

The three counties with the fastest housing growth during the observed 15 years (Flagler, Sumter, Osceola), were not among the most dense counties in Florida in 2004, ranked 33, 34, and 35 (Osceola, Flagler, Sumter) (see Table 5.7). Interestingly, Pinellas, ranking number one for housing density at the beginning of the period and the end, ranked last in growth rate, possibly due either to saturation or very costly homes affordable only by a few. Once again, the counties with the largest amount of housing grew more slowly than most others, where there was room to grow and possibly affordability.

Table 5.7: Florida Counties Housing Density and Growth 1990-2004

Rank	County	1990 Housing Density*	County	2004 Housing Density*	County	1990 - 2004 Housing Density Growth*	Rank
1	Pinellas	1,637	Pinellas	1,758	Flagler	125.0%	1
2	Broward	522	Broward	649	Sumter	107.3%	2
3	Miami-Dade	396	Miami-Dade	466	Osceola	94.6%	3
4	Duval	368	Duval	462	Walton	86.3%	4
5	Hillsborough	350	Hillsborough	454	Collier	85.4%	5
6	Orange	312	Orange	451	Wakulla	74.3%	6
7	St. Lucie	274	Lee	364	Sarasota	71.9%	7
8	Seminole	240	St. Lucie	352	St. Johns	66.9%	8
9	Lee	235	Seminole	351	Lake	60.6%	9
10	Palm Beach	234	Palm Beach	307	Clay	55.3%	10
11	Pasco	200	Pasco	261	Nassau	55.0%	11
12	Brevard	182	Brevard	239	Lee	54.9%	12
13	Escambia	169	Volusia	209	Gilchrist	52.0%	13
14	Volusia	164	Manatee	208	Liberty	48.5%	14
15	Manatee	156	Escambia	199	Marion	48.4%	15
16	Leon	122	Leon	170	Seminole	46.4%	16
17	Santa Rosa	116	Santa Rosa	159	Orange	44.9%	17
18	Hernando	105	Hernando	146	Indian River	40.4%	18
19	Polk	99	Indian River	132	Hernando	39.9%	19
20	Martin	98	Polk	132	Leon	39.6%	20
21	Indian River	94	Martin	129	Levy	39.2%	21
22	Charlotte	93	Lake	128	Columbia	37.9%	22
23	Alachua	90	Charlotte	127	Suwannee	37.9%	23
24	Bay	86	Sarasota	122	Santa Rosa	37.6%	24
25	Citrus	85	Alachua	117	DeSoto	36.1%	25
26	Lake	79	Citrus	116	Charlotte	36.1%	26
27	Sarasota	71	Bay	113	Okaloosa	36.0%	27
28	Clay	67	Clay	104	Citrus	35.7%	28
29	Okaloosa	67	Okaloosa	91	Baker	35.1%	29
30	Marion	60	St. Johns	90	Manatee	34.0%	30
31	St. Johns	54	Marion	89	Franklin	32.7%	31
32	Collier	46	Collier	86	Polk	32.5%	32
33	Monroe	46	Flagler	71	Martin	32.1%	33
34	Putnam	44	Osceola	71	Brevard	31.6%	34
35	Highlands	39	Sumter	58	Gulf	31.2%	35
36	Osceola	36	Monroe	53	Palm Beach	31.2%	36
37	Flagler	31	Highlands	50	Pasco	30.5%	37
38	Gadsden	29	Putnam	48	Bay	30.3%	38
39	Nassau	29	Nassau	45	Alachua	30.0%	39
40	Sumter	28	Gadsden	35	Hillsborough	29.9%	40
41	Bradford	28	Bradford	34	Union	29.2%	41
42	Columbia	22	Walton	33	St. Lucie	28.2%	42
43	Jackson	18	Columbia	31	Madison	27.9%	43

Rank	County	1990 Housing Density*	County	2004 Housing Density*	County	1990 - 2004 Housing Density Growth*	Rank
44	**Walton**	**18**	Suwannee	23	**Volusia**	**27.5%**	44
45	Okeechobee	17	**DeSoto**	**22**	Washington	27.4%	45
46	Suwannee	17	Jackson	22	Hardee	27.4%	46
47	DeSoto	16	Okeechobee	21	Glades	27.1%	47
48	Holmes	14	Wakulla	19	Highlands	26.9%	48
49	Washington	13	Gilchrist	18	Hendry	25.9%	49
50	Hardee	12	Holmes	17	**Duval**	**25.7%**	50
51	Union	12	**Washington**	**17**	**Jefferson**	**25.2%**	51
52	Gilchrist	12	Hardee	16	**Broward**	**24.5%**	52
53	**Gulf**	**11**	Union	16	**Taylor**	**24.2%**	53
54	**Levy**	**11**	**Gulf**	**15**	Hamilton	23.6%	54
55	**Wakulla**	**11**	**Levy**	**15**	Jackson	23.4%	55
56	**Franklin**	**11**	**Baker**	**14**	Bradford	21.6%	56
57	Baker	10	Franklin	14	Gadsden	21.4%	57
58	**Dixie**	**9**	Madison	12	Lafayette	21.2%	58
59	Madison	9	**Dixie**	**11**	Okeechobee	20.6%	59
60	Hendry	9	Hendry	11	Holmes	20.3%	60
61	Hamilton	8	Hamilton	10	Calhoun	19.4%	61
62	Calhoun	8	**Calhoun**	**9**	**Escambia**	**17.6%**	62
63	**Taylor**	**8**	Jefferson	9	**Miami-Dade**	**17.6%**	63
64	**Jefferson**	**7**	Taylor	9	**Dixie**	**17.2%**	64
65	Glades	6	Glades	8	**Monroe**	**13.7%**	65
66	Lafayette	4	Lafayette	5	Putnam	9.0%	66
67	Liberty	3	Liberty	4	**Pinellas**	**7.4%**	67

*Density per square mile

5.3 POPULATION AND HOUSING BY REGION

Florida's counties are categorized by regions: Atlantic, Gulf, and Inland.

5.3.1 Atlantic Florida

On Florida's Atlantic coast people were locating to counties with low existing populations between 1990 and 2004. The three counties with the largest previous populations were the slowest growing, while the counties with the smallest existing populations grew the most rapidly.

Flagler County, however, is a special circumstance. It appears that it was in transition between 1990 and 2004 from being a county with a small population to a county with a large population. This can be observed from Tables 5.4, 5.5, and 5.8. Flagler County ranked with the highest growth, it had a relatively small population (ranked 11th), and density (ranked 11th) in 2004, indicating it was not overcrowded and would have room to grow.

St Johns and St. Lucie Counties, however did rank in the top ten counties for density and population and rose to near the top for growth during the 14 years studied. While these two counties appear in the high rankings, their density and population numbers still places them far behind the larger coastal counties such as the top three in population and population density, Miami-Dade, Broward and Palm Beach, which have two to four times their population and at least double their density.

Table 5.8: Atlantic Florida Population, 2004

Rank	County	Population	County	Density*	County	1990 – 2004 Growth	Rank
1	Miami-Dade	2,358,714	Broward	1,454	Flagler	140.5%	1
2	Broward	1,753,000	Miami-Dade	1,212	St. Johns	82.2%	2
3	Palm Beach	1,244,189	Duval	1,059	St. Lucie	51.2%	3
4	Duval	819,623	Palm Beach	630	Palm Beach	44.1%	4
5	Brevard	518,812	Brevard	510	Nassau	43.5%	5
6	Volusia	478,951	Volusia	434	Broward	39.6%	6
7	St. Lucie	227,110	St. Lucie	397	Indian River	38.2%	7
8	St. Johns	152,724	St. Johns	251	Martin	36.5%	8
9	Martin	137,693	Martin	248	Brevard	30.0%	9
10	Indian River	124,676	Indian River	248	Volusia	29.2%	10
11	Flagler	69,016	Flagler	142	Duval	21.8%	11
12	Nassau	63,061	Nassau	97	Miami-Dade	21.8%	12

*Density per square mile

Table 5.9 shows that Florida's Atlantic coast began developing previously residentially underdeveloped counties between 1990 and 2004. Two of the three counties that had the highest housing growth, Flagler and Nassau, also had the lowest housing and density in 2004.

Table 5.9: Atlantic Florida Housing, 2004

Rank	County	Housing	County	Density*	County	1990 - 2004 Growth	Rank
1	Miami-Dade	906,877	Broward	649	Flagler	125.0%	1
2	Broward	782,384	Miami-Dade	466	St. Johns	66.9%	2
3	Palm Beach	605,650	Duval	462	Nassau	55.0%	3
4	Duval	357,721	St. Lucie	352	Indian River	40.4%	4
5	Brevard	243,652	Palm Beach	307	Martin	32.1%	5
6	Volusia	230,718	Brevard	239	Brevard	31.6%	6
7	St. Lucie	201,379	Volusia	209	Palm Beach	31.2%	7
8	Martin	71,572	Indian River	132	St. Lucie	28.2%	8
9	Indian River	66,177	Martin	129	Volusia	27.5%	9
10	St. Johns	54,785	St. Johns	90	Duval	25.7%	10
11	Flagler	34,231	Flagler	71	Broward	24.5%	11
12	Nassau	29,028	Nassau	45	Miami-Dade	17.6%	12

*Density per square mile

5.3.2   Gulf Florida

On Florida's Gulf coast people are locating to counties with low existing populations as well. As such, future growth can be seen in Gulf Florida. Collier and Wakulla counties grew the most, over 90%, on the Gulf coast, between 1990 and 2004 and still maintained a relatively small population and density, as shown in Table 5.10.

Table 5.10: Gulf Florida Population, 2004

Rank	County	Population	County	*Density**	County	1990 - 2004 Growth	Rank
1	Hillsborough	1,100,333	Pinellas	3,313	Collier	95.1%	1
2	Pinellas	927,498	Hillsborough	1,047	Wakulla	90.6%	2
3	Lee	514,923	Lee	641	Walton	74.2%	3
4	Pasco	408,046	Sarasota	622	Santa Rosa	69.2%	4
5	Sarasota	355,722	Pasco	548	Lee	53.7%	5
6	Escambia	296,739	Escambia	448	Hernando	48.9%	6
7	Collier	296,675	Manatee	399	Pasco	45.1%	7
8	Manatee	295,974	Hernando	315	Levy	43.7%	8
9	Okaloosa	180,910	Charlotte	227	Charlotte	41.8%	9
10	Bay	157,811	Citrus	223	Manatee	39.8%	10
11	Charlotte	157,324	Bay	207	Citrus	39.3%	11
12	Hernando	150,540	Okaloosa	193	Dixie	34.8%	12
13	Santa Rosa	138,073	Collier	146	Hillsborough	31.9%	13
14	Citrus	130,273	Santa Rosa	136	Sarasota	28.1%	14
15	Monroe	78,016	Monroe	78	Jefferson	27.4%	15
16	Walton	48,368	Walton	46	Okaloosa	25.8%	16
17	Levy	37,230	Wakulla	45	Bay	24.3%	17
18	Wakulla	27,074	Levy	33	Gulf	19.1%	18
19	Taylor	19,268	Gulf	25	Escambia	12.9%	19
20	Jefferson	14,392	Jefferson	24	Taylor	12.6%	20
21	Dixie	14,266	Dixie	20	Franklin	12.5%	21
22	Gulf	13,703	Franklin	19	Pinellas	8.9%	22
23	Franklin	10,084	Taylor	18	Monroe	0.0%	23

*Density per square mile

Florida's Gulf coast, shown in Table 5.10, began developing previously residentially underdeveloped counties between 1990 and 2004, as well. The four counties with the most housing units are also the four densest in housing units, in the same order. However, only one of those four counties, Lee, was one of the five fastest growing counties between 1990 and 2004.

