

# The Treasure Coast Region

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## THE TREASURE COAST REGION

### CONTEXT

The Treasure Coast Region encompasses an area of over 4,400 square miles and contains a significant number of important natural resources including the Loxahatchee National Wildlife Refuge, Lake Okeechobee, the Loxahatchee Wild and Scenic River, Corbett Wildlife Management Area, the Indian River and Lake Worth Lagoons, the Savannas, and St. John's Marsh.

The Region's geography extends across four counties - Palm Beach, Martin, St. Lucie and Indian River and 53 municipalities. The Treasure Coast is a major component of the State's economy boasting more than 630,000 jobs and over 1.4 million residents. At \$35.5 billion in 1998, the District's Gross Metropolitan Product (GMP) represents approximately 10 percent of Florida's Gross State Product<sup>1</sup> (GSP) while its total personal income of \$50.3 billion represents almost 14 percent of Florida's total personal income of \$364 billion.

The District contains a large number of municipalities (49 in 1990), most of which are in Palm Beach County. See Table I.1. Two Metropolitan Statistical Areas (MSAs) are located within the District, Boca Raton/West Palm Beach and Fort Pierce/Port St. Lucie. When appropriate, information will be provided at the District level or the MSA level.

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<sup>1</sup> \$380.61 billion in 1997 according to Enterprise Florida, October, 1999

**TABLE I.1**  
**Municipalities in the Treasure Coast District**

<b>Indian River County</b>	
	Fellsmere, City of
	Indian River Shores, Town of
	Orchid, Town of
	Sebastian, City of
	Vero Beach, City of
<b>Martin County</b>	
	Jupiter Island, Town of
	Ocean Breeze Park, Town of
	Sewall's Point, Town of
	Stuart, City of
<b>Palm Beach County</b>	
	Atlantis, City of
	Belle Glade, City of
	Boca Raton, City of
	Boynton Beach, City of
	Briny Breezes, Town of
	Cloud Lake, Town of
	Delray Beach, City of
	Glen Ridge, Town of
	Golf, Village of
	Golfview, Town of
	Greenacres, City of
	Gulf Stream, Town of
	Haverhill, Town of
	Highland Beach, Town of
	Hypoluxo, Town of
	Juno Beach, Town of
	Jupiter, Town of
	Jupiter Inlet Colony, Town of
	Lake Clarke Shores, Town of
	Lake Park, Town of
	Lake Worth, City of
	Lantana, Town of
	Manalapan, Town of
	Mangonia Park, Town of
	North Palm Beach, Village of
	Ocean Ridge, Town of
	Pahokee, City of
	Palm Beach, Town of
	Palm Beach Gardens, City of
	Palm Beach Shores, Town of
	Palm Springs, Village of
	Riviera Beach, City of
	Royal Palm Beach, Village of
	South Bay, City of
	South Palm Beach, Town of
	Tequesta, Village of
	Wellington, Village of
	West Palm Beach, City of
<b>St. Lucie County</b>	
	Fort Pierce, City of
	Port St. Lucie, City of
	St. Lucie Village, Town of
Source: TCRPC Staff	

**A. WHO WE ARE? A DEMOGRAPHIC PROFILE OF THE TREASURE COAST**

**TOTAL POPULATION**

Total Population

Age Profile

Diversity

Education Profile

The Treasure Coast District's current estimated (1999) population is 1,460,194. At a population of close to 1.5 million, the District would be ranked the 31st largest region in the Country, just behind the Columbus, Ohio and Orlando, Florida MSAs. See Table I.2 below.

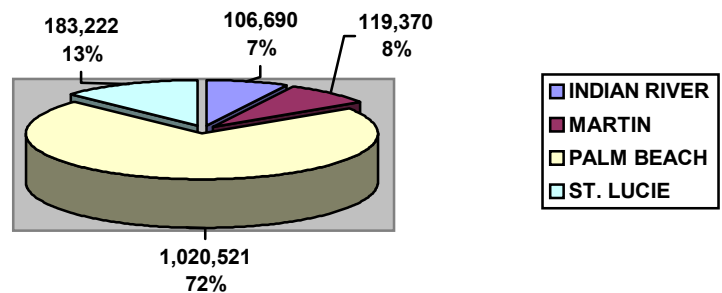
**Table I.2: Metropolitan Area Rank by Population, 1997**

Metropolitan Area	Population	Rank
Orlando, FL MSA	1,467,045	30
Columbus, OH MSA	1,460,262	31
Treasure Coast District	1,429,803	31 <sup>2</sup>
Charlotte-Gastonia-Rock Hill, NC-SC MSA	1,350,243	32
New Orleans, LA MSA	1,307,758	33
Las Vegas, NV-AZ, MSA	1,262,099	34
Salt Lake City-Ogden, UT MSA	1,247,554	35

Source: State and Metropolitan Area Data Book 1997-1998

The Region's population is distributed among the four counties as indicated in Figure I.1 below. Palm Beach County has the largest proportion of the District's population at approximately 72 percent.

**FIGURE I.1: 1999 POPULATION DISTRIBUTION TREASURE COAST REGION**



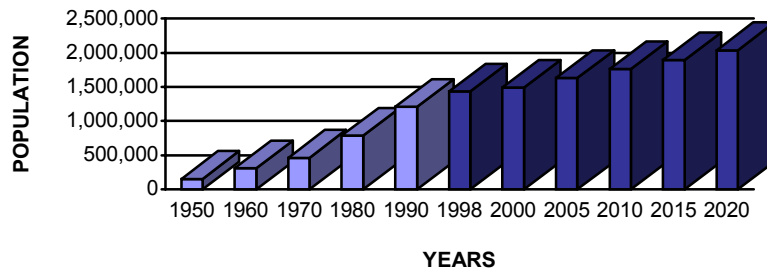
<sup>2</sup> Theoretical rank based on 1997 population.

**Growth Trends**

The Treasure Coast District’s population has changed dramatically over the years. Between 1950 and 1990 the District’s population increased eight fold nearly tripling over the last twenty years. Actual and projected population growth over the period of 1950 to 2020 is illustrated in Figure I.2. The highest rate of growth occurred between the years 1950 and 1960 when the population increased by 100.4 percent. While the District grew at a slower pace in subsequent decades, it significantly outpaced the State’s rate of growth in each decade. Between 1990 and 1998, the District population grew by over 18 percent compared to a 16 percent increase for the State as a whole.

*“ By 2020, the Treasure Coast District population is expected to exceed 2 million...”*

**Figure I.2: Treasure Coast Population Growth 1950 to 2020**



By 2020, the Treasure Coast District population is expected to exceed 2 million, growing at a faster rate than the State. Table I.3 presents growth data by county.

**TABLE I.3  
POPULATION GROWTH  
1980 – 2020**

County	Actual				Projected			
	1980	1990	1998	1999	2005	2010	2015	2020
Indian River	59,896	90,208	106,690	109,579	121,500	131,300	141,600	152,300
Martin	64,014	100,900	119,370	121,514	136,800	148,400	160,500	173,200
Palm Beach	576,812	863,503	1,020,521	1,042,196	1,155,300	1,244,500	1,337,400	1,434,100
St. Lucie	87,182	150,171	183,222	186,905	213,200	233,400	254,500	276,500
District	787,850	1,204,782	1,429,803	1,460,194	1,626,800	1,757,600	1,894,000	2,036,100

Source: Bureau of Economic and Business Research, University of Florida, Florida Population Studies, February, 1999

**AGE PROFILE**

The District's age distribution is significantly different than the State or the nation as a whole in terms of the relative proportion of school-age children and elderly residents. In 1998, elderly residents represented one quarter of the District population as compared to one fifth and one tenth of the State and national population, respectively. The growing proportion of elderly residents is evidenced by the increasing median age in each of the Region's counties over the past decades.

**Table I.4: Age Distribution of the District Population, 1997 (by percent)**

	School-Age (5 – 19)	Prime Working Age (20 –54)	Senior Population (65+)
District	16.6	43.4	24.2
State	18.6	47.1	18.4
Nation <sup>3</sup>	21.6	50.3	12.7

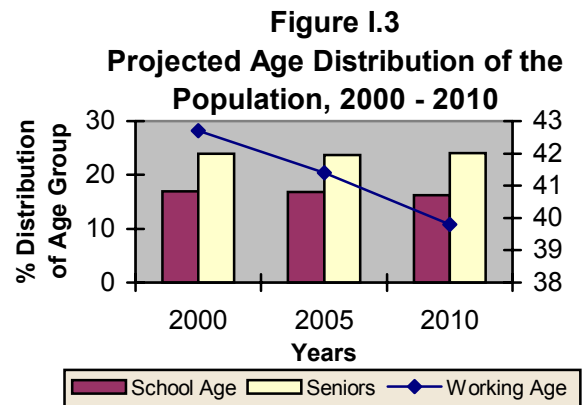
Source: BEBR

**Table I.5: Median Age**

Year	IRC	MC	PBC	SLC	FLA	US
1980	39.0	43.0	40.0	34.0	35.0	30.0
1990	44.0	44.5	39.9	37.9	36.4	32.8
1997	45.8	45.5	41.8	40.8	38.4	34.9

Source: BEBR

Over the next decade, the elderly population is expected to stabilize at about 25 percent of the population but the prime working age population (20-54) is expected to decline from about 44 percent in 1998 to just under 40 percent by 2010. The dual aspect of a shrinking prime working age population and increasing elderly population suggests that the working age population may be called upon to support the dependent population.



<sup>3</sup> Reflects 1997 data from Statistical Abstract of the United States 1998.

**DIVERSITY**

Since 1970, the racial composition of the Treasure Coast District has changed markedly. Generally, the white population, representing the largest proportion of the population has grown from 80.8 percent to 85.3 percent of the District's population in 1990. The black population over the same period has been substantially reduced from 18.8 percent to 12.1 percent. A significant in-migration of white persons to the District largely accounts for this racial shift in population. See Table I.6.a.

**TABLE I.6: RACE BY PERCENT OF TOTAL POPULATION  
 1970-1990**

1990	WHITE	BLACK	INDIAN	ASIAN	OTHER
INDIAN RIVER	90.3	8.5	0.2	0.5	0.6
MARTIN	91.3	6.0	0.2	0.5	2.0
PALM BEACH	84.8	12.5	0.1	1.0	1.5
ST. LUCIE	81.3	16.4	0.2	0.7	1.3
<b>DISTRICT</b>	<b>85.3</b>	<b>12.1</b>	<b>0.2</b>	<b>0.9</b>	<b>1.5</b>
STATE	83.1	13.6	0.3	1.2	1.8
<b>1980</b>					
INDIAN RIVER	85.3	13.0	0.14	0.3	1.3
MARTIN	90.4	7.4	0.1	0.3	1.8
PALM BEACH	83.9	13.4	0.1	0.4	1.6
ST. LUCIE	77.0	21.8	0.2	0.4	0.6
<b>DISTRICT</b>	<b>83.8</b>	<b>13.8</b>	<b>0.1</b>	<b>0.3</b>	<b>1.5</b>
STATE	83.9	13.8	0.2	0.6	1.5
<b>1970</b>					
INDIAN RIVER	81.7	18.1	0.1	0.1	0.1
MARTIN	84.6	15.0	0.1	0.2	0.2
PALM BEACH	82.1	17.5	0.1	0.1	0.2
ST. LUCIE	68.9	30.9	0.1	0.0	0.1
<b>DISTRICT</b>	<b>80.8</b>	<b>18.8</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>
STATE	84.2	15.4	0.1	0.2	0.1

Source: 1990 U.S. Census Bureau

Over the next ten years, the racial composition trends observed from the 1970 to 1990 period are projected to continue but at a more modest pace. In 2010, the projected racial composition of the District population will be 87 percent white, 11 percent black and 2 percent other. The Treasure Coast District is expected to be dissimilar to the racial composition of the State by 2010. See Table I.6.b.

**TABLE I.7: POPULATION PROJECTIONS BY RACE, 1997-2010**

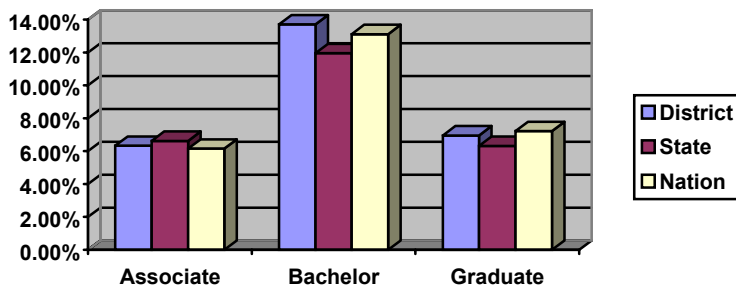
<b>1997</b>	<b>WHITE</b>	<b>BLACK</b>	<b>OTHER</b>
INDIAN RIVER	92.2	7.1	0.70
MARTIN	93.1	5.9	0.90
PALM BEACH	86.2	12.4	1.3
ST. LUCIE	83.4	15.5	1.1
<b>DISTRICT</b>	<b>86.9</b>	<b>11.9</b>	<b>1.2</b>
STATE	84.4	13.9	1.7
<b>2000</b>			
INDIAN RIVER	92.7	6.6	0.69
MARTIN	93.4	5.7	0.99
PALM BEACH	86.3	12.3	1.4
ST. LUCIE	84.0	14.9	1.2
<b>DISTRICT</b>	<b>87.1</b>	<b>11.6</b>	<b>1.3</b>
STATE	84.2	13.9	1.9
<b>2005</b>			
INDIAN RIVER	93.3	6.0	0.68
MARTIN	93.7	5.4	0.94
PALM BEACH	86.4	12.1	1.5
ST. LUCIE	84.5	14.2	1.3
<b>DISTRICT</b>	<b>87.2</b>	<b>11.4</b>	<b>1.4</b>
STATE	84.0	14.0	2.0
<b>2010</b>			
INDIAN RIVER	93.9	5.4	0.68
MARTIN	93.9	5.2	0.96
PALM BEACH	86.4	12.0	1.7
ST. LUCIE	84.9	13.7	1.4
<b>DISTRICT</b>	<b>87.4</b>	<b>11.1</b>	<b>1.5</b>
STATE	83.8	14.0	2.2

Source: Bureau of Economic and Business Research, *Florida Population Studies Population Projections by Age, Sex and Race for Florida and 13 Counties, 1997-2010, 1998.*

**EDUCATION PROFILE**

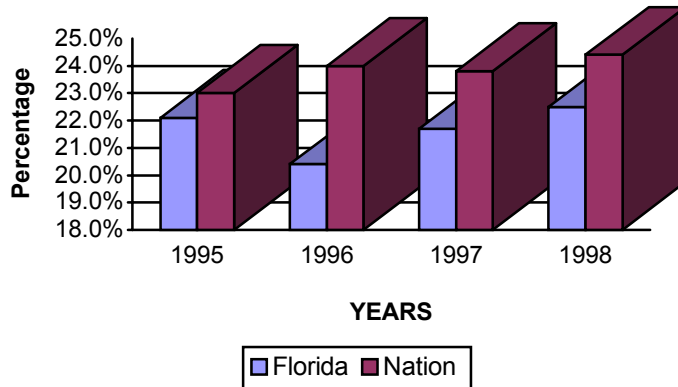
Educational attainment is an important measure of community well being. This is especially true as the transition to a new knowledge-based economy takes effect in cities, regions and States. In 1990, almost 21 percent of the population in the

**Figure I.4**  
**Percentage of Population over Age 25 with**  
**an Advanced Degree, 1990**



District over age 25 had earned a bachelor’s degree or higher compared to 18 percent and 20 percent for the State and nation, respectively. Over the period of 1990 to 1998, educational attainment standards have risen with approximately 82.8 percent of all adults aged 25 and over in the country completing high school and 24.4 percent earning a bachelor’s degree or more. In Florida, 22.5 percent of the population has earned a bachelor’s degree or more.

**Figure I.5**  
**Educational Attainment of Persons 25 Years and Older**  
**1995 to 1998**



**B. AN ENVIRONMENTAL PROFILE OF THE TREASURE COAST**

**NATURAL RESOURCES**

Air

The natural resources of the District can be broadly classified as air, land and water.

Land

The following discussion provides a general description of the natural resources and explains why they are regionally significant.

Water

**AIR**

Environmental  
Issues

Air quality in the Treasure Coast Region is affected by source, type and quantity of pollutant emissions. Emissions come from two main categories: point sources, including industry, agriculture, and public utilities and area sources, including automobiles, and to a lesser extent, open burning and solvent evaporation. Point source pollutant emissions are sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), and total suspended particulates (TSP) while area sources typically include hydrocarbons (HC), carbon monoxide (CO), and nitrogen oxides (NO<sub>x</sub>).

In general, the Region has good air quality. However, two indicators of air quality problems in the Region are the designation of the airshed containing Palm Beach County as a nonattainment area for ozone (O<sub>3</sub>) and exceedances of TSP standards in St. Lucie County. Ozone is formed through complex chemical reactions that are driven by solar radiation. Important precursors of O<sub>3</sub> are No<sub>x</sub>, CO and volatile organic compounds (VOCs) such as hydrocarbons. The primary source of these compounds in the Region is motor vehicle emissions.

**LAND**

**Upland Natural Communities.** Examples of typical upland natural communities and ecosystems in the District include beach dune, coastal strand, maritime hammock, scrub, and pine flatwoods. These natural communities are important because they provide habitat for a variety of plants and animals. These include many species listed as endangered or potentially endangered by the Florida Fish and Wildlife Conservation Commission, Florida Department of Agriculture and Consumer Services, Florida Council on Rare and Endangered Plants and Animals, or the US Fish and Wildlife Service.

Natural upland communities are also important for providing a clean source of aquifer recharge because those areas are relatively free of pollutants.

Coastal strand occurs along the primary dune system adjacent to the Atlantic Ocean. This community protects the primary dune system and helps to maintain the integrity of the barrier islands during major storms. Tropical and hardwood hammocks occur in small, isolated locations along the coast and at scattered locations inland. Tropical hammocks, which have a unique blend of temperate and tropical species, are considered a regionally endangered natural community because of their rarity in the District. Scrub communities occur primarily along the well-drained and elevated Atlantic Coastal Ridge and along a small ridge in western Indian River, Martin and St. Lucie Counties. Scrub is also considered a regionally endangered natural community because much of it has been eliminated by development. Pine flatwoods is the most common natural community in the District. This community type occurs on less well-drained soils inland from the coast. Pine flatwoods often have wetlands interspersed throughout the community (see Map M-3, Upland Natural Communities).

## **WATER**

**Marine Resources.** The Atlantic Ocean lies adjacent to all four counties in the District. The ocean is a natural resource of regional significance because it has a great influence on the economy of the District. Marine resources are important for navigation, import and export of supplies, shellfish harvesting, commercial and sport fishing, and recreation for residents and tourists. The winds and waves of the Atlantic Ocean shape the beaches and dunes along the shoreline of the District. Southward flowing near-shore currents transport sand which eventually forms beaches and sandbars. The northern flow of the Gulf Stream transports marine organisms from the tropics and has a tempering effect on the climate of the District.

Examples of marine benthic natural communities and ecosystems include hard bottom, sand bottom, coral reef, mollusk reef, worm reef, and algae bed. These communities occur in patches at scattered locations off the coast. Of special note are reef systems that have been nominated for designation as National Marine Sanctuaries. The St. Lucie near-shore reefs occur off the coast of Martin County, and the Vero Beach near-

shore reefs and *Oculina* reefs occur off the Indian River County. The large size and diversity of marine organisms in these reefs makes them regionally significant.

Fish and other marine organisms associated with marine communities are dependent on the District's estuaries for reproduction and survival at various stages of their life cycle. Also, several species of endangered and threatened sea turtles nest on the District's beaches from March through October. Protection of marine resources is essential to maintaining stability and growth in sectors of the economy dependent on commercial and recreational fishing and tourism.

**Estuarine Resources.** Estuaries are water bodies in which seawater is significantly diluted with freshwater flowing from the land. The main estuaries in the District are the Indian River Lagoon, Lake Worth Lagoon, Lake Wyman Lagoon, Lake Boca Raton Lagoon, and portions of the Sebastian, St. Lucie, and Loxahatchee rivers near the inlets. The District's estuaries are important because they contain highly productive natural communities and ecosystems including seagrass beds, algae beds, oyster beds, exposed sand and shell bottoms, mud flats, tidal marshes, and mangrove swamps. Seagrasses help stabilize sediments, enhance water quality, provide habitat for animals and are primary producers at the base of the marine food chain. They are also an important food source for manatees and serve as nursery areas for a high percentage of the regionally important commercial and sport fish species. Exposed sand and shell bottoms support algae, clams, oysters, and other bottom-dwelling organisms, which provide a foraging base for fish. Drift algae beds are unattached communities that move in response to the water currents. Similar to seagrasses, drift algae beds provide habitat and nursery areas for fish and may have special importance to juvenile shrimp, lobsters and other invertebrates. Mangrove communities provide a nutrient base, which is critical in maintaining the District's commercial and sport fish populations. The estuaries are heavily used by recreational boaters and are important to the marine industries. The estuaries are prime locations for boat facilities, waterfront development, and other water-related activities.

**Freshwater Resources.** Natural wetland and deepwater systems include lakes, ponds, rivers, marshes, swamps, sloughs, and wet prairies. Examples of natural wetland systems in the District include: 1) Blue Cypress Lake and the St. John's Marsh in Indian River County; 2) Allapattah Flats in western St. Lucie and Martin Counties; 3) the Savannas in eastern St. Lucie and Martin Counties; 4) the Loxahatchee Slough, water catchment areas, and conservation areas in Palm Beach County; 5) Lake Okeechobee and the Everglades in Martin and Palm Beach Counties; and 6) the Sebastian, St. Lucie, and Loxahatchee Rivers. In addition to these major systems, there are numerous unnamed wetlands on public and private property throughout the District.

The District's aquatic systems provide a great diversity of benefits making them natural resources of regional significance. Lake Okeechobee supplies potable water to communities near its shores including the cities of Belle Glade, Pahokee, and South Bay. The City of West Palm Beach relies on Lake Mangonia and Clear Lake for drinking water as well as groundwater withdrawal. These lakes are fed water by a canal from the West Palm Beach Water Catchment Area, an 18 square mile wetland west of the City. Inland wetlands function as collection basins in natural drainage areas that retain and detain water at various flood stages. Pollutants such as hydrocarbons, heavy metals, nitrogen, phosphorous, suspended solids, and organic matter are all removed from water in wetlands by a number of different processes. Natural systems are also critically important to the survival and well-being of a large number of plant and animal species. Wetland habitats have recreational values especially for hunting, fishing, canoeing, and bird watching. In addition, because of the thermal characteristics of water, large wetlands and deepwater habitats can have local and regional effects on wind patterns, humidity levels, precipitation rates, and temperature. Citrus and other temperature sensitive crops are less likely to suffer frost damage when located downwind of water bodies and wetland systems.

**Groundwater Resources.** The shallow surficial aquifers are important sources of groundwater in the District. Undifferentiated aquifers occur in Indian River, St. Lucie, and Martin Counties and in Palm Beach County north of Delray Beach. The thickness of these aquifers range from less than 50 feet to 200 feet. Sediments in this aquifer system consist primarily of sand, clay, silt, shell, and limestone. The Biscayne Aquifer occurs in southeastern Palm Beach County. This aquifer reaches a thickness of more than 170

feet along the coast, but it is less than ten feet thick at the edge of the Everglades. The sediments comprising the Biscayne Aquifer are highly permeable limestones, sandstones, and sands. These aquifers are recharged by rainwater percolating through uplands and from seepage from water bodies, canals, and wetlands.

Underlying the shallow aquifers is the Hawthorne Formation which contains relatively impermeable clays and marls. Below this confining layer is the Floridan Aquifer which, in this District, contains slightly to highly mineralized water. The Floridan Aquifer consists mostly of limestone and dolomite, and under natural conditions there is no opportunity for shallow and Floridan waters to mix. The Floridan Aquifer produces free-flowing artesian wells. For many years, Indian River County and some coastal communities have been withdrawing water from the Floridan Aquifer. The water is demineralized by reverse osmosis, and it provides a potable water supply to coastal communities. In recent years, more water utilities have been turning to this practice. The Floridan Aquifer is recharged from rainwater in the central part of the State, outside the District.