Walton, Collier, and Wakulla counties have grown the most during this time and still maintain a relatively small number of housing units and low density, as shown in Table 5.11.

Table 5.11: Gulf Florida Housing, 2004

Rank	County	Housing	County	Density	County	1990 - 2004 Growth	Rank
1	Pinellas	492,041	Pinellas	1,758	Walton	86.3%	1
2	Hillsborough	477,626	Hillsborough	454	Collier	85.4%	2
3	Lee	292,830	Lee	364	Wakulla	74.3%	3
4	Pasco	194,333	Pasco	261	Sarasota	71.9%	4
5	Collier	174,564	Manatee	208	Lee	54.9%	5
6	Santa Rosa	162,185	Escambia	199	Hernando	39.9%	6
7	Manatee	154,424	Santa Rosa	159	Levy	39.2%	7
8	Escambia	132,017	Hernando	146	Santa Rosa	37.6%	8
9	Charlotte	87,954	Charlotte	127	Charlotte	36.1%	9
10	Bay	86,013	Sarasota	122	Okaloosa	36.0%	10
11	Okaloosa	85,065	Citrus	116	Citrus	35.7%	11
12	Hernando	69,984	Bay	113	Manatee	34.0%	12
13	Sarasota	69,964	Okaloosa	91	Franklin	32.7%	13
14	Citrus	67,629	Collier	86	Gulf	31.2%	14
15	Monroe	52,536	Monroe	53	Pasco	30.5%	15
16	Walton	34,889	Walton	33	Bay	30.3%	16
17	Levy	17,126	Wakulla	19	Hillsborough	29.9%	17
18	Wakulla	11,484	Levy	15	Jefferson	25.2%	18
19	Taylor	9,824	Gulf	15	Taylor	24.2%	19
20	Gulf	8,319	Franklin	14	Escambia	17.6%	20
21	Franklin	7,816	Dixie	11	Dixie	17.2%	21
22	Dixie	7,553	Taylor	9	Monroe	13.7%	22
23	Jefferson	5,501	Jefferson	9	Pinellas	7.4%	23

5.3.3 Inland Florida

 Table 5.12 shows the three fastest growing counties between 1990 and 2004 in Florida's inland region still have room to grow, as well. Those with the highest growth, Osceola, Sumter, and Lake, are ranked fifth or below for population and density.

Table 5.12: Inland Florida Population, 2004

Rank	County	Population	County	Density*	County	1990 - 2004 Growth	Rank
1	Orange	989,873	Seminole	1,269	Osceola	104.3%	1
2	Polk	524,286	Orange	1,091	Sumter	91.8%	2
3	Seminole	391,241	Leon	366	Lake	72.1%	3
4	Marion	291,768	Polk	280	Gilchrist	64.7%	4
5	Lake	261,845	Lake	275	Clay	55.1%	5
6	Leon	243,703	Clay	273	Marion	49.8%	6
7	Alachua	222,568	Alachua	255	Hendry	47.9%	7
8	Osceola	220,127	Marion	185	Glades	46.8%	8
9	Clay	164,387	Osceola	167	Orange	46.1%	9
10	Highlands	93,133	Sumter	111	DeSoto	46.0%	10
11	Putnam	72,574	Putnam	101	Columbia	44.8%	11
12	Columbia	61,710	Bradford	94	Hardee	43.7%	12
13	Sumter	60,569	Highlands	91	Union	43.0%	13
14	Jackson	47,712	Gadsden	89	Suwannee	40.4%	14
15	Gadsden	46,083	Columbia	77	Highlands	36.1%	15
16	Okeechobee	39,006	Union	61	Seminole	36.1%	16
17	Hendry	38,113	Suwannee	55	Lafayette	34.5%	17
18	Suwannee	37,612	DeSoto	55	Liberty	33.6%	18
19	DeSoto	34,842	Jackson	52	Okeechobee	31.7%	19
20	Hardee	28,022	Okeechobee	50	Washington	30.0%	20
21	Bradford	27,623	Gilchrist	46	Baker	29.5%	21
22	Baker	23,946	Hardee	44	Polk	29.3%	22
23	Washington	21,987	Baker	41	Hamilton	28.8%	23
24	Madison	19,067	Holmes	39	Leon	26.6%	24
25	Holmes	19,031	Washington	38	Bradford	22.7%	25
26	Gilchrist	15,921	Hendry	33	Alachua	22.6%	26
27	Union	14,660	Madison	28	Holmes	20.6%	27
28	Hamilton	14,076	Hamilton	27	Calhoun	18.5%	28
29	Calhoun	13,043	Calhoun	23	Jackson	15.3%	29
30	Glades	11,146	Glades	14	Madison	15.1%	30
31	Lafayette	7,503	Lafayette	14	Gadsden	12.1%	31
32	Liberty	7,442	Liberty	9	Putnam	11.5%	32

*Density per square mile

Table 5.13 shows the three fastest growing counties between 1990 and 2004 in Florida's inland region can continue to grow. Sumter, Osceola, and Lake are ranked fourth or below for housing units and density.

Table 5.13: Inland Florida Housing, 2004

Rank	County	Housing	County	Density	County	1990 - 2004 Growth	Rank
1	Orange	409,685	Orange	451	Sumter	107.3%	1
2	Polk	246,661	Seminole	351	Osceola	94.6%	2
3	Marion	140,344	Leon	170	Lake	60.6%	3
4	Lake	121,564	Polk	132	Clay	55.3%	4
5	Leon	113,554	Lake	128	Gilchrist	52.0%	5
6	Seminole	108,130	Alachua	117	Liberty	48.5%	6
7	Alachua	102,700	Clay	104	Marion	48.4%	7
8	Osceola	93,352	Marion	89	Seminole	46.4%	8
9	Clay	62,501	Osceola	71	Orange	44.9%	9
10	Highlands	50,921	Sumter	58	Leon	39.6%	10
11	Putnam	34,701	Highlands	50	Columbia	37.9%	11
12	Sumter	31,715	Putnam	48	Suwannee	37.9%	12
13	Columbia	24,573	Gadsden	35	DeSoto	36.1%	13
14	Jackson	20,135	Bradford	34	Baker	35.1%	14
15	Gadsden	18,033	Columbia	31	Polk	32.5%	15
16	Suwannee	16,132	Suwannee	23	Alachua	30.0%	16
17	Okeechobee	15,994	DeSoto	22	Union	29.2%	17
18	DeSoto	14,032	Jackson	22	Madison	27.9%	18
19	Hendry	12,525	Okeechobee	21	Washington	27.4%	19
20	Hardee	10,114	Gilchrist	18	Hardee	27.4%	20
21	Bradford	9,848	Holmes	17	Glades	27.1%	21
22	Washington	9,812	Washington	17	Highlands	26.9%	22
23	Holmes	8,164	Union	16	Hendry	25.9%	23
24	Baker	8,074	Hardee	16	Hamilton	23.6%	24
25	Madison	8,025	Baker	14	Jackson	23.4%	25
26	Gilchrist	6,188	Madison	12	Bradford	21.6%	26
27	Glades	5,878	Hendry	11	Gadsden	21.4%	27
28	Calhoun	5,336	Hamilton	10	Lafayette	21.2%	28
29	Hamilton	5,092	Calhoun	9	Okeechobee	20.6%	29
30	Union	3,844	Glades	8	Holmes	20.3%	30
31	Liberty	3,203	Lafayette	5	Calhoun	19.4%	31
32	Lafayette	2,746	Liberty	4	Putnam	9.0%	32

5.4 FLORIDA VERSUS OTHER COASTAL STATES

Florida ranks third among the coastal states for shoreline county population and 13th for shoreline county population density as shown in Table 5.14. However, it is important to note that even though a state may have a large shoreline county population, it may reflect a small percentage of the state's total population.

Table 5.14: Coastal State Coastal Population and Density, 2004

Rank	State	Population	Coastal % of State	Coastal Land	Density*	State	Rank
1	California	27,261,347	76.0%	1,393	4,321	Illinois	1
2	New York	16,311,041	84.8%	1,729	1,692	Pennsylvania	2
3	Florida	13,320,811	76.7%	5,639	1,386	New Jersey	3
4	New Jersey	7,818,724	89.9%	3,546	1,358	Massachusetts	4
5	Illinois	6,020,672	47.4%	1,045	1,034	Rhode Island	5
6	Texas	5,548,520	24.7%	2,267	961	Connecticut	6
7	Michigan	5,092,918	50.4%	19,066	856	New York	7
8	Massachusetts	4,816,558	75.1%	3,758	728	Ohio	8
9	Virginia	4,722,679	63.3%	39,094	697	California	9
10	Washington	4,261,306	68.7%	8,826	535	Virginia	10
11	Pennsylvania	2,925,104	23.6%	1,513	499	Indiana	11
12	Maryland	2,899,232	52.2%	5,897	492	Maryland	12
13	Ohio	2,736,803	23.9%	29,971	444	Florida	13
14	Connecticut	2,177,746	62.2%	1,954	425	Delaware	14
15	Wisconsin	2,012,245	36.5%	1,064	386	New Hampshire	15
16	Louisiana	1,941,296	43.0%	15,091	368	Texas	16
17	Oregon	1,399,993	38.9%	18,884	226	Washington	17
18	Hawaii	1,262,840	100.0%	1,785	209	Mississippi	18
19	Rhode Island	1,080,632	100.0%	2,829	197	Alabama	19
20	South Carolina	1,057,345	25.2%	6,423	197	Hawaii	19
21	Maine	981,382	74.5%	10,525	191	Wisconsin	21
22	North Carolina	873,890	10.2%	10,852	179	Louisiana	22
23	Delaware	830,364	100.0%	31,422	162	Michigan	23
24	Indiana	755,560	12.1%	6,839	155	South Carolina	24
25	Georgia	565,431	6.4%	5,635	100	Georgia	25
26	Alabama	557,227	12.3%	9,361	93	North Carolina	26
27	Alaska	555,231	84.7%	12,051	81	Maine	27
28	New Hampshire	410,743	31.6%	19,241	73	Oregon	28
29	Mississippi	373,762	12.9%	10,635	23	Minnesota	29
30	Minnesota	248,310	4.9%	365,574	2	Alaska	30
	United States	**109,185,031**	**37.2%**	**653,909**	**167**	**United States**	

*Density per square mile

Florida ranks third among the coastal states for coastal housing units and 11th for coastal housing density, as shown in Table 5.15.