## ENVIRONMENTAL ISSUES

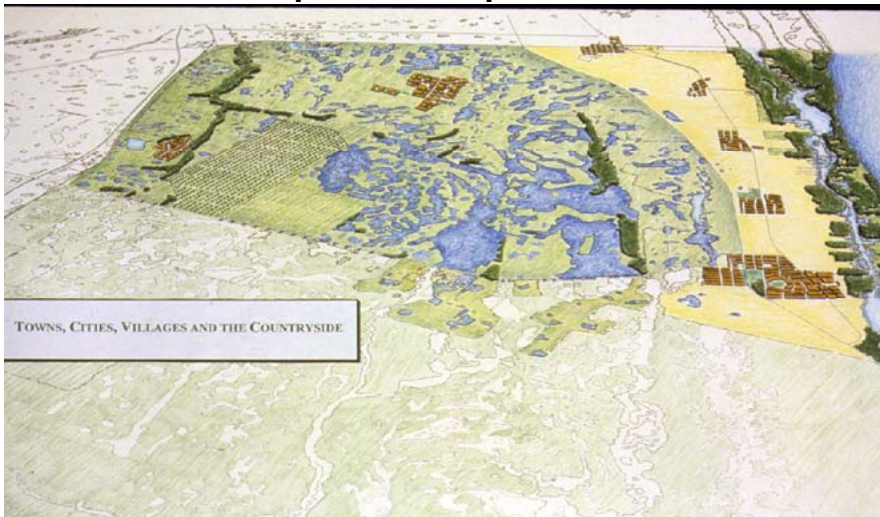
### PRESERVATION OF THE DISTRICT'S NATURAL SYSTEMS

Continued expansion of agricultural and urban development along the Treasure Coast will impact natural resources of regional significance. The natural systems of the Treasure Coast District should be preserved. The quality of life enjoyed in the District depends on the conservation of the natural environment. A plan for the Treasure Coast District should chart a clear strategy that identifies significant natural systems and proposes methods to preserve them.

#### *Patterns of Development*

There must be many types of land uses in a well-planned District. The ideal pattern of development for addressing natural system preservation is a series of compact urban areas (cities, towns, and villages) surrounded by the countryside (nature preserves and rural uses such as agriculture). While land uses on many properties may be flexible through time, the nature preserves are easier to determine and should not be expected to change in the future. Therefore, a plan for the District must start by determining the

#### Conceptual Development Pattern



Source: TCRPC

natural areas that should be preserved. Once nature preserves are identified, it will be easier to plan the areas that should be open for development.

Nature preserves, together with other rural uses, should form a permanent greenbelt that bounds development areas. They should be accessible to the extent that it does not affect the health of the native ecosystems. They provide recharge areas for potable water and stormwater attenuation for urban and rural uses.

## PROTECTION OF THE DISTRICT'S WATER SUPPLY

### *Water Demands*

Sectors competing for limited water resources within the District include 1) natural systems; 2) agriculture; and 3) domestic, municipal, and industrial users. Future increases in needs of these users will cause competition between all sectors for existing water supplies and will require more efficient use of water.

Certain volumes of water and flow rates are required to maintain the functions and values provided by natural systems and fish and wildlife species. A minimum baseline volume of water should be reserved for maintenance of these important sectors. The water demands of agriculture can be met partially by continued development and implementation of water conservation techniques and by the development of stormwater attenuation facilities for the storage of surface water. The water demands of domestic, municipal, and industrial users can be met through increased use of water conservation techniques, increased utilization of desalination, development of aquifer storage and recovery systems, increased use of stormwater attenuation facilities for urban areas, and better management of existing water supply reservoirs. Relying on reclaimed wastewater for irrigation can also enhance the water supply. The main problem with reclaimed water technique is that this type of water is not always available. All new and expanding wastewater treatment facilities should make reclaimed wastewater available for reuse, and new development should be required to use reclaimed wastewater. Managing the water supply through these activities should be supported.

### *Groundwater Quality*

In highly populated coastal areas, water supply problems arise when local demand may exceed the sustainable capacity of the sources, at least seasonally. This has led to groundwater quality being adversely impacted by overuse of wellfields located too close to the ocean. Saltwater intrusion occurs as a result of reduced groundwater pressure which allows a vertical movement of saline water into the surficial aquifer. This may prevent utilization of portions of the aquifer as a potable water source. Activities leading to over-utilization of coastal wellfields should be discouraged. Support should be provided for the development of alternative water supplies for coastal areas experiencing saltwater intrusion.

### ***Groundwater Recharge***

Another problem is the effect of urban development on water recharge into the shallow aquifers. Recharge is provided by infiltration of rainfall and seepage from water bodies such as lakes and wetlands. Canals and ditches can also provide recharge in certain situations if managed properly, but these facilities generally reduce the potential for recharge in the areas they are designed to drain. Significant recharge areas in the District are located in excessively drained sands found generally on the Atlantic coastal ridge in the eastern portion of the District. Historically, these areas were the preferred site for development and are currently highly urbanized. The predominance of urban and suburban development within these recharge areas has lowered the rate, quantity, and quality of recharge waters to the shallow aquifers. Also, the clearing and replacement of a natural community with irrigated lawns or landscape materials creates a greater demand for limited water resources.

### ***Water Conservation***

Urban water supply shortages can be addressed by 1) encouraging conservation (including water reuse, rate restructuring, installation of water-saving devices, and public education), 2) restricting use of water for irrigation and non-potable water needs, 3) encouraging development to occur within service areas of facilities with available capacity, 4) discouraging development that would require significant expenditures in public facilities or would severely impact recharge areas, and 5) cutting water demand by use of native vegetation and xeriscape practices.

## **PROTECTION OF THE DISTRICT'S WATER RESOURCES**

### ***Resource Contamination***

The District's heavy reliance on surface and surficial, shallow aquifer waters as primary water sources in combination with a predominance of very permeable sandy soil types, proximity of saline waters, low elevations, and high water tables make the District extremely vulnerable to water supply contamination. Potential and existing sources of contamination include 1) stormwater runoff; 2) septic tank, sewage treatment plant, and landfill leachate; 3) mismanaged toxic and hazardous materials; 4) saltwater intrusion; 5) free flowing saline Floridan Aquifer irrigation wells; and 6) discharge of wastewater effluent that has not been adequately treated.

### ***Stormwater Runoff***

The impacts of stormwater runoff from urban and agricultural sources can be minimized through implementation of a series of management practices designed to detain or retain water on developed sites. Such practices are currently required of new development by Water Management Districts. Serious impacts have occurred and will continue to occur due to discharges from older development which were not designed to hold stormwater. Plans need to be developed and implemented to address and correct the problems created by these existing water management systems.

### ***Wastewater Contamination***

Problems associated with septic tanks, sewage treatment plants, leaky underground storage tanks, and landfill leachate can be reduced through better land use regulations, environmentally sensitive siting of facilities, improved facility design, public education, and development and implementation of plans for better managing hazardous and toxic materials.

## **PROTECTION OF MARINE RESOURCES**

### ***Shoreline Erosion***

Beach erosion may be caused by activities that obstruct the normal transport of sand in near-shore currents. The construction of a jetty that blocks the southward flow of sand in these currents causes accretion of the beaches north of the structure and beach erosion to the south. This is evident by examining how the north and south shorelines do not match at the major inlets in the District. Activities that restore the natural transport of sand should be supported and activities that result in beach erosion should be discouraged.

### ***Dredging***

Dredging in the marine environment can result in a high level of suspended sediments that can be detrimental to benthic communities and marine organisms. The effects of sedimentation on slow-growing, highly productive coral and worm reef communities are of particular concern. The organisms in these communities die or are displaced when high levels of sedimentation occur. Suspended sediments can be the result of dredging channels, basins, or beach renourishment projects that dredge sand from offshore and

transport it to build up nearby beaches. Also, reef systems can be impacted when covered with dredged material transported offshore for disposal. Dredging and spoil disposal activities that result in impacts to reef communities should be discouraged. Programs to protect coral and worm reefs should be supported. The designation of the St. Lucie Near-shore Reefs, Vero Beach Near-shore Reefs, and Oculina Reefs as National Marine Sanctuaries should be supported.

## **PROTECTION OF ESTUARINE RESOURCES**

### ***Fresh Water Quality and Quantity***

Foremost among the factors impacting the District's marine resources is the quality and quantity of water entering the estuaries. Stormwater runoff has a major detrimental impact. The runoff contains heavy metals and hydrocarbons from roadways as well as fertilizers, herbicides, and pesticides from developed areas. Discharge from sewage treatment plants, leakage from faulty septic tanks, and raw sewage from boats have also added excess nutrients and pollutants to the estuaries. Some marinas and boatyard operations have caused a variety of toxic substances to enter the marine waters including tin and copper. Efforts to retrofit problem stormwater and wastewater management systems should be supported, and programs to improve and restore water quality should be encouraged.

### ***Dredging and Erosion***

Marine dredging is utilized to create, improve, and maintain channels and docking facilities and to restore and maintain eroding beaches. Such projects must be carefully designed in terms of the source and deposition areas, the composition of the dredged material, and the construction technique to avoid both direct and indirect adverse environmental impacts. Poorly designed dredging activities in the Intracoastal Waterway and increased use of the estuaries by boats have caused turbidity levels to rise. Increased boating activity has also contributed to a high mortality rate in manatees. In addition, the elimination of littoral vegetation and mangroves from the shoreline has led to erosion and allowed polluted runoff to enter the estuaries directly from waterfront property. Seagrasses and mangroves have been removed by dredge and fill operations, and many of the existing mangrove communities have been isolated by impoundment for mosquito control. Efforts to protect and restore estuarine natural resources, such as

opening mangrove impoundments through rotational impoundment management techniques, and the development of manatee protection plans should be supported.

## **PROTECTION OF WATER BODIES AND WETLANDS**

### ***Agricultural Impacts***

The District receives about 62 inches of rain a year, and most of it falls during the spring and summer months. The combination of concentrated periods of rainfall and level terrain produces flood conditions. Historically, agricultural expansion into wetlands has been a major threat to these systems. Land was drained and protected from flooding in order to support agriculture. Furthermore, some crops such as citrus required that the water table be dropped well below natural levels. These practices destroy the wetlands that are converted to agriculture, and lowering the water table negatively impacts the viability of wetlands on adjacent properties. However, current practices involve permitting from the Water Management Districts that require the protection of wetlands and/or mitigation for wetland impacts.

### ***Urban Development Impacts***

Development near wetlands is a problem if the water table is lowered. The water table may be lowered for flood control, or it may be lowered as a result of excessive pumping from wells in the shallow aquifer. Lowering the water table often alters the hydroperiod of the wetlands and threatens their viability unless the drainage plan is specifically designed to manage the wetland systems. When wetland habitats are altered by development, there is a need for mitigation through the creation of new wetland habitats or through the restoration of the degraded or existing habitats. The establishment of mitigation banks in areas unaffected by development could be used to mitigate for these impacts.

## **PROTECTION OF UPLAND NATURAL COMMUNITIES AND ECOSYSTEMS**

### ***Methods of Protection***

One method of protecting natural communities and ecosystems is to encourage new development to occur in areas where natural communities have already been impacted.

Infill and redevelopment projects in urban areas should be supported as a method of minimizing impacts to uplands. Additional benefits of this strategy are more fully discussed in other sections of the plan.

The main method to protect important natural communities and ecosystems has been through public purchase programs. All four counties and several municipalities in the District have land acquisition programs designed to preserve natural communities. These programs are financed by bond referendums approved by the public. Matching funds provided through State programs (Conservation and Recreational Lands, Save Our Rivers, and Florida Community Trust) help to extend the purchase power of these programs. Once environmentally sensitive lands are purchased, it is important to provide the necessary level of restoration and management to maintain the natural communities. Programs to acquire, restore, and manage natural communities should be encouraged and supported. Other methods of protection such as purchasing development rights or establishing conservation easements should also be considered.

## **PROTECTION OF ENDANGERED AND POTENTIALLY ENDANGERED SPECIES**

### ***Listed Species***

The historic loss of upland and wetland natural communities has had a major impact on wildlife and plant populations. More than 95 species of animals and 100 species of plants in the District have been listed as rare, threatened, or endangered by the Florida Fish and Wildlife Conservation Commission, Florida Department of Agriculture and Consumer Services, Florida Council on Rare and Endangered Plants and Animals, or the US Fish and Wildlife Service. In a regional analysis, the FGFWFC identified numerous large and small patches of natural communities outside the existing preserve areas that warrant preservation to protect wildlife. In addition to listed species, there are hundreds of other more common species that depend on the remaining natural communities for survival.

## **PROTECTION AND SUSTAINABILITY OF THE EVERGLADES ECOSYSTEM**

### ***Extent of the Everglades Ecosystem***

The Everglades ecosystem requires special attention in this plan because of its large size, economic and environmental importance, and the State's commitment to protect this system as part of creating a sustainable South Florida. The Everglades ecosystem is a massive watershed spreading over 9,000 square miles in southern Florida. This system includes a series of interconnected fresh water rivers, lakes, marshes, prairies, forests, and estuaries that stretch from the Kissimmee River Basin, Lake Okeechobee, the Everglades, Big Cypress Swamp, and the estuaries of Florida Bay and the Ten Thousand Islands. This hydrologically related system occurs in all or part of 16 counties. Within the Treasure Coast District, portions of St. Lucie, Martin, and Palm Beach Counties are located within the Everglades ecosystem.

### ***Importance of the Everglades Ecosystem***

Both the economy and natural resources of South Florida depend on the health of the Everglades ecosystem. Approximately 6 million residents and 17 million visitors yearly depend on this system for domestic, agricultural, and industrial water supply as well as for income and recreation. Furthermore, thousands of plant and animal species, many of which are endangered and potentially endangered, depend on the clean, free-flowing water and expansive natural areas of the Everglades ecosystems for survival.

### ***Changes to the Everglades Ecosystem***

Historically, water flowed slowly through the Everglades ecosystem through the chain of lakes in the Kissimmee River Basin into Lake Okeechobee and then southward through the Everglades proper and into Florida Bay. The Everglades once covered about 4 million acres and was characterized as a slowly-moving sheet of freshwater drifting southward.

During the last 100 years, drainage of lakes, swamps, and marshes and the alteration of the flow of water has resulted in the permanent loss of over half the original Everglades. The drainage was primarily to make the area more suitable for urban and agricultural development. Channelization of the Kissimmee River destroyed over 40,000 acres of wetlands and diminished fish and wildlife habitat. Agricultural runoff and water diversion

degraded Lake Okeechobee and the Everglades. Roads, canals, levees, and water control structures have disrupted water flow to the Everglades, Big Cypress Swamp, Florida Bay, and Ten Thousand Islands estuaries. Within the Treasure Coast District, much of what was originally Everglades wetlands south and southeast of Lake Okeechobee has been converted to the production of sugar cane.

Sustainability of the Everglades ecosystem cannot be accomplished if each of the components of the system is managed independently in isolation from one another. For this reason, it is important for the Treasure Coast Economic Development District to improve coordination between State and federal agencies, other regional planning councils, and affected local governments concerning methods to achieve sustainability of the Everglades ecosystem. Support should also be provided for programs being implemented by the South Florida Water Management District and Florida Department of Environmental Protection to 1) develop coordinated and integrated water resource plans, 2) improve understanding of environmental water needs, 3) minimize flooding impacts, 4) increase focus on pollution prevention, and 5) combat the spread of exotic species. The regional planning councils' efforts to transform urban sprawl into quality development patterns, promote employment and business opportunities, improve quality of life, and improve scientific understanding and information coordination is necessary to attain a sustainable South Florida and Everglades ecosystem.

### **The Central and Southern Florida Project**

Restoration of the Everglades ecosystem is highly dependent on making changes to the Central and South Florida (C&SF) Project. This project is a multi-purpose water management system that provides flood protection and water supply in a 16,000-square mile area that includes all or part of 18 counties in central and southern Florida. The C&SF Project includes more than 1,000 miles of canals and levees, over 150 water control structures, and 16 major pump stations. The 50-year old system is outdated and not designed to accommodate the needs of the current and future population levels in central and southern Florida. Furthermore, the current system is contributing to the degradation of major ecosystems including the Everglades, Florida Bay, Lake Okeechobee, Kissimmee River, Caloosahatchee River, St. Lucie River, Loxahatchee River, Indian River Lagoon, and Lake Worth Lagoon.

In order to correct the problems with the existing water management system, the US Army Corps of Engineers (COE) and South Florida Water Management District (SFWMD) have been working for several years on the C&SF Project Comprehensive Review Study, known as the Restudy. The primary goals of the Restudy are to restore natural ecosystems, increase regional water supplies, improve water quality, and maintain flood protection in the project area.

The COE has recently released the final report for the Restudy. The Restudy final report includes a recommended comprehensive plan that is designed to correct many of the major problems associated with the existing C&SF Project. The recommended plan is comprised of structural and operational changes to the existing C&SF Project that were formulated to restore, protect, and preserve the Everglades ecosystem as well as meet other water resource needs. Major features of the plan include new water storage reservoirs, water preserve areas, revised management of Lake Okeechobee water levels, improved water flows to estuaries, underground water storage, stormwater treatment areas, improved water delivery to the Everglades, removal of barriers to sheetflow, water storage in existing quarries, wastewater reuse, and improved fresh water flows to Florida Bay. The recommended plan also includes an implementation strategy to coordinate integration of the components of the plan.

The report recommends that the comprehensive plan be approved as a framework and guide for modifications to the C&SF project. Based on October 1999 prices, the estimated first cost of the comprehensive plan is \$7.8 billion. This is to be cost shared 50/50 with the State of Florida, the non-federal sponsor. In accordance with Section 528 of the Water Resources Development Act of 1996, operation and maintenance of the project is a non-federal responsibility; however, the report includes a recommendation that operation and maintenance costs should be shared equally between the federal government and the State. The estimated annual operation and maintenance costs, including adaptive assessment and monitoring, are \$182 million.

The Restudy final report is currently being evaluated by the U.S. Congress. Congressional approval of the plan is necessary to appropriate funds to implement the recommendations in the Restudy final report. At the present time, the State of Florida is also considering different mechanisms for funding implementation of the Restudy. The restoration of the Everglades and the sustainability of the District depend on cooperation and an adequate level of funding provided by the State and federal governments.

C. WHERE ARE WE? EMPLOYMENT, WAGES AND INCOME TRENDS

Overview **OVERVIEW**

Population growth is the primary engine of economic growth in the Treasure Coast Region. Over the last ten years, the Region has supported a significant population increase of over 300,000 persons, or approximately 27 percent. Most of this rapid population growth can be attributed to a substantial and persistent positive net migration of over 26,000 persons per year. Primary migration flows into the region have been from Fort Lauderdale, Miami, New York, Boston and Philadelphia. This population growth drove employment to increase by over 116,000, or just under 23 percent.

Employment

Wages

Income

Industry Trends

State Economic Trends

Metropolitan Area Trends

Regional average annual employment grew by 4.0 percent or approximately 22,700 jobs in 1998. This compares to the Statewide average annual employment growth of 3.7 percent. At an annual average employment growth of 2.1 percent during the 1990s, Regional job growth essentially mirrored the Statewide annual average growth of 2.2 percent.

The Region's Gross Metropolitan Product (GMP), which is the sum of all income produced in the Region, continues to outpace the State and the nation. The Treasure Coast GMP increased by 7.3 percent in 1998 to a total of \$35.5 billion. Over the past year, Florida's Gross State Product (GSP) and the nation's Gross Domestic Product increased 4.8 percent and 3.9 percent, respectively.

Labor force participation represents the proportion of the population aged 15-64 that is working or actively seeking work. In 1998, the Region's labor force participation rate was 80.6 percent. This compares to a rate of 77.0 percent for the State. The Region's participation rate has declined marginally from 83.2 percent in 1990. The first half of the decade witnessed increasing unemployment rates as the nationwide recession was felt. Rates in the Region peaked at 11.2 percent in 1992 and declined thereafter. In 1998, the Region's unemployment rate was 6.2 percent, more than 2 percentage points higher than the rate for the State (4.3 percent) and nation (4.5 percent). See Table I.7.

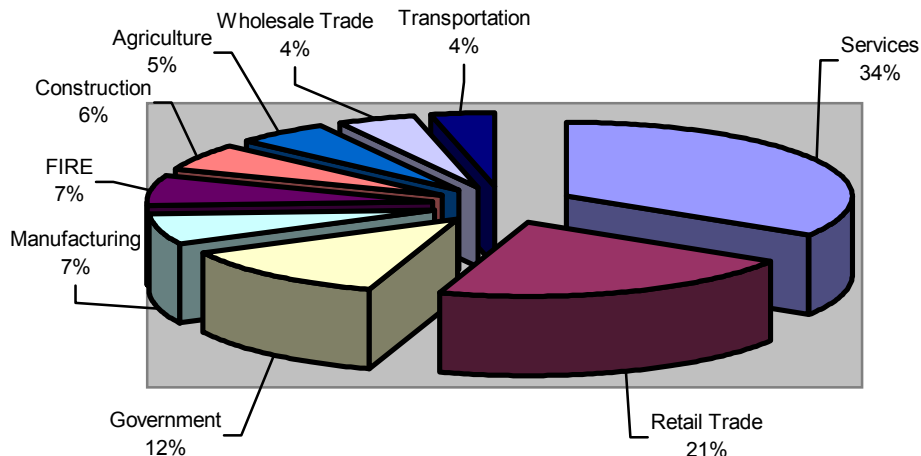
**EMPLOYMENT**

Employment in the Treasure Coast District is divided into the following industrial sectors:

- **Services**
- **Trade** (Wholesale and Retail)
- **Government** (Federal, State and Local)
- **Manufacturing**
- **FIRE** (Finance, Insurance and Real Estate)
- **Construction**
- **Agriculture**
- **TCPU** (Transportation, Communications, Public Utilities)

Presently, employment in the District is concentrated in the services and trade sectors of the economy. In 1998, the Treasure Coast District employed approximately 632,000 people. As illustrated in Figure I.6 below, total service jobs comprise over one-third of the 1998 total wage and salary employment in the Treasure Coast; while trade jobs represent one-quarter of the total employment. These two sectors account for approximately 59.0 percent of the Treasure Coast's labor force. The government sector employs almost 72,000 persons and represents over 12 percent of total regional jobs. Manufacturing jobs represented less than 7 percent of total District employment in 1998.

**Figure I.6: Regional Employment by Industry Sector, 1998**



### **Largest Employment Sectors**

The largest employment sector in the Treasure Coast Region is health services which employs over 62,000 people and constitutes all aspects of health care including doctors and dentists and other health practitioners; nursing and personal care facilities; hospitals; medical and dental laboratories; and home health care services. Because of the size of the senior population in the District, this sector has and will continue to enjoy significant growth. This sector had a 1998 annual average wage of \$34,613. By comparison, the second largest employer, local government, paid an average of \$37,173 per year. These industries provided wages moderately higher than the District average wage of \$30,279. The ninth, eleventh and thirteenth largest employers, engineering and management, durable and nondurable goods trades paid far in excess of the District average. However, the fourth and fifth largest employers, eating and drinking places and food stores only paid a fraction of the District average wage. For example, restaurant employees' average earnings totaled, \$12,457, only 41 percent of the District average. Altogether, six of the top fifteen employment sectors in the Treasure Coast District provide wages well above the District average, while nine offer pay rates significantly below it.

**Table I.8**  
**Top 15 Employers in the Treasure Coast District, 1998**

SIC Code	Sector	Total Employment	Average Annual Wages
80	Health Services	62,430	\$34,613
93	Local Government	46,360	\$37,173
73	Business Services	41,534	\$24,710
58	Eating and Drinking Places	39,762	\$12,457
54	Food Stores	24,624	\$14,813
17	Special Trade Contractors	23,185	\$27,302
07	Agricultural Services	18,710	\$18,197
79	Amusement & Recreation Services	15,806	\$22,653
87	Engineering & Management Services	14,659	\$47,986
59	Miscellaneous Retail	14,437	\$21,139
50	Wholesale Trade – Durable Goods	14,262	\$39,817
53	General Merchandise Stores	13,739	\$16,438
51	Wholesale Trade – Nondurable Goods	12,001	\$41,850
55	Automotive Dealers & Service Stations	11,710	\$32,449
70	Hotels and Other Lodging Places	11,472	\$20,309
Total Employment (All Sectors)		586,814	\$30,279

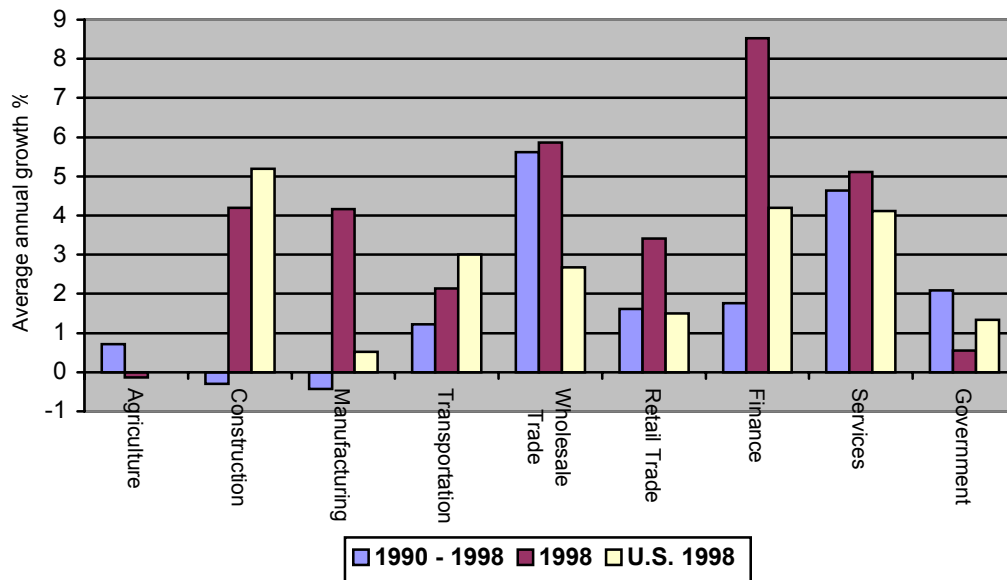
*...Six out of the top 15 employers in the Region provide wages above the District average; nine offer wage rates below the average.*

Florida Department of Labor, ES-202, 1999

### Employment Growth and Concentration

Finance, Insurance and Real Estate was the industry with the highest employment growth in the Region, increasing 8.5 percent in 1998. Nationally, growth for this industry was 4.2 percent. Agriculture was the industry that experienced the poorest growth performance district-wide, declining by -0.1 percent in 1998. Nationally, agricultural employment decreased by -0.6 percent. During the 1990s, Wholesale Trade was the highest growth industry with an annual average growth of 5.6 percent. Manufacturing was the slowest growth industry, declining by -0.4 percent per year.