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Table 5.15: Coastal State Coastal Housing and Density, 2004

Rank	State	Housing	Coastal % of State	Coastal Land	Density*	State	Rank
1	California	9,731,593	76.0%	1,393	1,706	Illinois	1
2	New York	6,488,096	83.0%	1,729	712	Pennsylvania	2
3	Florida	6,285,851	78.5%	3,546	569	Massachusetts	3
4	New Jersey	3,082,822	90.3%	5,639	547	New Jersey	4
5	Illinois	2,377,039	46.7%	1,045	427	Rhode Island	5
6	Michigan	2,244,167	50.6%	2,267	386	Connecticut	6
7	Texas	2,195,246	24.8%	19,066	340	New York	7
8	Massachusetts	2,016,560	75.5%	3,758	325	Ohio	8
9	Virginia	1,914,080	61.4%	39,094	249	California	9
10	Washington	1,824,090	70.0%	8,826	217	Virginia	10
11	Maryland	1,236,157	54.9%	29,971	210	Florida	11
12	Pennsylvania	1,230,261	22.8%	5,897	210	Maryland	12
13	Ohio	1,220,068	24.6%	1,513	206	Indiana	13
14	Wisconsin	890,896	36.2%	1,954	188	Delaware	14
15	Connecticut	874,164	61.8%	1,064	158	New Hampshire	15
16	Louisiana	812,965	42.3%	15,091	145	Texas	16
17	Oregon	601,000	39.1%	18,884	97	Washington	17
18	South Carolina	526,188	27.8%	1,785	93	Mississippi	18
19	Maine	494,771	73.1%	2,829	91	Alabama	19
20	Hawaii	482,873	100.0%	10,525	85	Wisconsin	20
21	North Carolina	458,044	11.9%	6,839	77	South Carolina	21
22	Rhode Island	446,305	100.0%	6,423	75	Hawaii	22
23	Delaware	367,448	100.0%	10,852	75	Louisiana	22
24	Indiana	312,256	11.6%	31,422	71	Michigan	24
25	Alabama	258,118	12.5%	9,361	49	North Carolina	25
26	Georgia	243,255	6.6%	5,635	43	Georgia	26
27	Alaska	228,987	84.3%	12,051	41	Maine	27
28	New Hampshire	168,069	29.2%	19,241	31	Oregon	28
29	Mississippi	165,100	13.5%	10,635	12	Minnesota	29
30	Minnesota	125,026	5.7%	365,574	1	Alaska	30
	United States	**39,982,585**	**32.6%**	**653,909**	**61**	**United States**	

*Density per square mile

Comprehensive charts of population and housing, including land and density can be found in the appendix for all counties. Adding the land mass allows the reader to determine whether density is a result of limited land and crowding or whether the area is really a rural place with lots of land available. In some cases where densities are low, environmental assets and regulations may prevent growth from occurring to preserve the natural assets, which are an important part of Florida's economy.

5.5   POPULATION AND HOUSING SUMMARY

Following the pattern of the economy, population and housing is concentrated along the shore, especially the Atlantic shore, and concentrated in the Southeast region. In fact, 77% of Florida's population lives in a shoreline county, and 79% of housing is there. During the period 1990-2004, Miami-Dade county remained the largest county, even though much lower populated counties experienced enormous growth Florida's shoreline population is only exceeded by California, and California's overall population is about twice the size of Florida's population.

Of note is the even balance between housing and population, leading one to surmise that Florida does not have a housing shortage and that housing is still reasonably priced in the least densely populated areas. The Southeast is really the only region that indicates a gap, with less housing than population by a small percentage. No matter how you view it, Florida's shoreline population was more than three times the size of inland counties and had more than four times the amount of housing in 2004.

5.6   REFERENCES

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Chapter 6   Understanding the Non-Market Value of Coastal Recreation

6.1   INTRODUCTION

In 1999 and 2000, more than 43% of all Americans participated in some form of marine recreation.[22] Americans flock to beaches and shores to swim, fish, boat, and view the natural scenery. The total number of people participating in all forms of marine recreation is expected to increase with the largest increases expected for beach-going activities (Leeworthy et al. 2005). We estimate the economic Non-Market values range from $3.5 to $17.7 billion for beach going, $3.9 to $7.8 billion for birdwatching and wildlife viewing, and $3.4 to $5.6 billion for recreational fishing ($2005, see Table 6.1).

Table 6.1: Estimated Non-Market Values for Selected Activities

Activities	Low Estimates* ($2005, millions)	High Estimates* ($2005, millions)
Beach	$3,543	$17,715
Swimming	$3,222	$16,110
Bird Watching	$3,898	$7,795
Other Wildlife	$2,513	$5,026
Fishing	$3,377	$5,629
Scuba Diving	$27	$81
Snorkeling	$239	$1,198

*(Rounded to nearest $millions)
Values cannot be added across activities due to double counting.

In 2001, the National Survey on Recreation and the Environment (NSRE) published results of a nationwide study on coastal recreational uses (Leeworthy and Wiley 2001). According to the NSRE data, Florida ranks number one among the nation's destinations for Americans that swim, fish, dive, and otherwise enjoy the state's many beaches, coastal wetlands, and shores. Florida's 1350 miles of coastline (NOAA 1975), including the Gulf, Atlantic, and Caribbean coasts, is the most visited in the nation with almost one in ten Americans visiting the Florida coasts in 2000 (more than 22 million visitors overall, Leeworthy and Wiley 2001). Table 6.2 summarizes the visitation rates and totals for the coastal United States.

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[22] Estimates are based on a national survey of outdoor recreation known as the National Survey on Recreation and the Environment (Leeworthy and Wiley 2001).

Table 6.2: Coastal Recreation by State, 2000

National Rank	State	Participation Rate (% of national population)	Participants (in state where activities took place)
1	**Florida**	**10.7**	**22,060,908**
2	California	8.71	17,654,215
3	South Carolina	3.14	6,469,023
4	New Jersey	3.02	6,224,769
5	Texas	2.99	6,167,691
6	North Carolina	2.7	5,576,629
7	New York	2.67	5,503,395
8	Massachusetts	2.38	4,904,006
9	Maryland	2.38	4,901,728
10	Virginia	2.37	4,878,313
11	Hawaii	2.2	4,540,543
12	Maine	1.82	3,753,337
13	Washington	1.66	3,429,729
14	Oregon	1.54	3,183,483
15	Rhode Island	1.28	2,641,812
16	Alabama	1.24	2,549,078
17	Connecticut	1.11	2,294,362
18	Georgia	1.1	2,262,763
19	Delaware	1.05	2,168,108
20	Louisiana	1.05	2,165,830
21	New Hampshire	1.03	2,120,282
22	Mississippi	0.87	1,801,442
23	Alaska	0.84	1,725,078
24	District of Columbia	0.13	258,559

From Leeworthy, V.R. and P.C Wiley. 2001. "Current Participation Patterns in Marine Recreation" National Survey On Recreation And The Environment 2000. U.S. Department of Commerce. National Oceanic and Atmospheric Administration. National Ocean Service. Special Projects. Silver Spring, Maryland.

Coastal areas support a wide variety of recreational activities. Visitors to Florida and local Floridians come to area shores to swim, sunbathe, watch wildlife (especially birds), photograph scenery, boat, fish, and dive. The National Survey on Recreation and the Environment provides estimates for the number of participants and the number of days of participation for a variety of coastal activities in Florida (Table 6.3).

Table 6.3: Annual Participation in Coastal Recreation Florida 1999-2000

Activities	Participants (in state where activities took place) (millions)	Activity Days (millions)
Beach-going	15.246	177.153
Bird Watching	3.373	77.952
Canoeing	0.019	n/a
Fishing	4.698	56.285
Hunting	0.072	*
Kayaking	0.338	n/a
Motorboating	3.337	46.624
Other Wildlife	2.846	50.264
Personal Watercraft	1.626	14.54
Photography Scenery	3.92	96.591
Rowing	0.153	n/a
SCUBA	0.802	5.42
Snorkeling	2.866	23.956
Swimming	14.033	161.098
Waterside	1.801	22.59
Waterskiing	0.613	4.475

* Too few to estimate
N/A data not collected

Beach-going and swimming dominate coastal recreational activities in the Florida. In 2000, Leeworthy and Wiley (2001) estimate that just over 15 million Americans visited Florida to go to beaches, 14 million of which swam. During the same period, these beach-goers enjoyed more than 177 million beach days and 161 million swimming days in Florida.[23] Bird watching also is a popular activity with 78 million bird watching days and just under 97 million photography days enjoyed in coastal Florida annually. Fishing and boating also draw many visitors to the Florida coast; over 56 million fishing days and nearly 47 million boating days were enjoyed in 2000. Finally, scuba divers in Florida waters spent nearly 5.5 million person days and nearly 24 million person days were spent snorkeling. Of course, these figures are likely to have changed substantially over the last 6 years. For instance, Leeworthy et al. (2005) project that nationwide, beach visitation days were expected to increase by 5.6% from 2000 to 2005 and 10.3% from 2000 to 2010. Similarly, recreational fishing days were expected to increase by 5.8% and 11.1% for the same periods.

Coastal and marine recreation generates value for participants, revenues for local businesses that support these activities, and taxes for a variety of levels of government. The quantification of the economic impacts associated with coastal recreation is complicated by the fact that these activities generate both market and Non-Market impacts. The market impact of coastal recreation usually is assessed by examining how much money visitors contribute to the local economy through spending related to access (e.g. parking fees), equipment, and goods and services (e.g. ice and bait). Commonly, the

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[23] An activity day (or person day) is defined as participation by one visitor for one day. Because of return visits and multi-day trips, the number of activity days is always greater than or equal to the number of visitors.

focus of market-based studies is on gross expenditures by coastal visitors with fewer studies focusing on profits or taxes. While gross expenditures do not represent net benefits to the economy, gross expenditures do capture the magnitude of importance that recreational expenditures have in the overall local economy. Spending by state residents represents a transfer of economic activity within the state. In other words, taxes generated by state residents are simply a transfer within the state from taxpayers to the treasury. Also, it is usually the case that spending by state residents would have taken place elsewhere in the state if not at the coast. Spending by out-of-state visitors, however, represents a direct economic influx for the state economy; gross expenditures by out-of-state visitors represent the base upon which additional tax revenues can be generated.

The Non-Market value of coastal recreation is more difficult to determine. Non-Market values represent the value visitors place on the marine resources they use, beyond what they have to pay to access these resources (this also is known as consumer surplus). Non-Market values often are associated with outdoor recreational resources, including recreational fishing sites, beaches, wildlife, and even views. The Non-Market values associated with coastal and marine resources have been shown to generate substantial economic value beyond the market expenditures generated by these resources. These Non-Market values represent the net economic value of the resource to the coastal visitor. While the literature recognizes Non-Market values that accrue to both users and non-users, we follow the policy of the NOEP and focus here only on those Non-Market values enjoyed by visitors to the coast as part of their use of the coast. These use values tend to be estimated more frequently and with more precision in estimation than "non-use values."[24]

In the literature, two primary methods are used to estimate the Non-Market use value of coastal recreation. Travel cost methods[25] are used to estimate the trade-offs visitors make between travel costs (time and out of pocket expenses) and recreational opportunities. Travel cost methods use real visitor behavior to estimate the Non-Market value of coastal recreation (the value the coastal visitor places on a recreational trip beyond what they have to pay), but because the method requires considerable variation in the travel costs faced by visitors, the method works best when applied to both residents and non-resident visitors (those living outside the immediate area). When travel cost methods are inappropriate, authors have used contingent methods to estimate values for coastal recreational use. Contingent valuation methods rely on surveys to elicit from visitors their willingness to pay to use, protect or avoid damage to coastal recreational resources or access.