**Figure I.7: Employment Growth by Industry**

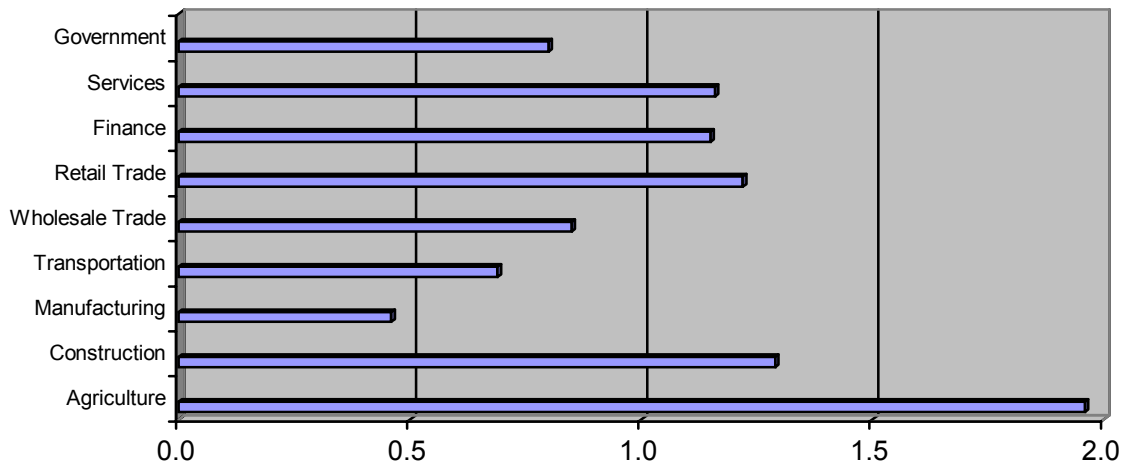


One of the ways to gauge the Region’s industrial concentration or specialization is to use location quotient analysis. A location quotient is a ratio that compares the percentage of employment in a particular industry in a local economy (in this case, the Treasure Coast District) to the percentage of employment the same industry comprises in a reference economy (i.e., the national economy). The analysis indicates which industries have a comparatively larger or smaller presence in the subject economy.

A location quotient equal to 1.0, for example, suggests that industrial production in a particular industry is just enough to support local demand. Industries with location quotients of less than 1.0 are assumed to be local-serving or non-basic industries. It also suggests that local demand for a particular product or service is greater than what is

supplied locally and needs to be imported. A location quotient greater than 1.0 for a particular industry indicates relatively high production of a particular good or service and suggests that surplus production is being exported beyond what is required to meet local demand.

**Figure I.8: Location Quotients by Major SIC Division**



Source: U.S. Bureau of Labor Statistics, Florida Department of Labor and Employment Security, ES-202 program and TCRPC

The industry with the highest location quotient value or concentration was Agriculture with 1.96 times the national employment share. The lowest concentration was in Manufacturing, which only had 0.46 times the national employment share.

At the beginning of the 1990's, almost one out of every three jobs was related to services up from 25 percent a decade earlier. In 1980, the manufacturing industry employed almost 12 percent of the workforce, or one out of every eight jobs according to U.S. Bureau of Economic Analysis information. By 1990, however, the regional employment share of manufacturing declined to 6.9 percent and by 1997, the percentage of employees in manufacturing regionally had been reduced to under 5.4 percent. Regional employment shares in construction, transportation, finance and government services industries have also declined over the past two decades as well.

**Employment Growth – By Major Industry Groups**

Over the last decade, the Region’s employment<sup>4</sup> has grown from 482,000 to almost 587,000, an increase of over 43 percent, or 105,000 jobs. Most of this growth can be attributed to growth in just fifteen major industry groups of the economy. Accounting for over 50 percent of the growth are substantial employment increases in business services, health services, food stores, social services and wholesale trade. The majority of these industries are population-driven and generally provide for the local needs of the population.

**Table I.9**  
**Top 15 Industries with Greatest Job Growth in the Treasure Coast District,**  
**1990 - 1998**

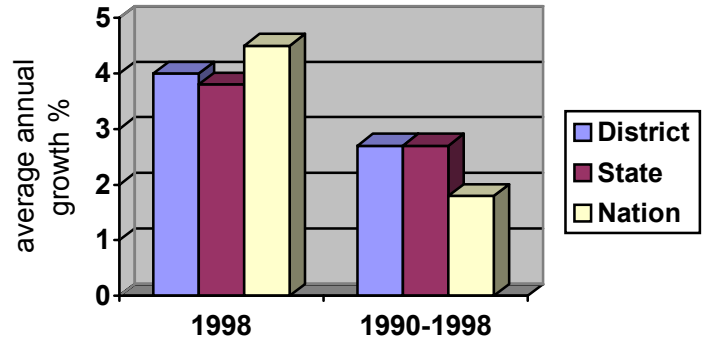
SIC Code	Sector	Total Employment		Change 1990 -1998		Average 1998 Annual Wages
		1990	1998	Number	percent	
73	Business Services	21,475	41,534	20,059	93.41	\$24,710
80	Health Services	43,108	62,430	19,322	44.82	\$34,613
54	Food Stores	19,067	24,624	5,557	29.14	\$14,813
83	Social Services	6,631	12,044	5,413	81.63	\$14,960
51	Wholesale Trade – Nondurable Goods	6,603	12,001	5,398	81.75	\$41,850
87	Engineering & Management Services	9,902	14,659	4,757	48.04	\$47,986
79	Amusement & Recreation Services	11,375	15,806	4,431	38.95	\$22,653
7	Agricultural Services	14,600	18,710	4,110	28.15	\$18,197
58	Eating & Drinking Places	35,734	39,762	4,028	11.27	\$12,457
50	Wholesale Trade – Durable Goods	10,364	14,262	3,898	37.61	\$39,817
36	Electric & Electronic Equipment	4,683	8,397	3,714	79.31	\$57,788
35	Machinery & Equipment	512	3,693	3,181	621.29	\$54,566
17	Special Trade Contractors	20,694	23,185	2,491	12.04	\$27,302
62	Security and Commodity Brokers	2,807	5,194	2,387	85.04	\$105,763
61 <sup>1</sup>	Nondepository Institutions	1,423	3,535	2,112	148.42	\$47,946
Total Top 15 Employment Sectors		208,978	299,836	90,858	43.48	
Total, All Sectors		482,205	586,814	104,609	21.69	\$30,285

Florida Department of Labor, ES-202 Program, 1999

<sup>4</sup> Includes employees covered by federal and State unemployment compensation laws.

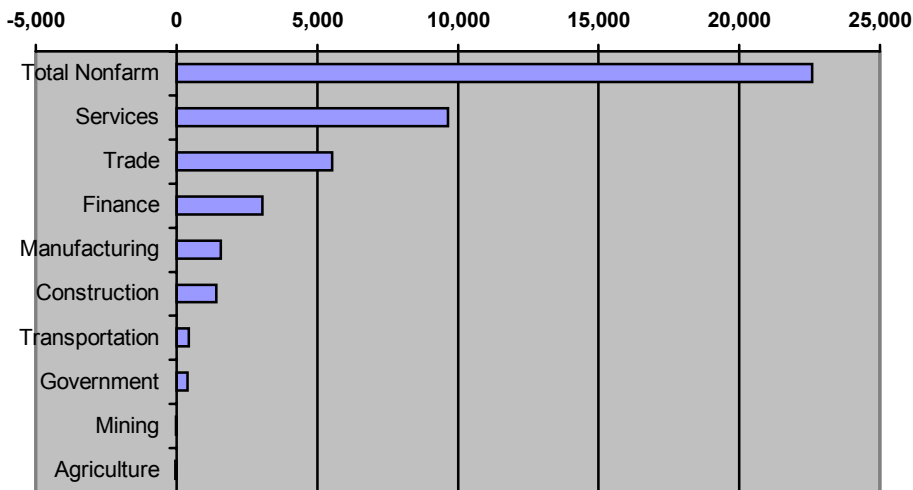
Treasure Coast District employment grew a moderate 4.0 percent in 1998, adding an estimated 22,700 jobs. This compares to 3.7 percent for the State and 4.4 percent for the nation. District average annual employment growth of 2.1 percent during the 1990's coincided with the State growth rate but surpassed the national growth in employment of 1.8 percent.

Figure I.9: Employment Growth



Between December 1997 and December 1998, the District gained 22,500 jobs, a major increase from the 1997 figure of 15,300. About 43 percent of the job growth can be attributed to the service sector followed by trade, finance, manufacturing and construction sectors.

Figure I.10 District Employment Change by Industry  
 1997 - 1998

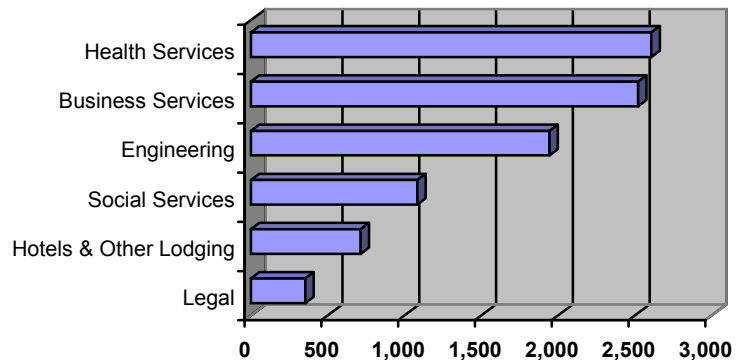


- Services continues to be the main engine of growth for the District economy. Service jobs grew by 5.1 percent in the period of December 1997 and December 1998 adding 9,600 new jobs to the economy.

- The trade sector comprised of wholesale and retail trade grew by 5,500 jobs in 1998 reflecting strong consumer spending and concomitant growth in food stores and durable and non-durable goods trade throughout the Region.
- The Finance, Insurance and Real Estate (FIRE) sector jobs increased by nearly 3,100 between 1997 and 1998, an increase of 8.5 percent. Most of the growth was related to increases in real estate and non-depository and depository institution jobs.
- Manufacturing jobs in the District increased by 4.2 percent, or 1,570 jobs led by gains in electric and electronic equipment, transportation equipment and machinery and equipment industries.
- The construction industry gained just over 1,400 jobs from 1997 to 1998 led overwhelmingly by increases in special trade construction.

Health and business services accounted for over 53 percent of the new jobs created in the service industry. Between 1997 and 1998, health services created over 2,600 new jobs and business services created over 2,500 new jobs. Engineering and management accounted for more than 20 percent of all new service industry jobs in 1998. Business and health services are projected to be the leading job creators over the long-term in the Region. In particular, health services will benefit from the projected in-migration of over 27,000 residents per year.<sup>5</sup>

**Figure I.11**  
**Employment Change Within the Services Sector**  
**1997 - 1998**



<sup>5</sup> Extrapolated from Regional Financial Associates, Metropolitan Precip

**Table I.10 Major Private Sector Employers in the Treasure Coast**

<b>Employer</b>	<b>County</b>	<b>Business Line</b>	<b>Number of Employees</b>
Pratt & Whitney	Palm Beach	Jet Engines	4,000 – 5,000 <sup>1</sup>
Florida Power & Light	Palm Beach, Martin and St. Lucie	Electric Utility	3,100
Motorola, Inc.	Palm Beach	Pagers	2,300
Flo Sun, Inc	Palm Beach	Sugar	2,300
Martin Memorial Health Systems	Martin	Health Care	1,844
BellSouth Corporation	Palm Beach and St. Lucie	Telecommunications	1,700
Siemens Companies	Palm Beach	Telecommunications Equipment	1,500
Office Depot Headquarters	Palm Beach	Headquarters	1,500
Lawnwood Regional Medical Center	St. Lucie	Healthcare	1,400
The Palm Beach Post	Palm Beach	Newspapers	1,300
Rexall Sundown	Palm Beach	Vitamins	1,200
Sensormatic Electronic Corporation	Palm Beach	Security Equipment	1,100
The New Piper Aircraft	Indian River	Light Aircraft	1,000
HCA-Medical Center of Port St. Lucie	St. Lucie	Healthcare	800
AEGIS	St. Lucie	Call Center	750
Liberty Medical Supply	St. Lucie	Medical Supplies	530
Armellini Express Lines	Martin	Trucking	475
Via Tropical Fruit/Caulkins	Martin	Citrus	450
Indian River Community College	Martin, St. Lucie and Indian River	Education	446
Northrop Grumman	Martin	Aerospace	400

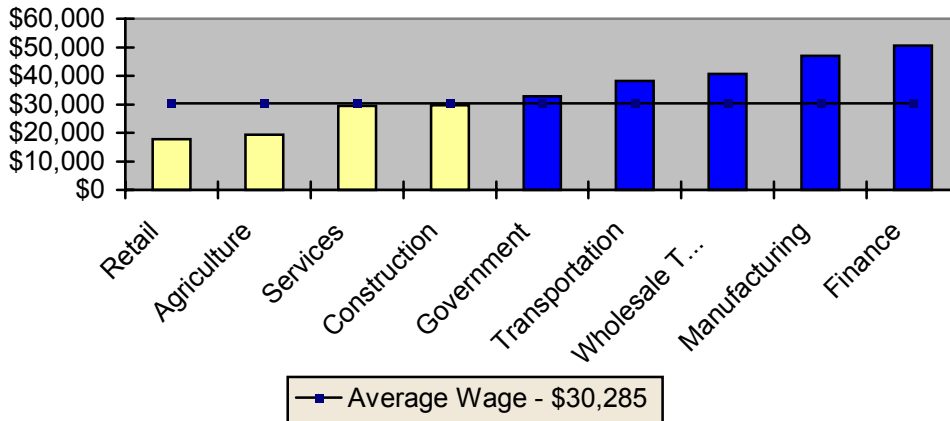
Source: Enterprise Florida, Florida County Profile, 1999.

1. Does not reflect announced employee relocations of between 2,500 – 2,800.

**WAGES**

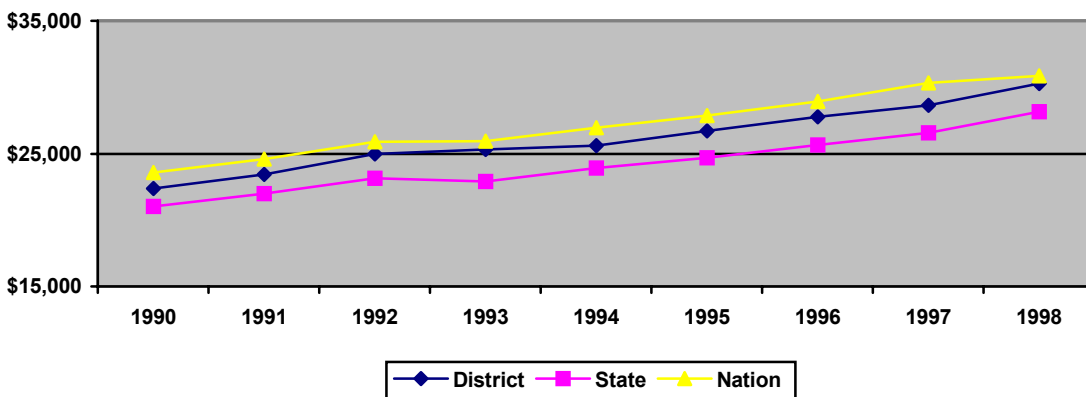
Average annual earnings by industry are indicated in Figure I.12 below. The average annual wage per employee in the Treasure Coast District is approximately \$30,285. Industry sectors with average wage levels below the District average wage include Retail Trade (\$17,764), Agriculture (\$19,430), Services (\$29,443) and Construction (\$29,764). Industries with above average compensation include Government (\$32,886), Transportation (\$38,312), Wholesale Trade (\$40,748), Manufacturing (\$46,898) and FIRE (\$50,623).

**Figure I.12: Average Earnings by Industry, 1998**



In 1998, the average wage per employee in the Treasure Coast District at \$30,279 was slightly behind the national average wage level of \$31,908. It was almost \$2,000 above the State wage level of \$28,177. The average annual salary per worker in the Treasure Coast District rose from \$22,397 in 1990 to \$30,279 in 1998, an increase of 35 percent. Over the same period, the State annual average wage increased by 34 percent. See Figure I.13.

**Figure I.13: Average Annual Wage Per Employee**



Wage levels are markedly different by county as evidenced in Table I.11 below:

**Table I.11: Average Wages by Industry and County, 1998**

<b>Industry</b>	<b>Indian River</b>	<b>Martin</b>	<b>Palm Beach</b>	<b>St. Lucie</b>	<b>District Average</b>
Average, All Industries	\$24,425	\$26,998	\$31,834	\$24,189	\$30,285
Agriculture	\$19,373	\$18,527	\$19,817	\$18,538	\$19,430
Construction	\$25,089	\$29,259	\$31,019	\$23,080	\$29,764
Manufacturing	\$33,775	\$38,487	\$50,698	\$26,217	\$46,898
Transportation	\$25,719	\$34,393	\$38,982	\$40,799	\$38,312
Wholesale Trade	\$32,045	\$37,067	\$42,641	\$27,397	\$40,748
Retail Trade	\$16,144	\$16,462	\$18,345	\$15,548	\$17,764
Finance	\$38,194	\$49,889	\$52,982	\$29,080	\$50,623
Services	\$25,004	\$26,655	\$30,398	\$25,599	\$29,443
Government	\$30,718	\$29,430	\$34,152	\$28,602	\$32,886

Source: Florida Department of Labor and Employment Security, ES-202 Program, 1999.

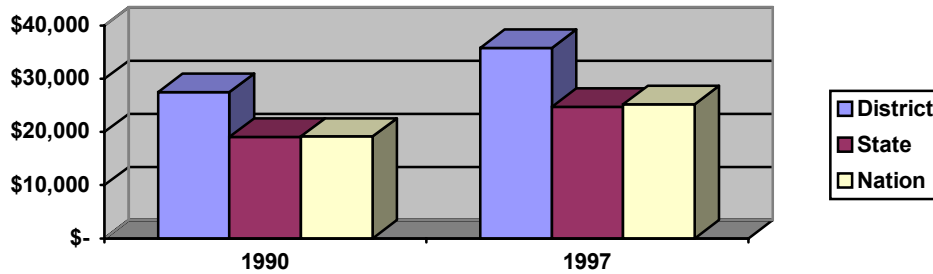
The District's three highest average wages are in the finance, manufacturing, and wholesale trade sectors. The lowest wage averages are found in the agricultural, services and retail trade sectors.

Earnings by persons employed in the Treasure Coast District increased from \$10.8 billion in 1990 to \$17.8 billion in 1998, an increase of 64.6 percent. The largest industries in 1998 were services, 32.8 percent of earnings; State and local government, 13.3 percent; and retail trade, 12.3 percent. In 1990, the largest industries were services at 28.5 percent; retail trade at 13.7 percent and State and local government at 13.4 percent.

**INCOME**

Per capita personal income growth in the District has been consistent with that for the State and the nation increasing by almost 30 percent over the period of 1990 to 1997. At almost \$35,900 however, the District's per capita personal income far exceeds the State's and the nation's at \$24,800 and \$25,300, respectively. See Figure I.14.

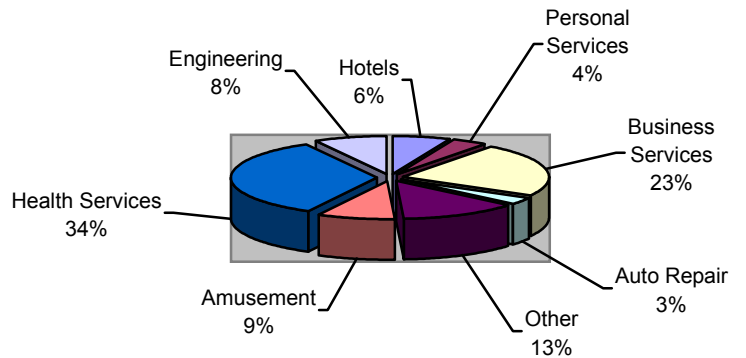
**Figure I.14: Per Capita Income**



**INDUSTRY TRENDS**

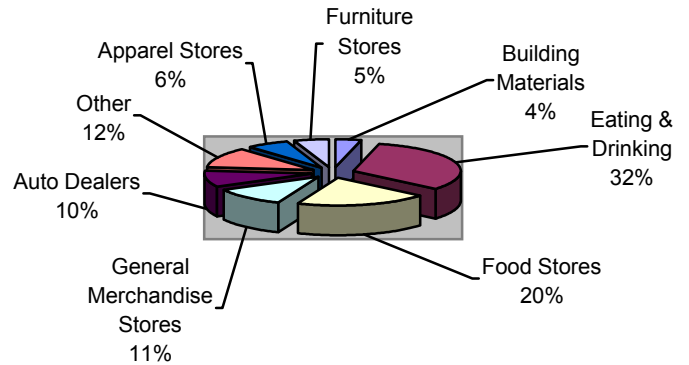
**Services.** The service industry is the largest employment sector of the Treasure Coast District. In 1998, services provided over 198,000 jobs or almost 34 percent of the District's workforce and contributed over \$5.8 billion in earnings or 33 percent of total earnings. It is also the fastest growing industrial sector in the District. The major components of the Services sector are shown in Figure I.15. The dominant SIC groups within the services division are health services (SIC code 80) and business services (SIC code 73). These divisions provided 104,000 jobs in 1998 or 17.7 percent of the District's jobs. Business and health services combined are expected to generate six out of every ten new jobs in the Treasure Coast District from 1996 to 2006 (Florida Department of Labor and Employment Security, August 1999).

**Figure I.15: Services Employment 1998**



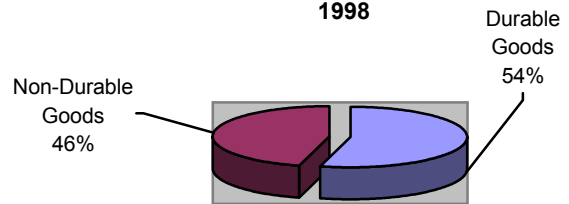
**Retail Trade.** The retail trade sector is a major component of the District's economy providing one out of every five jobs. In 1998, the District employed 123,521 retail workers. From 1990 to 1998, retail trade employment increased by over 13 percent and currently contributes almost \$2.2 billion dollars to the local economy. The major components of the retail sector are shown in Figure I.16. The dominant SIC group within the retail trade division is eating and drinking places (SIC code 58). This division comprised almost 40,000 jobs in 1998 or 6.8 percent of all jobs in the District. Eating and drinking places are expected to gain the largest number of new jobs in the retail sector by 2006.

**Figure I.16  
 Retail Trade Employment  
 1998**



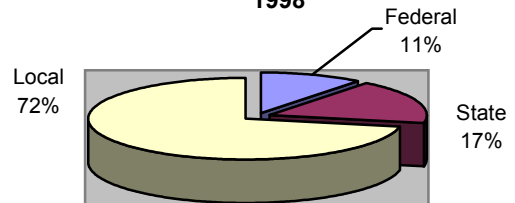
**Wholesale Trade.** Wholesale trade employment grew by more than 54 percent in the period of 1990 to 1998 ranking second only to services in highest employment growth. This industry contributes slightly more than \$1 billion to the local economy and generates 4.5 percent of total regional employment. The dominant SIC group within the wholesale trade division is wholesale trade durable goods (SIC code 50). This group represented 14,262 jobs in 1998 or 2.4 percent of the regional workforce.

**Figure I.17  
 Wholesale Trade Employment  
 1998**



**Government.** The District's third largest employer is the government sector providing over 71,000 jobs and contributing almost \$2.4 billion to the local economy. The Treasure Coast District's rapid pace of population growth over the years has contributed significantly to the growth in government

**Figure I.18  
 Government Employment  
 1998**



services. Addressing the diverse needs of a growing population has necessitated an expansion of government services. The major employers in this sector include Palm Beach County School District (14,000), Palm Beach County Government (8,000), Martin County School District (2,175), Martin County Government (1,354), St. Lucie County School District (3,500), St. Lucie County Government (1,565), Indian River County School District (1,652), and Indian River County Government (1,319). Local government provides the largest employment base within the public administration sector. In 1998, local government provided 46,360 jobs or 7.9 percent of total District employment.