In this chapter, we summarize studies that provide estimates of Non-Market values that may be similar to those for coastal recreation in Florida. We limit our review when possible to studies of coastal recreation expenditures and Non-Market values in the Gulf of Mexico or southern United States. It is important for the reader to note that the

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[24] Non-use values include existence value, option value, and bequest values.
[25] (Travel cost methods include single and multiple site travel cost models, count data models, and a variety of site choice models including random utility models.)

methods for estimating these market and Non-Market values often differ among studies. In the following we provide these estimates (all converted to U.S.$ in 2005, figures are rounded when appropriate) with brief explanations of the basic methods. Further, when possible, we break down the estimates based on the value per visitor per day. By doing so, we hope the reader will be able to better compare these results across studies and also understand how these values may compare to the values that are generated by coastal recreation in Florida.

6.2 THE NON-MARKET VALUE OF COASTAL AND MARINE RECREATION

Coastal recreation generates direct economic benefits to visitors, beyond the costs associated with getting to and using coastal resources. Changes in these Non-Market values, for better or for worse, reflect important changes in the net economic value of coastal resources. Changes in value could result from changes in access or availability or changes in the quality of resources. In this section, we review the literature to summarize estimates of the Non-Market values of coastal and marine recreational uses that are likely to be similar to those found in coastal Florida. We remind the reader that these estimates are intended only to show the potential order of magnitude of Non-Market environmental values for coastal resources in Florida. Further study is required to develop a more precise estimate of these values.

The literature provides a good set of value estimates for only a handful of coastal recreation activities. Fortunately, Florida's coasts are among the most studied in the world (Pendleton et al. 2006). We review the literature and also government technical reports to develop a range of value estimates that reflect the potential Non-Market environmental value of coastal recreation, measured as per person per day values, in Florida. We focus on beach-going, wildlife viewing, recreational fishing, scuba diving, and snorkeling because these are activities for which the literature provides the most substantial research on Non-Market values. Finally, we combine estimates of user activity from the National Survey on Recreation and the Environment (Leeworthy and Wiley 2001) with both our low and high estimates of Non-Market values from the literature to provide a range for the potential Non-Market economic value of coastal recreational resources in Florida.

Non-Market values may differ between local visitors and non-local visitors. Unfortunately, the NSRE data on estimated participation do not reveal what proportion of visits are made by local and non-local visitors (although the raw data may contain this information). Bell and Leeworthy (1986) do show that 52% of beach visits made in Florida in the early 1980's were made by local visitors, we are unaware of more recent estimates of the proportion of beach visitors.[26] Non-Market values also differ depending on the quality and nature of the coastal resources and also proximity to population centers. As a result, the Non-Market value of an activity (e.g. bird watching) is likely to differ substantially across regions of the state. Unfortunately, the NSRE data cannot be easily disaggregated by region within the state. We offer both a low and high estimate of

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26 Thanks to Valerie Seidel for pointing this out.

the potential Non-Market value of recreational activities to partially account for the range of potential Non-Market values across users and regions.

6.2.1   Beaches

Warm waters and sandy beaches draw millions of visitors to Florida and in 2000 generated more than 177 million beach days (i.e. a visit by one person to a beach for one day) along Florida's coasts. At least two studies (Bell and Leeworthy 1986 and 1992) estimate the Non-Market value of a beach day in Florida at between \$19 and \$74[27] (Table 6.4).

Table 6.4: Non-Market Values for South Atlantic and Gulf Coast Beach Recreation

Author	Location	Method [28]	Asset	CS* per person
Bell and Leeworthy (1986)	*Florida*	*TC*	*Beach use*	*\$19.43/day (average)*
Bell and Leeworthy (1992)	*Florida*	*TC*	*Saltwater beach use*	*\$73.84/day*
Leeworthy and Bowker (1997)	*Florida*	*TC*	*Beach use by non-residents*	*\$95.85/day (winter) \$120.74/day(summer)*
Bin et al. (2004, revised 2005)	North Carolina	TC, RUM	Beach use	\$22.29 - \$76.42/day (average)

Italics indicate Florida Value

*CS is consumer surplus, the average willingness to pay for a beach trip beyond any costs associated with getting to the beach

Later, Leeworthy and Bowker (1997) estimated the Non-Market value of non-resident beach-goers in Florida to be more than \$95/beach day in the winter and \$120/beach day in the summer. An even more recent, but unpublished, study (Bin et al. 2005) of beach use in North Carolina estimates the value of a beach day at between \$22 and \$76 per beach day. These figures are similar to the range of values used by Pendleton and Kildow (2006) to estimate the economic value of beach days in California (\$15 to \$50 per beach day).[29] For Florida, we use a range of \$20 to \$100 per beach day to illustrate the potential Non-Market value of beach-going in Florida. Based on year 2000 activity levels, we find that the Non-Market value, in 2005 dollars, of beach use in Florida would have been between \$3.5 billion and just under \$18 billion in 2000. The map in Figure 6.1 shows major beach destinations in Florida.

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[27] Figures adjusted to 2005 dollars.

[28] TC=Travel Cost; RUM=Random Utility Model

[29] At least four other technical reports have been completed for beach values in Florida: Curtis and Shows (1982), Curtis and Shows (1984), U.S.A.C.E. (1981), and U.S.A.C.E. (1993). While we are unable to locate full-text versions of these studies, the abstracts from these studies indicate estimates of the consumer surplus per person day of less than \$15/person/day in \$2005.
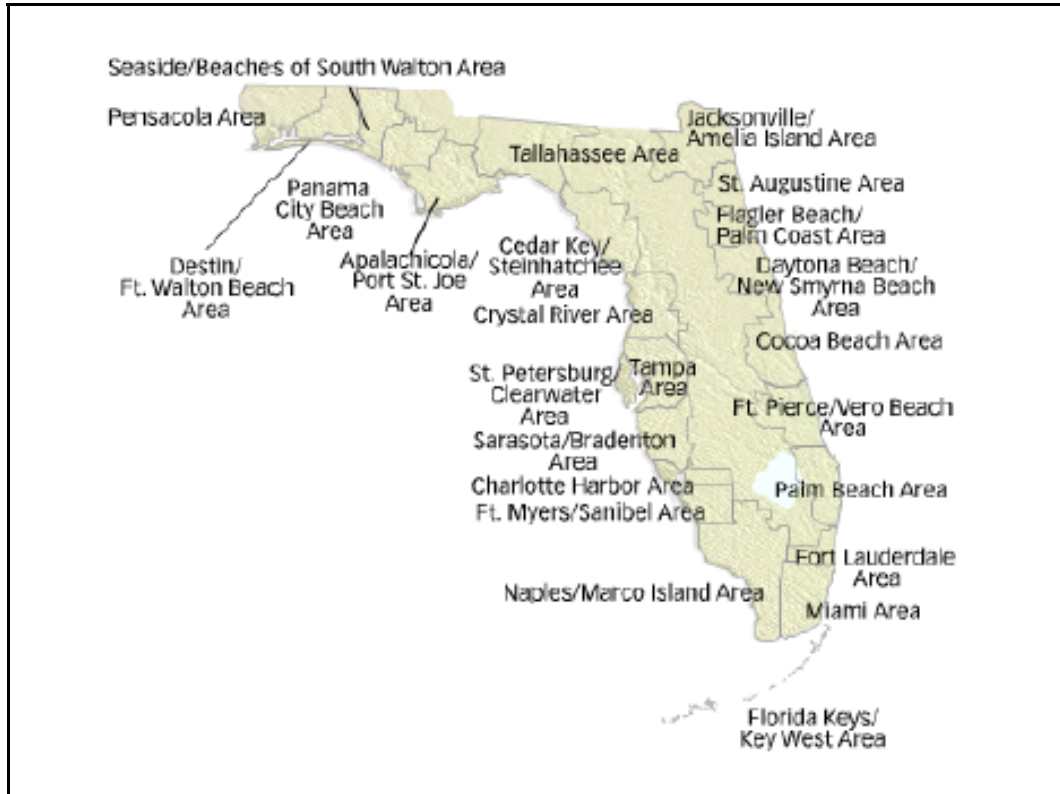
Figure 6.1: Beach Destinations in Florida

6.2.2   Bird Watching and Wildlife Viewing

Bird watching and wildlife viewing also contribute to the Non-Market values enjoyed by coastal visitors along the coast of Florida. The literature holds only a few examples of the Non-Market value of marine wildlife viewing that range from tidepooling in California (less than $7/family visit) to wildlife viewing in Alaska ($143 to $229 per person day) (see Table 6.5). Leeworthy and Bowker (1997) estimated the economic value of general wildlife viewing in the Florida Keys to be $108 per person per day for all visitors combined. To illustrate the potential value of wildlife viewing in Florida, we use a lower bound of $50 and an upper bound of $100 per person day. Using this range of value estimates and the activity estimates of bird watching and wildlife viewing from the year 2000, provided by the NSRE, we estimate that the Non-Market value for bird watching would have ranged between $3.9 billion and $7.8 billion in year 2000 and $2.5 billion and $5 billion for other types of wildlife during the same period. (Note that the values for bird watching and other wildlife viewing cannot be added together because many people participate in both activities and adding these sums would lead to double counting.) The map in Figure 6.2 illustrates bird watching hotspots in Florida.