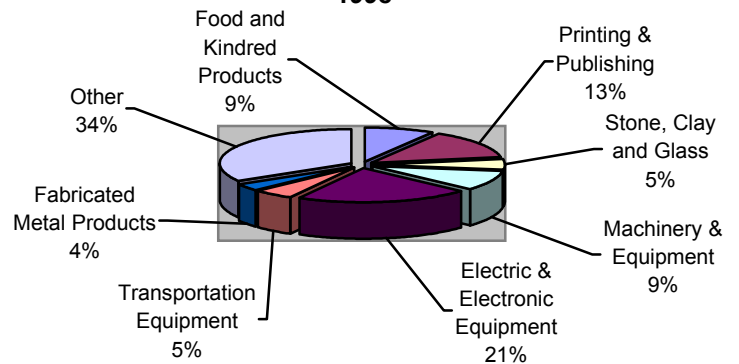
### Manufacturing

Manufacturing provides 6.7 percent of the District's employment and contributes over \$1.8 billion to the local economy. This sector experienced a decrease in employment share over the last decade losing almost 1,400 jobs between 1990 and 1998. In 1990, manufacturing jobs comprised 8.4 percent of total District employment.

By 1998 the share had declined to 6.7 percent of total District jobs. The manufacturing division provided 17.7 percent of District wages in 1980. By 1998, manufacturing employment provided only 10.0 percent of District wages. Reflecting an overall decline in manufacturing jobs nationally, the proportional share of employment in manufacturing has declined at the county, regional and State levels. Despite the overall trend toward a more service-based economy, however, manufacturing is still highly sought after as an economic development engine. This industry provides relatively high-paying jobs, produces high value-added products, and is an important basic sector industry.

Palm Beach County provides the District's largest proportion of manufacturing employment. In 1998, approximately 80 percent of manufacturing employment took place in Palm Beach County. Major regional manufacturers include Florida Power & Light Co. - electrical generation; Pratt & Whitney - jet engines; Motorola, Inc. -

Figure 1.19: Manufacturing Employment 1998



communications; Siemens - communication devices; Northrop Grumman - aviation; New Piper Aircraft - aviation; and Tropicana Products - citrus juice.

Recent bright spots in regional manufacturing growth include the development of a NASA-inspired \$4.5 million high-technology “business incubator” on the Martin County campus of Indian River Community College in Stuart known as the Technology Development and Training Center of the Treasure Coast and the phenomenal growth of the New Piper Aircraft company in Indian River County. Since its reorganization in 1995, when it had less than 100 employees, Piper Aircraft has grown to become a \$200 million company with over 1,300 employees.

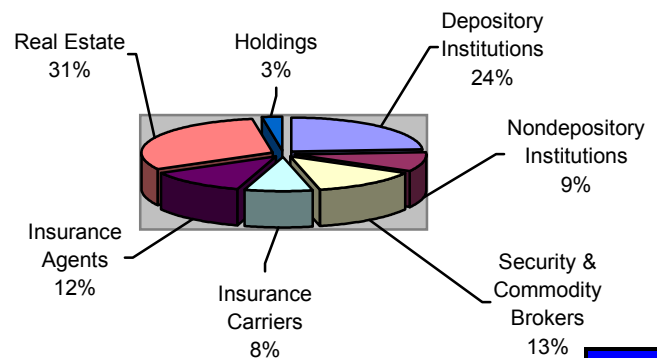
*New Piper Aircraft 1999 Press Release*

The dominant SIC group within the manufacturing division was the electronic and other electronic equipment group (SIC code 36). This group represented 1.4 percent of all District jobs in 1998. The overwhelming proportion of electronic equipment jobs are located in Palm Beach County. In fact, each of the District’s counties seems to specialize in a particular SIC group within the manufacturing division. In Indian River County the machinery and equipment group (SIC code 35) provided 381 jobs in 1998 or 14.5 percent of County manufacturing jobs. In Martin County, the transportation equipment group (SIC code 37) comprises 27.3 percent of County manufacturing jobs. The dominant manufacturing SIC group in St. Lucie County is also transportation equipment (SIC code 37), which represents 376 jobs in 1998 or 14.4 percent of County manufacturing jobs.

### Finance, Insurance and Real Estate

This sector’s share of total District employment has remained virtually the same over the last decade (1990 to 1998) and it has gained just over 5,000 employees. It provides almost 39,000 jobs in

Figure I.20: FIRE Employment 1998

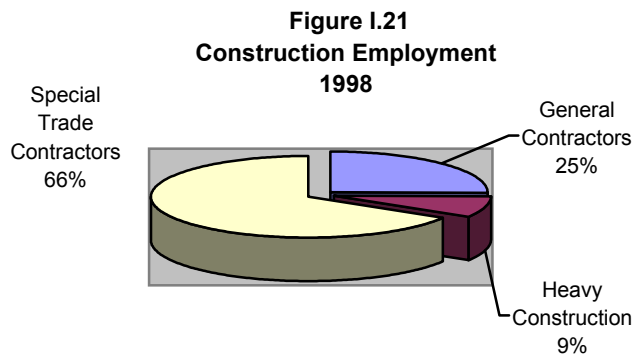


the District and contributes almost \$2.0 billion to the local economy. The dominant SIC group within the FIRE division is real eState (SIC code 65). This group represented 11,852 jobs in 1998 or 2.0 percent of all regional jobs. Real eState is expected to gain the most jobs in this industry division according to the Florida Department of Labor as people seek second jobs to supplement their incomes (Florida Department of Labor and Employment Security, 1999).

### Construction

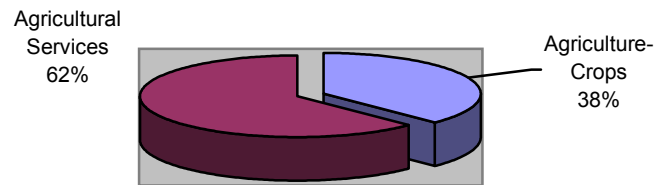
The construction industry provides almost 35,000 jobs in the District and over \$1.0 billion to the local economy. This sector's proportional share of District employment and earnings has decreased markedly over the last decade. In 1990, construction services supported approximately 7.4 percent of all District jobs and contributed over 13 percent of

total industrial earnings. In 1998, the industry provided 6.0 percent of total District jobs and 5.9 percent of total District earnings. The construction industry is driven to a great extent by tourism and the continued in-migration to the District. However, the industry is also cyclical in nature and employment trends closely follow downturns or upswings in the economy. During the last recession (1988-1991), for example, the District lost over 12,200 construction jobs. The dominant SIC group within the construction division is special trade contractors (SIC code 17). This group provided 23,185 jobs in 1998, or 4.0 percent of all jobs in the District. Employment in this group is projected to grow as more general contractors continue to subcontract out construction work.



**Agriculture.** The agriculture, forestry and fishing industry provides over 30,000 jobs in the District and comprises 5.2 percent of the District's total employment. In 1990, agricultural employment provided 5.8 percent of total District wages.

Figure I.22  
Agricultural Employment  
1998



Agriculture continues to be a vital basic industry to the Treasure Coast District because it provides significant income to the local economy through exports. Palm Beach County ranks first in the State in amount of agricultural cropland acreage and farm income cash receipts from agricultural products. In 1994, farm income for Palm Beach County was just under \$1.2 billion. St. Lucie County leads the State in grapefruit production and is a major exporter of oranges as is Indian River County.

Under a recently signed trade agreement between the United States and China, the Chinese government gave formal approval to accept the import of Florida citrus. Oranges and grapefruits from Fort Pierce will be headed to China in March of this year – the first such shipment. The Florida Agriculture Department estimates that up to \$300 million worth of citrus may be bought by the Chinese.

*The Palm Beach Post Tuesday, March 23, 2000*

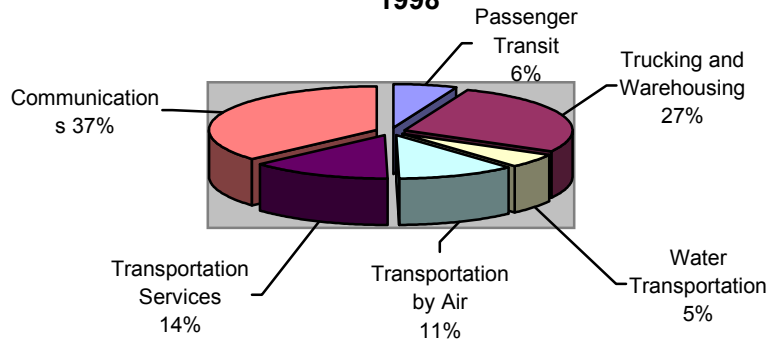
The dominant SIC group within the Agriculture division is agricultural services (SIC code 07) which accounts for 18,710 jobs in 1998 or 3.2 percent of all District jobs. The Florida Department of Labor estimates that agricultural services will generate the largest increase in new jobs in the agriculture division over the next seven years as a growing number of employers in this group continue to increase their services to nonagricultural customers (Florida Department of Labor and Employment Security, 1999).

**Transportation, Communications**

**and Public Utilities.** This sector provides employment for 20,800 people in the Treasure Coast and \$800 million in wages and salary earnings to the local economy. The major transportation sector resources in the District include Palm Beach International Airport, St. Lucie International Airport, the Port of Palm Beach, and the Port of Fort Pierce.

The dominant SIC group within the transportation, communications, and public utilities division is communication (SIC code 48), which provides 5,907 jobs in 1998, or 1.0 percent of total District jobs. From 1996 to 2006, the Florida Department of Labor projects that air transportation (SIC code 45) will surpass communications as the largest industry group in the transportation, communications, and public utilities division (Florida Department of Labor and Employment Security, 1997).

**Figure I.23: Transportation, Communications and Public Utilities Employment 1998**



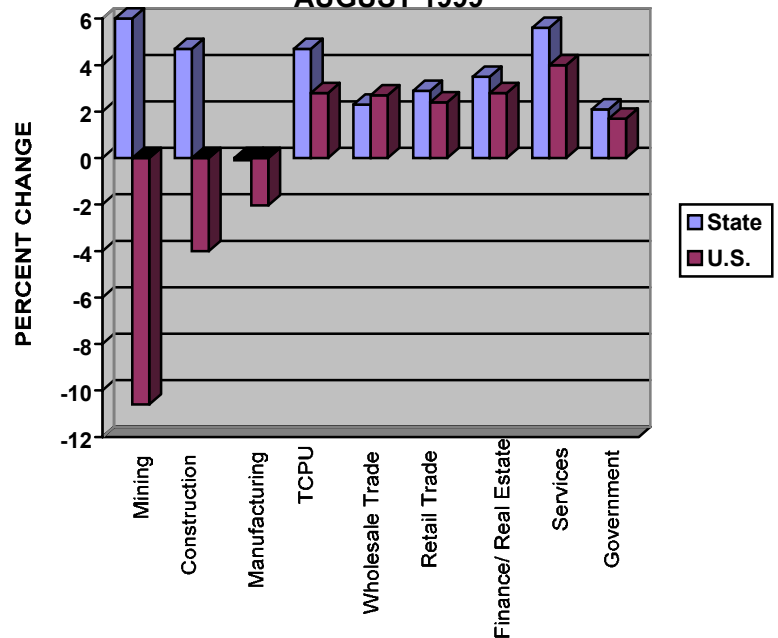
**STATE ECONOMIC TRENDS**

The Florida economy continues to outpace the nation with a high rate of economic expansion. In 1998, Florida's Gross State Product (GSP) grew by 4.8 percent while the national GDP grew by 3.9 percent<sup>6</sup>. The strong national economy, high consumer spending and significant in-migration of about 200,000 per year will propel the State's economic growth over the next three years. State GSP is projected to increase by 4.7 percent in 2000 and 2001.<sup>7</sup>

Florida's unemployment rate has been consistently lower than the national average since May 1998. The seasonally adjusted State unemployment rate fell to 3.9 percent in August of this year, 0.3 percentage points lower than last year's rate of 4.2 percent. The U.S. unemployment rate was 4.2 percent in August slightly higher than Florida's rate.