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Source: http://floridaconservation.org/viewing/species/birdingmap.html
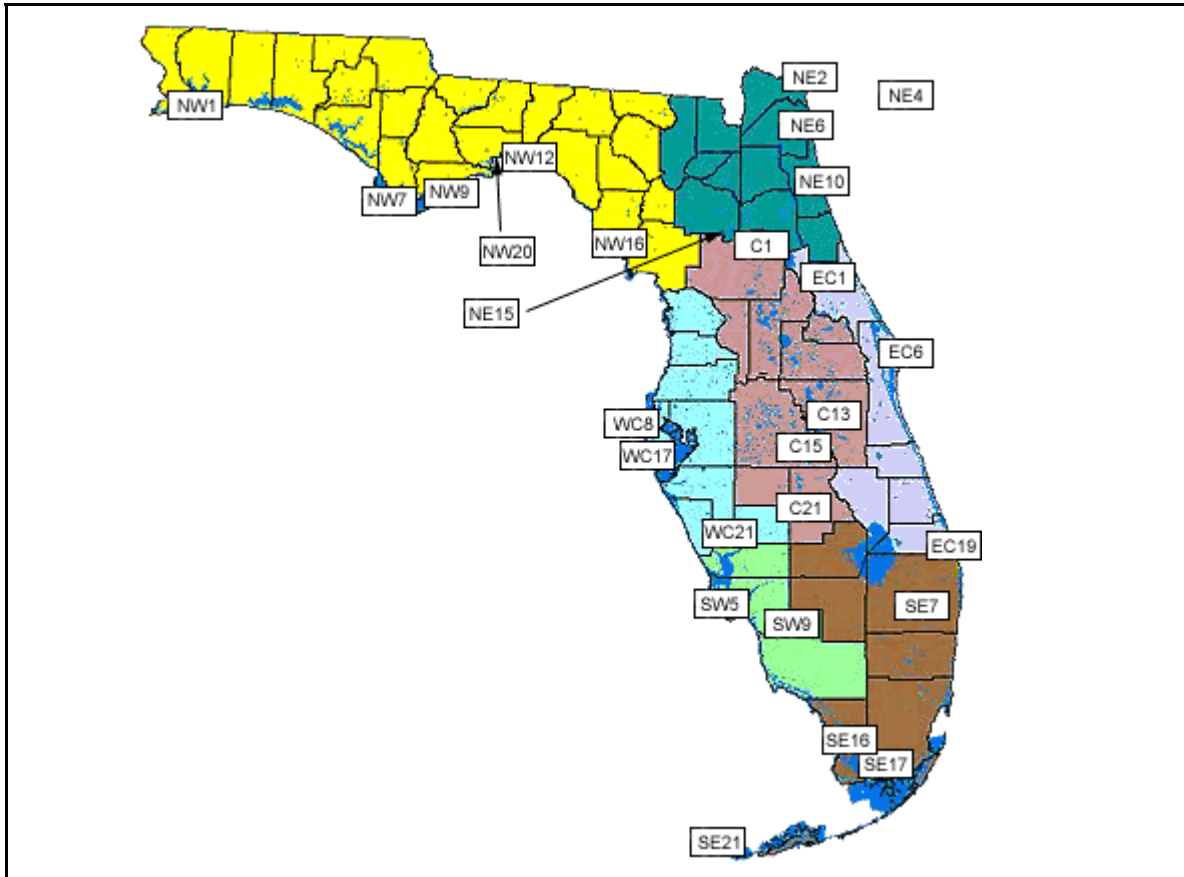
Figure 6.2: Bird Watching Hotspots in Florida

Table 6.5: Non-Market Values Associated with Bird Watching and Wildlife Watching

Author	Location	Method	Species	Consumer Surplus per person day ($2005)	Annual Non-Market Value[30]
Leeworthy and Bowker (1997)	*Florida Keys*	*Travel Cost Model*	*Not identified*	*$108.35*	*$287 million*
Colt (2001)	Alaska	Unreported		Min: $143 Max: $229	
Hall et al. (2002)	California	Contingent Valuation	Tide pools	$6.78/family visit	
Bosetti and Pearce (2003)	England	Contingent Valuation	Gray seals	For seeing seals in the wild: $14.50	
Johnston et al. (2002)	New York	Travel Cost Method	Not mentioned	$63.80	$35 million

Italics indicate Florida Value

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[30] Values are rounded to the nearest million $2005.

6.2.3 Recreational Fishing

Recreational saltwater fishing also contributes significantly to the Non-Market value of coastal recreation in Florida. The NSRE estimated that more than 56 million person days were devoted to saltwater recreational fishing in Florida in 2000. The literature on the Non-Market value of recreational fishing has a number of examples from Florida, the Southern Atlantic states, and the Gulf Coast states (Table 6.6).

Table 6.6: Non-Market Values for Atlantic and Gulf Coast Recreational Fishing

Author	Location	Mode[31]	Method[32]	$(2005)/Trip	$(2005)/Day
Non-Residents					
Bell et al. (1982)	*Florida[5]*	*PC; P; S*	*CVM*		*$61.86*
Bockstael et al. (1986)	South Carolina	P	CVM		$97.92
McConnell & Strand (1994)	*Florida*	*PC; P; S*	*TC and RUM*		*$113.03*
	Florida	*PC; P; S*	*TC and RUM*		*$135.86*
	Georgia	PC; P; S	TC and RUM		$66.06
	Georgia	PC; P; S	TC and RUM		$70.12
	North Carolina	PC; P; S	TC and RUM		$111.23
	North Carolina	PC; P; S	TC and RUM		$114.81
	South Carolina	PC; P; S	TC and RUM		$113.03
	South Carolina	PC; P; S	TC and RUM		$114.44
Residents					
Bell et al. (1982)	*Florida[33]*	*PC; P; S*	*CVM*		*$82.90*
Downing and Ozuna (1996)	Texas	General boating	CVM	$60.23-$407.69 (mean of counties $171.11)	
Residential Status Not Specified					
Leeworthy (1990)	*Florida*	*NS*	*TC*	*$81.33*	

Italics indicate Florida Value

For non-residents, the Non-Market value of a recreational fishing day in the Gulf, the states most likely to have values similar to those in Florida, ranges from just over $60 (Bell et al. 1986) to more than $100 (McConnell et al. 1993); both values are for fishing days in Florida. For residents, Ozuna and Downing (1996) estimated that the value for a fishing day in Texas ranged from $60 to more than $400. Bell et al. (1982) and Leeworthy (1990) both estimated values for a fishing day in Florida at just over $80 for residents and anglers of unspecified origin. To illustrate the potential value of recreational fishing in Florida, we use a lower bound of $60 and an upper bound of $100

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[31] PC = Party/Charter boat; P = Private boat; R = Rental boat; O = Boat Owner; NO = Non-Boat Owner; S = Shore; OS = Offshore, NS=not specified.

[32] CVM = Contingent Valuation Method; TC = Travel Cost Method, RUM = Random Utility Model, NRUM = Nested Random Utility Model

[33] Includes Northwest Gulf, West Gulf, Northeast Gulf, Southwest Gulf, and Southeast Atlantic

per person day. Using this range of value estimates and the year 2000 estimates of recreational saltwater fishing provided by the NSRE, we estimate that the Non-Market value of recreational fishing along Florida's Gulf coast would have ranged between nearly $3.4 billion to $5.6 billion annually in 2000.

6.2.4 Scuba Diving and Snorkeling

Snorkeling generates Non-Market values that are similar to the values estimated for other types of activities, discussed above. Estimates for the Non-Market value of snorkeling in Florida range from $3 to nearly $120 per person day for snorkeling in the Florida Keys (see Table 6.7).

Table 6.7: Non-Market Values for South Atlantic and Gulf Coast Snorkeling and Diving

Author	Location	Natural Setting[34]	Resident/ Non Resident[35]	Mode of Access[36]	$(2005)/Day (unless otherwise specified)
Snorkeling					
Leeworthy, et al. (2001)	*Southeast Florida*	*A*	*R*		*$3.02*
	Southeast Florida	*A*	*NR*		*$8.37*
Leeworthy and Bowker (1997)	*Florida Keys/Key West*	*N*	*R and NR*		*$118.96*
Park, et al. (2002)	*Florida Keys*	*N*	*R and NR*		*$130.59 /trip*
Kaval and Loomis (2003)	All U.S. National Parks	NS	R and NR		$32.08
Scuba Diving					
Bell, et al. (1998)	*Northwest Florida*	*A*	*NR*		*$11.27*
Ditton and Baker (1999)	Texas	A	R and NR	Ch	$83.48
	Texas	A	R and NR	Ch	$49.53
Stoll and Ditton (2002) secondary source[37]	Gulf of Mexico FGBNMS,[38]	A	R and NR	Ch	$121.20/ trip
	Gulf of Mexico	N	R and NR	Ch	$157.20/ trip
Kaval and Loomis (2003)	All U.S. National Parks	NS	R and NR		$34.25
	Northeast Region	NS	R and NR		$18.96
Leeworthy, et al. (2001)	*Southeast Florida*	*A*	*R*		*$4.02*
	Southeast Florida	*A*	*NR*		*$16.16*

Italics indicate Florida Value

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[34] A = Artificial Reef; N = Natural Reef; NS = Not Specified

[35] R = Resident; NR = Non Resident

[36] Ch = Charter Boat; P = Private Boat; R = Rental Boat; O = visitors or residents using their Own Boat

[37] Abstract from www.marineeconomics.noaa.gov

[38] Flower Garden Banks National Marine Sanctuary

Because snorkeling in the keys is likely to be of higher value than snorkeling elsewhere in the state, we conservatively use the upper bound of our estimated Non-Market value of snorkeling to $50 per person per day. According to the literature, scuba diving in Florida generates Non-Market values that are significantly lower than those of the other values discussed here. Further, Non-Market values for diving in Florida tend to be lower than similar values estimated in other states (see Pendleton 2005 or Pendleton 2006). One reason for this difference is that scuba diving was not valued separately from other activities in the Florida studies. As a result, we believe these estimates represent an extreme lower bound for scuba diving in Florida.

To illustrate the potential value of diving and snorkeling in Florida, we use a range of $10 to $50 per person day for snorkeling and $5 to $15/day for SCUBA diving. The annual Non-Market value of diving in Florida would have been between $27 million and $81 million in 2000 (adjusted to $2005). Similarly, we estimate that the Non-Market economic value of snorkeling in Florida would have been $240 million and $1.2 billion in the year 2000.

6.3   NON-MARKET VALUES SUMMARY

The Non-Market values associated with coastal recreation in Florida generate economic well-being for the state and nation. The Florida coast provides opportunities for people to boat, fish, hunt, swim, and view wildlife. These Non-Market values contribute directly to the quality of life of coastal visitors. As a result, damages to coastal resources or, conversely, major improvements in these resources, result in a direct change in these values that in turn represents a direct change in the economic well-being of the region and the country. We combed the literature to find estimates of Non-Market activities that reflect the potential economic value of coastal and marine recreation in Florida. We use these estimates to provide upper and lower bounds for the potential economic value of these uses in the state. The summary of Florida Non-Market values from the literature with ranges for values transfers is listed in Table 6.8.

The commercial importance of the Florida coasts is fairly well understood. Transportation, tourism, and fishing all are important parts of Florida's Coastal Economic engine. Far less, however, is known about the market and Non-Market workings of Florida's coastal and marine recreational economy. We lack even a thorough baseline of local coastal recreational activities within the state. Best estimates of participation in most types of recreation, made by the National Survey on Recreation and the Environment (NSRE, Leeworthy and Wiley 2001) are for the state as a whole. The NSRE was not intended to provide a more refined mapping of uses, but it is exactly this level of detail that is required for many kinds of local coastal management. Similarly, our understanding of the Non-Market value of coastal recreation in Florida is limited by the fact that many activities have not been extensively valued in the state (e.g. personal watercraft use, boating, and waterskiing) and even activities that have been valued, have not been valued frequently over the last decade. More studies are needed to

better understand how activity levels and Non-Market values differ across regions of the state and how these activity levels and values have changed over time.

In this report, we use the best available data from the federal government and the scholarly and gray literature to estimate the potential magnitude of the Non-Market economic value of coastal recreation in Florida. In addition to these Non-Market values, coastal recreation generates substantial local revenues for coastal businesses. We do not even attempt to estimate these revenues here, but note that in three recent papers prepared for the state of California, the magnitude of expenditures on coastal recreational activities is usually within one order of magnitude of the Non-Market value of these activities (Pendleton 2005a and Pendleton and Rooke 2005a and b). Clearly the potential magnitude of the economic value of coastal recreation in Florida warrants a more comprehensive and consistent effort at data collection and research.

Table 6.8: Summary of Florida Non-Market Values From the Literature

Activity	Author	Location	Resident (R), Non-resident (NR)	Consumer surplus*/person/day ($2005)	Value Range Transferred	
Beach-going	*Bell and Leeworthy (1992)*	*FL*		*$73.84*	*High*	*$100*
	Bell and Leeworthy (1986)	*FL*		*$19.43 (mean)*	*Low*	*$20*
	Leeworthy and Bowker (1997)	*FL Keys*	*NR*	*$95.85 (winter) $120.74 (summer)*		
Bird Watching and Wildlife Viewing	*Leeworthy and Bowker (1997)*	*FL*		*$108.35*	*High Low*	*$100$50*
Recreational Fishing	*McConnell & Strand* (1994)	*FL*	*NR*	*$135.86*	*High*	*$100*
	Bell et al. (1982)	*FL* *FL*	*NR* *R*	*$61.86* *$82.9*	*Low*	*$60*
	Leeworthy (1990)	*FL*	*Not specified*	*$81.33/trip*		
Scuba Diving	*Bell, et al. (1998)*	*Northwest FL*	*NR*	*$11.27*	*High*	*$15*
	Leeworthy, et al. (2001)	*Southeast FL*	*R* *NR*	*$4.02* *$16.16*	*Low*	*$5*
Snorkeling	*Leeworthy, et al. (2001)*	*Southeast FL* *Southeast FL*	*R* *NR*	*$3.02* *$8.37*	*High* *Low*	*$50* *$10*
	Leeworthy and Bowker (1997)	*Florida Keys*	*R and NR*	*$118.96*		
	Park, et al. (2002)	*Florida Keys*	*R and NR*	*$130.59/trip*		
	Kaval and Loomis (2003)	All U.S. National Parks	R and NR	$32.08		

Italics indicate Florida Value

*Consumer surplus is the willingness of a user to pay to engage in an activity beyond any costs involved in participating in that activity.

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Conclusion

This examination of Florida's Ocean and Coastal economies is a preliminary look at a complex and important foundation of Florida's overall economy. While there are many more ocean and coastal-related values to be measured, this report should provide a solid perspective of the past, present and future of Florida's economy. Most often, population is the principal indicator of changes in coastal areas. For example, as of June 2006, Florida had three cities ranked among the top ten fastest growing cities in the U.S. However, this study indicates that economic indicators are also excellent signals of change in coastal areas. In some ways, the economy may be a better indicator of change than population, because it reveals land use footprints for different types of economic activities. With Florida's large Tourism & Recreation sector and second homes, population can be a daunting indicator to assess. The economy, on the other hand, indicates the size of the activities necessary to support the range of populations. The size and nature of the economy and its workforce reflect land use patterns, infrastructure changes, environmental impacts, and other changes essential to effective land use planning along our nation's coasts.

The commercial importance of the Florida coasts is reasonably well understood. This report presents many of those sectors using well-documented market values. Transportation, tourism, and fishing, for example, all are important parts of Florida's coastal economic engine. However, far less is known about the market and Non-Market values of Florida's coastal and marine recreational economy. There is even a lack of a thorough baseline of local coastal recreational activities within the state. The Florida coast provides opportunities for people to boat, fish, hunt, swim, and view wildlife among other act ivies. These Non-Market values contribute directly to the quality of life of coastal users. As a result, damages to coastal resources or, conversely, major improvements in these resources, result in a direct change in these values that, in turn, represents a direct change in the economic well-being of the region and the country.

The Ocean Economy is dominated by Tourism & Recreation and appears to be solidly in place for a long time to come. Marine transportation, especially passenger cruise ships, is a major economic force and by all indications will remain strong in the future. Marine construction and Living Resources, while considerably smaller in size, also provide important inputs to Florida's overall economy.

The Coastal Economy is dominated by the shoreline areas, particularly the Atlantic Coast, which provided nearly half of Florida's GSP in 2003. While the inland areas and the Gulf Coast have a smaller impact on the Florida Coastal Economy, the size and influence of the regions are growing more rapidly. This pattern will probably continue as land becomes more scarce along the shore.

Finally, it is obvious that Florida's natural assets are the hidden treasure of the economy. Florida's natural resources, particularly its beaches and wild areas, not only draw local and tourist dollars, but they generate added Non-Market values for the economy. While the Tourism & Recreation sector was valued at more than $26 billion in Florida's market

place in 2003, in a 2000 government survey the Non-Market added values for Florida amounted to somewhere between $3 and $10 billion, annually. These contributions to the Florida economy must be noted. Florida's natural resources must be preserved to sustain and facilitate future growth of its strong economy -- an economy that is absolutely vital to the nation's well-being.

Appendixes

APPENDIX A: ALL COASTAL STATES POPULATION AND HOUSING

Table A.1: Coastal State 2004 Population by Location

State	Total Population	Coastal Population	Coastal Percentage	Total Density*	Coastal Density*
Alabama	9,060,364	557,227	6.2%	179	197
Alaska	1,310,870	551,387	42.1%	2	2
California	71,787,598	24,942,331	34.7%	460	713
Connecticut	7,007,208	2,177,746	31.1%	1,446	961
Delaware	1,660,728	830,364	50.0%	850	425
Florida	17,385,430	17,385,430	100.0%	322	323
Georgia	17,658,766	565,431	3.2%	305	100
Hawaii	2,525,680	1,262,840	50.0%	393	197
Ilinois	25,427,268	6,020,672	23.7%	457	4,321
Indiana	12,475,138	755,560	6.1%	348	499
Louisiana	9,031,540	764,374	8.5%	207	161
Maine	2,634,506	981,382	37.3%	85	81
Maryland	11,116,116	2,096,262	18.9%	1,137	437
Massachusettes	12,833,010	4,816,558	37.5%	1,637	1,358
Michigan	20,225,240	5,325,113	26.3%	356	152
Minnesota	10,201,916	214,671	2.1%	128	22
Mississippi	5,805,932	373,762	6.4%	124	209
New Hampshire	2,599,000	410,743	15.8%	290	386
New Jersey	17,397,758	3,092,581	17.8%	2,346	977
New York	38,454,176	11,949,771	31.1%	814	1,051
North Carolina	17,082,442	873,890	5.1%	351	93
Ohio	22,918,022	2,736,803	11.9%	560	728
Oregon	7,189,172	1,399,993	19.5%	75	73
Pennsylvania	24,812,584	282,355	1.1%	554	352
Rhode Island	2,161,264	1,080,632	50.0%	2,068	1,034
South Carolina	8,396,136	1,057,345	12.6%	279	155
Texas	44,980,044	5,548,520	12.3%	172	368
United States	293656842	109,185,031	37.2%	1	162
Virginia	14,919,654	4,761,032	31.9%	377	539
Washington	12,407,576	4,261,306	34.3%	186	226
Wisconsin	11,018,052	2,097,219	19.0%	203	179

*Per square mile

Table A.2: Coastal State 2004 Housing by Location

State	Total Units	Coastal Units	Coastal Percentage	Total Density*	Coastal Density*
Alabama	4,117,902	258,118	6.3%	81	91
Alaska	543,066	226,213	41.7%	1	1
California	25,609,404	8,885,446	34.7%	164	254
Connecticut	2,828,866	874,164	30.9%	584	386
Delaware	734,896	367,448	50.0%	376	188
Florida	**8,009,427**	**8,009,427**	**100.0%**	**149**	**149**
Georgia	7,345,354	243,255	3.3%	127	43
Hawaii	965,746	482,873	50.0%	150	75
Ilinois	10,188,372	2,377,039	23.3%	183	1,706
Indiana	5,381,238	312,256	5.8%	150	206
Louisiana	3,839,718	321,724	8.4%	88	68
Maine	1,353,334	494,771	36.6%	44	41
Maryland	4,500,678	877,316	19.5%	460	183
Massachusettes	5,344,122	2,016,560	37.7%	682	569
Michigan	8,866,964	2,359,344	26.6%	156	67
Minnesota	4,425,402	110,232	2.5%	56	11
Mississippi	2,442,480	165,100	6.8%	52	93
New Hampshire	1,151,342	168,069	14.6%	128	158
New Jersey	6,829,478	1,288,406	18.9%	921	407
New York	15,638,718	4,581,666	29.3%	331	403
North Carolina	7,720,156	458,044	5.9%	158	49
Ohio	9,933,492	1,220,068	12.3%	243	325
Oregon	3,070,762	601,000	19.6%	32	31
Pennsylvania	10,771,458	116,307	1.1%	240	145
Rhode Island	892,610	446,305	50.0%	854	427
South Carolina	3,781,364	526,188	13.9%	126	77
Texas	17,693,456	2,195,246	12.4%	68	145
United States	122,671,734	39,982,585	32.6%	0	59
Virginia	6,233,654	1,925,940	30.9%	157	218
Washington	5,213,246	1,824,090	35.0%	78	97
Wisconsin	4,927,604	928,160	18.8%	91	79

*Per Square Mile

Table B.1: Employment in 2000 and 2015 by Region and Industry (in Thousands)

Region	Industry	2000	2015	Region	2000	2015
Central/Space Coast Coastal	Construction	18.336	41.433	Central/Space Coast Inland	60.204	127.792
	Education and Health Services	49.831	90.186		94.672	155.743
	Financial Activities	13.462	19.878		58.553	100.610
	Government	47.327	61.391		110.254	155.991
	Information	6.227	6.779		28.078	33.253
	Leisure and Hospitality	37.372	64.537		184.819	303.912
	Manufacturing	35.755	33.735		63.177	56.704
	Natural Resources and Mining	2.507	2.237		2.670	2.868
	Other Services	14.835	21.023		43.255	70.650
	Professional and Business Services	47.992	89.159		159.407	243.326
	Retail Trade	50.417	60.202		126.057	156.793
	Transportation and Utilities	5.541	7.850		32.072	38.691
	Wholesale Trade	9.444	13.608		43.689	66.299
	Total	339.047	512.020		1006.906	1512.633
North Central Coast	Construction	1.514	1.715	North Central Inland	6.336	10.885
	Education and Health Services	1.696	1.718		25.460	42.629
	Financial Activities	0.565	0.678		8.051	9.402
	Government	5.253	4.512		56.266	56.519
	Information	0.119	0.127		2.879	3.368
	Leisure and Hospitality	1.564	1.876		15.926	26.296
	Manufacturing	2.923	1.865		13.107	8.534
	Natural Resources and Mining	1.358	0.856		2.791	2.029
	Other Services	0.372	0.366		5.155	7.951
	Professional and Business Services	0.594	0.784		13.173	21.163
	Retail Trade	2.797	2.527		22.424	21.659
	Transportation and Utilities	0.473	0.379		2.548	3.395
	Wholesale Trade	0.439	0.443		3.440	4.895
	Total	19.666	17.845		177.558	218.725
Northeast Coast	Construction	30.289	57.920	Northeast Inland	4.521	9.472
	Education and Health Services	56.027	90.610		7.353	13.704
	Financial Activities	55.774	72.718		2.090	3.143
	Government	63.524	71.117		14.031	14.965
	Information	14.947	15.533		0.624	1.549
	Leisure and Hospitality	46.017	77.844		8.089	11.020
	Manufacturing	39.339	30.050		5.620	3.724
	Natural Resources and Mining	0.596	0.513		1.015	0.563
	Other Services	21.752	29.512		3.213	4.407
	Professional and Business Services	82.060	110.213		9.049	7.577
	Retail Trade	64.363	68.024		11.364	13.280
	Transportation and Utilities	31.547	32.071		1.902	2.947
	Wholesale Trade	25.741	31.290		1.073	1.408
	Total	531.976	687.414		69.944	87.759
Northwest Coast	Construction	20.991	39.375	Northwest Inland	6.782	10.777
	Education and Health Services	40.153	70.230		19.700	29.326
	Financial Activities	16.715	27.906		7.544	11.310
	Government	60.392	71.453		74.281	75.689
	Information	7.395	8.199		5.138	5.343
	Leisure and Hospitality	38.161	62.644		14.012	24.766
	Manufacturing	16.337	15.697		7.100	4.698

Region	Industry	2000	2015	Region	2000	2015
	Natural Resources and Mining	0.962	0.828		3.171	2.664
	Other Services	14.386	20.387		8.708	11.334
	Professional and Business Services	40.328	68.049		18.200	29.094
	Retail Trade	45.968	50.817		23.211	23.734
	Transportation and Utilities	6.822	8.850		2.696	3.307
	Wholesale Trade	9.343	13.720		4.551	4.608
	Total	317.952	458.155		195.094	236.652
Southeast	Construction	126.099	234.144	Southwest	28.385	77.627
	Education and Health Services	281.752	482.898		35.011	64.498
	Financial Activities	166.506	243.645		16.960	34.118
	Government	318.701	387.043		41.731	65.449
	Information	65.042	70.699		7.233	9.575
	Leisure and Hospitality	249.250	389.187		40.820	82.411
	Manufacturing	142.303	101.513		10.440	11.636
	Natural Resources and Mining	5.943	4.874		6.540	7.639
	Other Services	104.323	140.652		13.560	24.984
	Professional and Business Services	344.849	617.265		37.444	89.105
	Retail Trade	327.174	357.297		53.643	79.701
	Transportation and Utilities	105.793	117.243		5.336	8.357
	Wholesale Trade	128.234	182.051		8.071	15.078
	Total	2365.966	3328.512		305.174	570.177
Tampa Bay Coast	Construction	82.619	159.951	Tampa Bay Inland	7.122	15.521
	Education and Health Services	181.480	269.732		22.351	41.289
	Financial Activities	106.768	141.896		9.601	13.749
	Government	174.198	194.235		26.962	29.338
	Information	45.167	43.364		2.342	2.504
	Leisure and Hospitality	138.765	198.760		14.893	22.730
	Manufacturing	112.821	85.961		20.208	16.810
	Natural Resources and Mining	6.244	4.978		6.696	5.478
	Other Services	58.465	85.861		7.234	11.355
	Professional and Business Services	284.302	637.262		23.399	48.788
	Retail Trade	195.015	213.817		27.263	26.873
	Transportation and Utilities	42.284	41.481		9.685	13.928
	Wholesale Trade	62.246	72.765		8.124	12.245
	Total	1490.374	2150.062		185.880	260.608
Heartland	Construction	2.704	4.194	Florida	395.902	790.806
	Education and Health Services	8.475	10.115		823.961	1362.678
	Financial Activities	1.928	2.357		464.517	681.410
	Government	15.336	12.729		1008.255	1200.431
	Information	0.695	0.576		185.888	200.868
	Leisure and Hospitality	4.409	5.724		794.096	1271.708
	Manufacturing	3.386	2.483		472.515	373.412
	Natural Resources and Mining	18.783	11.291		59.277	46.817
	Other Services	1.475	1.448		296.732	429.929
	Professional and Business Services	4.384	6.026		1065.182	1967.811
	Retail Trade	9.934	8.725		959.630	1083.449
	Transportation and Utilities	1.517	1.256		248.213	279.757
	Wholesale Trade	1.762	1.537		306.157	419.948
	Total	74.788	68.461		7080.325	10109.023

APPENDIX C: FLORIDA REGIONS

Source: Enterprise Florida http://eflorida.com/aboutus/default.asp?tn=3
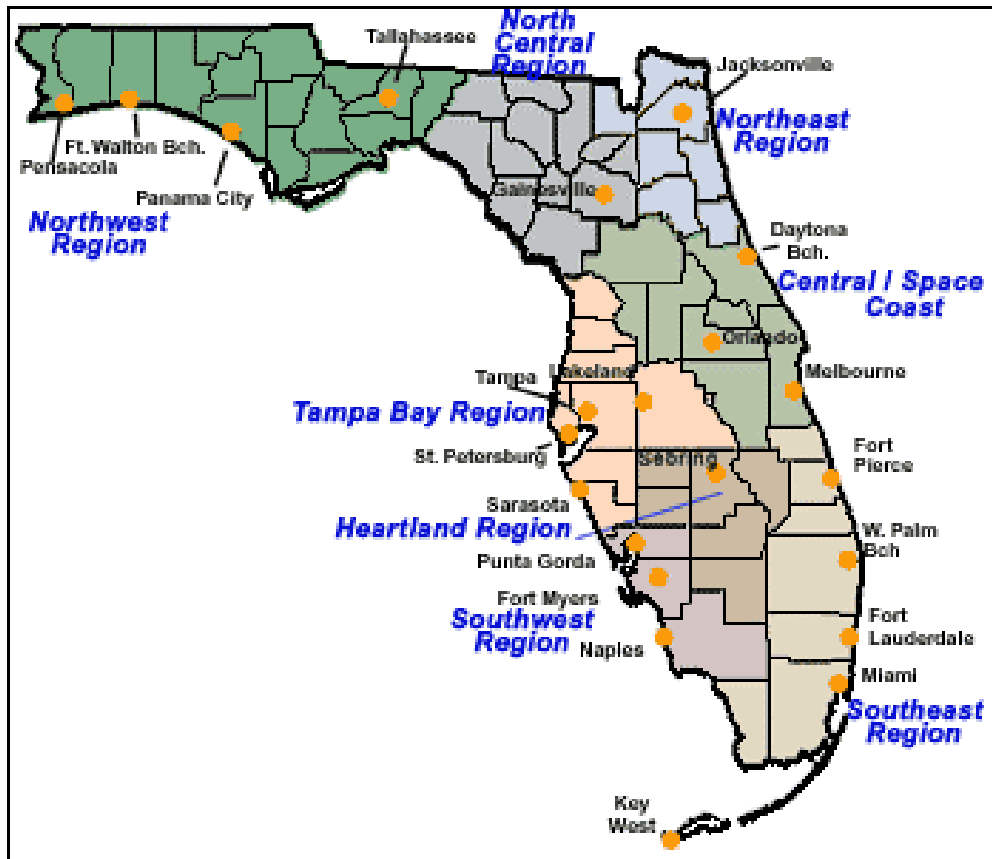
Figure C.1: Regions of Florida

APPENDIX D: POPULATION, HOUSING, AND DENSITY DETAIL 1990-2004

Table D.1: Population and Density Detail 1990-2004

County	1990	2004	Net Change	Growth	Land	1990 Density	2004 Density	Density Net Change	Density Growth
Florida	**12,938,071**	**17,385,430**	**4,447,359**	**34.4%**	**53,926.82**	**240**	**322**	**82**	**34.4%**
Atlantic Florida									
Brevard	398978	518,812	119,834	30.0%	1,018.19	392	510	118	30.0%
Broward	1255531	1,753,000	497,469	39.6%	1,205.40	1,042	1,454	413	39.6%
Duval	672971	819,623	146,652	21.8%	773.67	870	1,059	190	21.8%
Flagler	28701	69,016	40,315	140.5%	485.00	59	142	83	140.5%
Indian River	90208	124,676	34,468	38.2%	503.23	179	248	68	38.2%
Martin	100900	137,693	36,793	36.5%	555.62	182	248	66	36.5%
Miami-Dade	1937194	2,358,714	421,520	21.8%	1,946.06	995	1,212	217	21.8%
Nassau	43941	63,061	19,120	43.5%	651.55	67	97	29	43.5%
Palm Beach	863503	1,244,189	380,686	44.1%	1,974.11	437	630	193	44.1%
St. Johns	83829	152,724	68,895	82.2%	609.01	138	251	113	82.2%
St. Lucie	150171	227,110	76,939	51.2%	572.45	262	397	134	51.2%

County	1990	2004	Net Change	Growth	Land	1990 Density	2004 Density	Density Net Change	Density Growth
Volusia	370737	478,951	108,214	29.2%	1,103.25	336	434	98	29.2%
Total	**5,996,664**	**7,947,569**	**1,950,905**	**32.5%**	**11,397.52**	**526**	**697**	**171**	**32.5%**
Gulf Florida									
Bay	126,994	157,811	30,817	24.3%	763.68	166	207	40	24.3%
Charlotte	110,975	157,324	46,349	41.8%	693.60	160	227	67	41.8%
Citrus	93,513	130,273	36,760	39.3%	583.81	160	223	63	39.3%
Collier	152,099	296,675	144,576	95.1%	2,025.34	75	146	71	95.1%
Dixie	10,585	14,266	3,681	34.8%	704.01	15	20	5	34.8%
Escambia	262,798	296,739	33,941	12.9%	662.35	397	448	51	12.9%
Franklin	8,967	10,084	1,117	12.5%	544.34	16	19	2	12.5%
Gulf	11,504	13,703	2,199	19.1%	554.60	21	25	4	19.1%
Hernando	101,115	150,540	49,425	48.9%	478.31	211	315	103	48.9%
Hillsborough	834,054	1,100,333	266,279	31.9%	1,050.91	794	1,047	253	31.9%
Jefferson	11,296	14,392	3,096	27.4%	597.74	19	24	5	27.4%
Lee	335,113	514,923	179,810	53.7%	803.63	417	641	224	53.7%
Levy	25,912	37,230	11,318	43.7%	1,118.38	23	33	10	43.7%
Manatee	211,707	295,974	84,267	39.8%	741.03	286	399	114	39.8%
Monroe	78,024	78,016	-8	0.0%	996.91	78	78	0	0.0%
Okaloosa	143,777	180,910	37,133	25.8%	935.63	154	193	40	25.8%
Pasco	281,131	408,046	126,915	45.1%	744.85	377	548	170	45.1%
Pinellas	851,659	927,498	75,839	8.9%	279.92	3,043	3,313	271	8.9%
Santa Rosa	81,608	138,073	56,465	69.2%	1,016.93	80	136	56	69.2%
Sarasota	277,776	355,722	77,946	28.1%	571.55	486	622	136	28.1%
Taylor	17,111	19,268	2,157	12.6%	1,041.91	16	18	2	12.6%
Wakulla	14,202	27,074	12,872	90.6%	606.66	23	45	21	90.6%
Walton	27,759	48,368	20,609	74.2%	1,057.56	26	46	19	74.2%
Total	**4,069,679**	**5,373,242**	**1,303,563**	**32.0%**	**18,573.65**	**219**	**289**	**70**	**32.0%**
Inland Florida									
Alachua	181,596	222,568	40,972	22.6%	874.25	208	255	47	22.6%
Baker	18,486	23,946	5,460	29.5%	585.21	32	41	9	29.5%
Bradford	22,515	27,623	5,108	22.7%	293.13	77	94	17	22.7%
Calhoun	11,011	13,043	2,032	18.5%	567.31	19	23	4	18.5%
Clay	105,986	164,387	58,401	55.1%	601.11	176	273	97	55.1%
Columbia	42,613	61,710	19,097	44.8%	797.05	53	77	24	44.8%
DeSoto	23,865	34,842	10,977	46.0%	637.27	37	55	17	46.0%
Gadsden	41,116	46,083	4,967	12.1%	516.13	80	89	10	12.1%
Gilchrist	9,667	15,921	6,254	64.7%	348.89	28	46	18	64.7%
Glades	7,591	11,146	3,555	46.8%	773.64	10	14	5	46.8%
Hamilton	10,930	14,076	3,146	28.8%	514.86	21	27	6	28.8%
Hardee	19,499	28,022	8,523	43.7%	637.30	31	44	13	43.7%
Hendry	25,773	38,113	12,340	47.9%	1,152.53	22	33	11	47.9%
Highlands	68,432	93,133	24,701	36.1%	1,028.27	67	91	24	36.1%
Holmes	15,778	19,031	3,253	20.6%	482.45	33	39	7	20.6%
Jackson	41,375	47,712	6,337	15.3%	915.64	45	52	7	15.3%
Lafayette	5,578	7,503	1,925	34.5%	542.84	10	14	4	34.5%

County	1990	2004	Net Change	Growth	Land	1990 Density	2004 Density	Density Net Change	Density Growth
Lake	152,104	261,845	109,741	72.1%	953.15	160	275	115	72.1%
Leon	192,493	243,703	51,210	26.6%	666.74	289	366	77	26.6%
Liberty	5,569	7,442	1,873	33.6%	835.87	7	9	2	33.6%
Madison	16,569	19,067	2,498	15.1%	691.79	24	28	4	15.1%
Marion	194,835	291,768	96,933	49.8%	1,578.86	123	185	61	49.8%
Okeechobee	29,627	39,006	9,379	31.7%	773.94	38	50	12	31.7%
Orange	677,491	989,873	312,382	46.1%	907.45	747	1,091	344	46.1%
Osceola	107,728	220,127	112,399	104.3%	1,321.90	81	167	85	104.3%
Polk	405,382	524,286	118,904	29.3%	1,874.38	216	280	63	29.3%
Putnam	65,070	72,574	7,504	11.5%	721.89	90	101	10	11.5%
Seminole	287,521	391,241	103,720	36.1%	308.20	933	1,269	337	36.1%
Sumter	31,577	60,569	28,992	91.8%	545.73	58	111	53	91.8%
Suwannee	26,780	37,612	10,832	40.4%	687.64	39	55	16	40.4%
Union	10,252	14,660	4,408	43.0%	240.29	43	61	18	43.0%
Washington	16,919	21,987	5,068	30.0%	579.93	29	38	9	30.0%
Total	**2,871,728**	**4,064,619**	**1,192,891**	**41.5%**	**23,955.65**	**120**	**170**	**50**	**41.5%**

Table D.2: Housing and Density Detail 1990-2004

County	1990	2004	Net Change	Growth	Land	1990 Density	2004 Density	Density Net Change	Density Growth
Florida	**6,100,262**	**8,009,427**	**1,909,165**	**31.3%**	**53,926.82**	**113**	**149**	**35**	**31.3%**
Atlantic Florida									
Brevard	185150	243,652	58,502	31.6%	1,018.19	182	239	57	31.6%
Broward	628660	782,384	153,724	24.5%	1,205.40	522	649	128	24.5%
Duval	284673	357,721	73,048	25.7%	773.67	368	462	94	25.7%
Flagler	15215	34,231	19,016	125.0%	485.00	31	71	39	125.0%
Indian River	47128	66,177	19,049	40.4%	503.23	94	132	38	40.4%
Martin	54199	71,572	17,373	32.1%	555.62	98	129	31	32.1%
Miami-Dade	771288	906,877	135,589	17.6%	1,946.06	396	466	70	17.6%
Nassau	18726	29,028	10,302	55.0%	651.55	29	45	16	55.0%
Palm Beach	461665	605,650	143,985	31.2%	1,974.11	234	307	73	31.2%
St. Johns	32831	54,785	21,954	66.9%	609.01	54	90	36	66.9%
St. Lucie	157055	201,379	44,324	28.2%	572.45	274	352	77	28.2%
Volusia	180972	230,718	49,746	27.5%	1,103.25	164	209	45	27.5%
Total	**2,837,562**	**3,584,174**	**746,612**	**26.3%**	**11,397.52**	**249**	**314**	**66**	**26.3%**
Gulf Florida									
Bay	65,999	86,013	20,014	30.3%	763.68	86	113	26	30.3%
Charlotte	64,641	87,954	23,313	36.1%	693.60	93	127	34	36.1%
Citrus	49,854	67,629	17,775	35.7%	583.81	85	116	30	35.7%
Collier	94,165	174,564	80,399	85.4%	2,025.34	46	86	40	85.4%
Dixie	6,445	7,553	1,108	17.2%	704.01	9	11	2	17.2%
Escambia	112,230	132,017	19,787	17.6%	662.35	169	199	30	17.6%
Franklin	5,891	7,816	1,925	32.7%	544.34	11	14	4	32.7%
Gulf	6,339	8,319	1,980	31.2%	554.60	11	15	4	31.2%

County	1990	2004	Net Change	Growth	Land	1990 Density	2004 Density	Density Net Change	Density Growth
Hernando	50,018	69,984	19,966	39.9%	478.31	105	146	42	39.9%
Hillsborough	367,740	477,626	109,886	29.9%	1,050.91	350	454	105	29.9%
Jefferson	4,395	5,501	1,106	25.2%	597.74	7	9	2	25.2%
Lee	189,051	292,830	103,779	54.9%	803.63	235	364	129	54.9%
Levy	12,307	17,126	4,819	39.2%	1,118.38	11	15	4	39.2%
Manatee	115,245	154,424	39,179	34.0%	741.03	156	208	53	34.0%
Monroe	46,215	52,536	6,321	13.7%	996.91	46	53	6	13.7%
Okaloosa	62,569	85,065	22,496	36.0%	935.63	67	91	24	36.0%
Pasco	148,965	194,333	45,368	30.5%	744.85	200	261	61	30.5%
Pinellas	458,341	492,041	33,700	7.4%	279.92	1,637	1,758	120	7.4%
Santa Rosa	117,845	162,185	44,340	37.6%	1,016.93	116	159	44	37.6%
Sarasota	40,712	69,964	29,252	71.9%	571.55	71	122	51	71.9%
Taylor	7,908	9,824	1,916	24.2%	1,041.91	8	9	2	24.2%
Wakulla	6,587	11,484	4,897	74.3%	606.66	11	19	8	74.3%
Walton	18,728	34,889	16,161	86.3%	1,057.56	18	33	15	86.3%
Total	**2,052,190**	**2,701,677**	**649,487**	**31.6%**	**18,573.65**	**110**	**145**	**35**	**31.6%**
Inland Florida									
Alachua	79,022	102,700	23,678	30.0%	874.25	90	117	27	30.0%
Baker	5,975	8,074	2,099	35.1%	585.21	10	14	4	35.1%
Bradford	8,099	9,848	1,749	21.6%	293.13	28	34	6	21.6%
Calhoun	4,468	5,336	868	19.4%	567.31	8	9	2	19.4%
Clay	40,249	62,501	22,252	55.3%	601.11	67	104	37	55.3%
Columbia	17,818	24,573	6,755	37.9%	797.05	22	31	8	37.9%
DeSoto	10,310	14,032	3,722	36.1%	637.27	16	22	6	36.1%
Gadsden	14,859	18,033	3,174	21.4%	516.13	29	35	6	21.4%
Gilchrist	4,071	6,188	2,117	52.0%	348.89	12	18	6	52.0%
Glades	4,624	5,878	1,254	27.1%	773.64	6	8	2	27.1%
Hamilton	4,119	5,092	973	23.6%	514.86	8	10	2	23.6%
Hardee	7,941	10,114	2,173	27.4%	637.30	12	16	3	27.4%
Hendry	9,945	12,525	2,580	25.9%	1,152.53	9	11	2	25.9%
Highlands	40,114	50,921	10,807	26.9%	1,028.27	39	50	11	26.9%
Holmes	6,785	8,164	1,379	20.3%	482.45	14	17	3	20.3%
Jackson	16,320	20,135	3,815	23.4%	915.64	18	22	4	23.4%
Lafayette	2,266	2,746	480	21.2%	542.84	4	5	1	21.2%
Lake	75,707	121,564	45,857	60.6%	953.15	79	128	48	60.6%
Leon	81,325	113,554	32,229	39.6%	666.74	122	170	48	39.6%
Liberty	2,157	3,203	1,046	48.5%	835.87	3	4	1	48.5%
Madison	6,275	8,025	1,750	27.9%	691.79	9	12	3	27.9%
Marion	94,567	140,344	45,777	48.4%	1,578.86	60	89	29	48.4%
Okeechobee	13,266	15,994	2,728	20.6%	773.94	17	21	4	20.6%
Orange	282,686	409,685	126,999	44.9%	907.45	312	451	140	44.9%
Osceola	47,959	93,352	45,393	94.6%	1,321.90	36	71	34	94.6%
Polk	186,225	246,661	60,436	32.5%	1,874.38	99	132	32	32.5%
Putnam	31,840	34,701	2,861	9.0%	721.89	44	48	4	9.0%
Seminole	73,843	108,130	34,287	46.4%	308.20	240	351	111	46.4%

County	1990	2004	Net Change	Growth	Land	1990 Density	2004 Density	Density Net Change	Density Growth
Sumter	15,298	31,715	16,417	107.3%	545.73	28	58	30	107.3%
Suwannee	11,699	16,132	4,433	37.9%	687.64	17	23	6	37.9%
Union	2,975	3,844	869	29.2%	240.29	12	16	4	29.2%
Washington	7,703	9,812	2,109	27.4%	579.93	13	17	4	27.4%
Total	**1,210,510**	**1,723,576**	**513,066**	**42.4%**	**23,955.65**	**51**	**72**	**21**	**42.4%**