U.S. total nonagricultural employment rose in August 1999 to 128,919,000, an increase of 2,750,000 jobs, or 2.2 percent from a year ago. All major industrial groups except for mining, construction and manufacturing posted over-the-year job growth. Florida employment rose in August 1999 to 6,855,800, an increase of 249,500 jobs, or 3.8 percent from a year ago, according to the State Department of Labor. All major nonagricultural industries in Florida except for manufacturing registered increases in employment over the one-year period of August 1998 to August 1999. Department of Labor economists note that Florida has maintained its number

**Figure I.24  
 FLORIDA AND US EMPLOYMENT BY  
 INDUSTRY OVER-THE-YEAR  
 PERCENT CHANGE  
 AUGUST 1999**



<sup>6</sup> First Union, Regional Economic Review, March 1999

<sup>7</sup> WEFA, Summer, 1999

one ranking in over-the-year percentage job growth and is third in the nation in the number of jobs added to nonagricultural payrolls.

All MSAs in the State reported increased employment over the past year with the highest growth occurring in the West Palm Beach-Boca Raton MSA at 5.6 percent.

Continued population growth is expected to fuel growth in construction, both commercial and homebuilding, with starts of single-family homes increasing 7.8 percent and multi-family housing starts increasing a significant 16 percent.

The strongest gains in hiring were evident in business services, which increased 11.2 percent. Manufacturing in Florida lost jobs in industrial machinery, electronic components and communications equipment according to First Union's Regional Report for Florida. Approximately 2,100 jobs were eliminated over the past year in several major metropolitan areas including Tampa, Melbourne and Fort Lauderdale.

**Table I.12: Total Non-Agricultural Employment by Selected Metropolitan Statistical Areas (MSAs)**

**Not Seasonally Adjusted**

MSA	Year to Year Change	Percent Change
West Palm Beach – Boca Raton	26,300	5.6 percent
Tampa	56,800	5.1
Orlando	37,700	4.5
Gainesville	4,500	4.0
Sarasota – Bradenton	9,100	3.7

Source: Florida Department of Labor, Florida Labor Market Trends, October, 1999

According to the Florida Department of Labor Industry and Occupational Employment Projections the following major trends are expected to occur over the period of 1996 – 2006. Florida's population is expected to grow more slowly over the next ten years than in the previous decade due to a decrease in net migration and a natural increase that is declining toward zero. The proportion of elderly people in the State will tend to increase. The State's employment will continue its shift to a service-producing sector away from a goods-producing sector. All industries are expected to rely more heavily on outsourcing,

contractors, temporary labor and leased employment to provide services to their customers. In line with findings of the nature of the New Economy, the emphasis on better-educated and higher-skilled workers will continue. Defense spending cutbacks are expected to continue to impact the manufacturing sector. During the period of 1996-2006, the following statewide industry projections apply:

**Total, All Industries**

The Florida Economy will gain over 1.5 million jobs at an average annual growth rate of 2.2 percent, which is lower than the 3.4 percent experienced during the 1986-1996 period. The service-producing industries will account for almost 90 percent of the new jobs to be created.

**Agriculture**

This industry is expected to gain more new jobs than any other major industry division in the goods-producing sector due to continued growth in agricultural services (veterinary, animal and landscape services).

**Mining**

This industry is expected to have a declining growth rate over the projected period. The decline will be closely tied to the strong competition that U.S. phosphate companies are experiencing in the global market.

**Construction**

Construction sector growth will be sluggish with most of the employment growth concentrated in special trade construction contractors.

**Manufacturing**

The manufacturing sector will continue to experience slow growth in employment resulting from declines in defense spending and gains in productivity. The bulk of manufacturing jobs will be in electronics and other electrical equipment, instruments and related products, rubber and miscellaneous plastics.

### **Transportation, Communications and Public Utilities**

All industries in this sector are expected to post job gains between 1996 and 2006 but at a pace slower than the average growth rate for all industries in Florida. Air transportation is expected to become the largest industry in this major group surpassing communications and gaining almost one-third of all job growth.

### **Wholesale and Retail Trade**

Continuing population and income growth will fuel growth in trade, especially retail trade. Food stores and eating and drinking places will generate seven of the ten new retail trade jobs between 1996 and 2006.

### **Finance, Insurance and Real Estate**

This group will be the slowest-growing industry in the services-producing sector with mergers, consolidations and closings resulting from competition and overexpansion expected to curb growth. Insurance will gain the most jobs as more people file claims for natural disasters and medical illness.

### **Services**

This major industry group will continue to be the fastest growing division and will generate the most jobs during the period of 1996 to 2006. Business and health services will account for six out of every ten new jobs created.

### **Government**

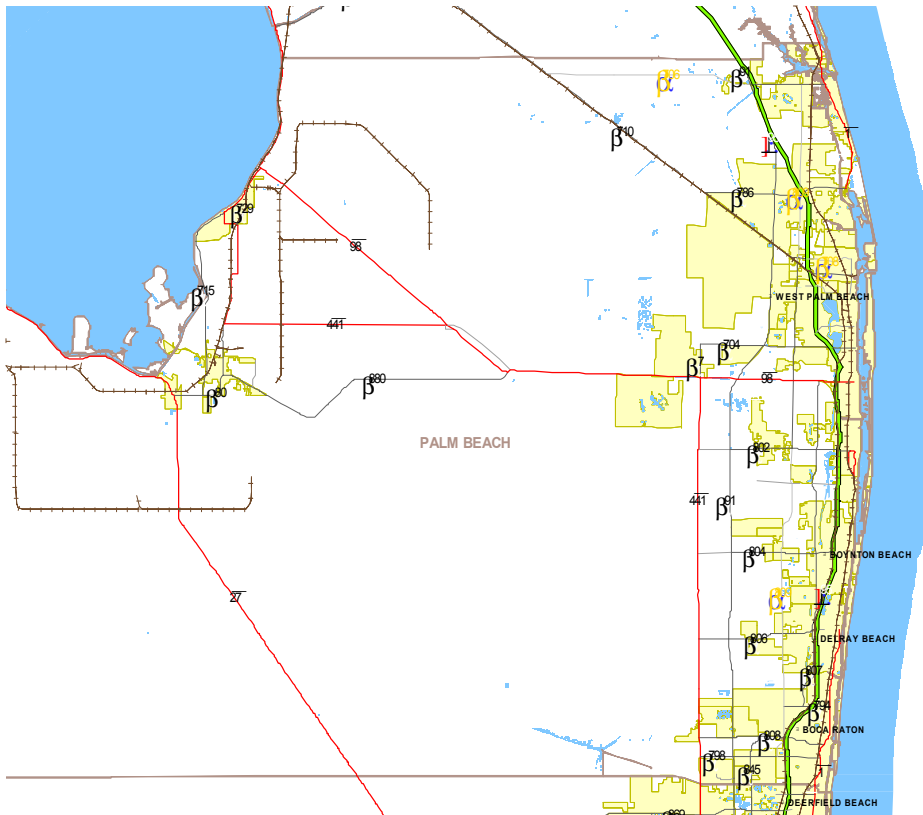
Government employment will grow more slowly than the average growth rate for all Florida industries. Local government is expected to generate the majority of new jobs while federal government employment growth will moderate due to defense and space exploration cutbacks. New prison construction will fuel State employment growth.

**METROPOLITAN AREA TRENDS**

**West Palm Beach – Boca Raton**

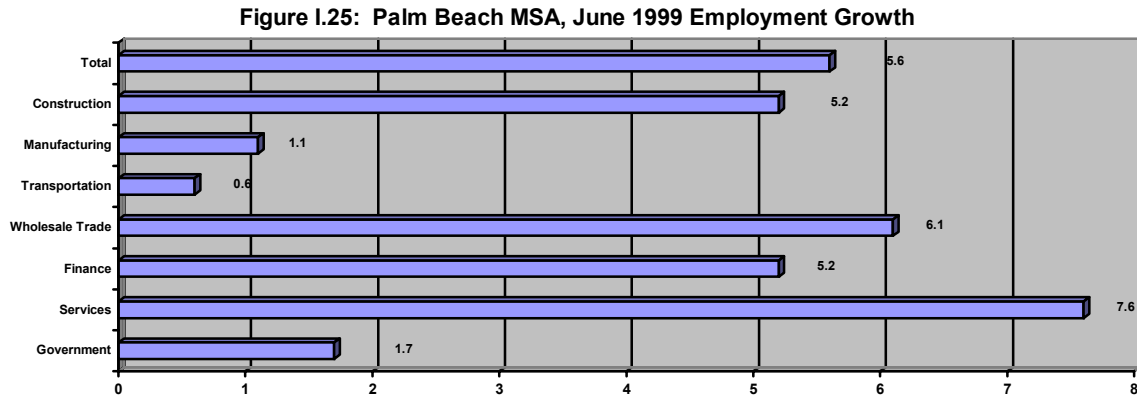
The West Palm Beach – Boca Raton MSA is the largest of the two MSAs in the District and encompasses Palm Beach County. At almost 2,000 square miles in size, Palm Beach County is one of the largest counties in the eastern United States. Its total population of more than 1,020,000 in 1997 makes it the third largest county in Florida and ranks it 47<sup>th</sup> out of 273 metropolitan areas in the nation.

**West Palm Beach – Boca Raton MSA**



Palm Beach County has experienced tremendous economic growth over the last decade and is expected to continue to grow strongly into the next century. During the last year, Palm Beach County nonagricultural employment grew by 5.6 percent, the highest rate of job creation of all Florida's metropolitan areas. The major job increases occurred in the services, trade, financial services and construction sectors (See Figure I.25). According to Regional Financial Associates (1999), a significant factor in its economic growth can

be attributed to huge capital gains accruing to the wealthiest segment of the population,



which in turn spurs heavy consumer spending.

**Table I.13: MSA Select Statistic Rank**

	Metropolitan Ranking ( )
Population Growth, Percent Change (1990-1997)	18.0 percent (27)
Average Annual Pay, 1996	\$29,057 (34)
New Private Housing Units Permitted, 1990 – 1996	66,473 (30)
Personal Income Per Capita, 1994	\$33,519 (1)
Unemployment Rate, 1996	6.7 (39)
People of All Ages in Poverty, 1993	12.3 percent (196)

Source: State and Metropolitan Area Data Book 1997-1998

Note: Ranking based on 273 metropolitan areas. Highest possible rank is 1, lowest rank is 273.

On all of the indicators reflected in Table I.13 above, the Palm Beach metropolitan area reflects genuine economic strength. The Palm Beach MSA economy is projected to grow strongly over the next five years and is expected to outperform the U.S. economy. Much of its strength lies in its relative affluence and high per capita income. All of the forecast indicators on the next page reflect healthy employment and income growth. However, according to Regional Financial Associates, Palm Beach County’s service industry dependence, particularly in tourism, makes it vulnerable to national and global economic downturns. This could potentially pose the area’s primary long-term risk. The metropolitan area’s relative industrial diversity is also much less than what it could be. Compared to similar sized metropolitan areas, the Palm Beach MSA rates at the top in terms of its rapid total nonfarm employment growth, high per capita personal income, and low average household unemployment rate. However, it receives an “average”

rating as a high-technology location - a location which has a high concentration of high technology industry employment as compared to the nation. It also ranks below average as a manufacturing location<sup>8</sup>.

Palm Beach County's top employers are indicated in table I.14 below.

**Table I.14: Top Employers in Palm Beach MSA**

<b>Employer</b>	<b>Average Number of Employees</b>
Pratt & Whitney	4,000 – 5,000
Columbia Palm Beach Healthcare System	4,000
Intracoastal Health Systems, Inc.	3,200
Motorola, Inc.	2,300
Florida Power & Light Company	2,300
Flo Sun, Inc	2,300
Boca Raton Resort & Club	1,850
Boca Raton Community Hospital	1,600
Behesda Memorial Hospital	1,600
Office Depot Headquarters	1,500
The Breakers	1,500
Florida Atlantic University	1,500
Talisman Sugar Corporation	1,400
Veterans Administration Medical Center	1,400
Siemens Companies	1,300
Palm Beach Newspapers, Inc.	1,300
Palm Beach Community College	1,300
BellSouth Corporation	1,200
Sensormatic Electronic Corporation	1,100
Palm Beach Gardens Medical Center	1,100

Source: Enterprise Florida Website, Florida County Profile, 1999

These employers are a mix of high technology, business and health service industries that propel the Palm Beach MSA economy.

<sup>8</sup> Standard & Poor's DRI, 1999.

According to Regional Financial Associates, the Palm Beach MSA economy is characterized by the following strengths and weaknesses:

**Strengths**

- A popular tourist and retiree destination that benefits directly from continued national economic growth
- High per capita income well above the national average
- Tourism and international trade benefit from area's fast growth
- Rapidly expanding retail market

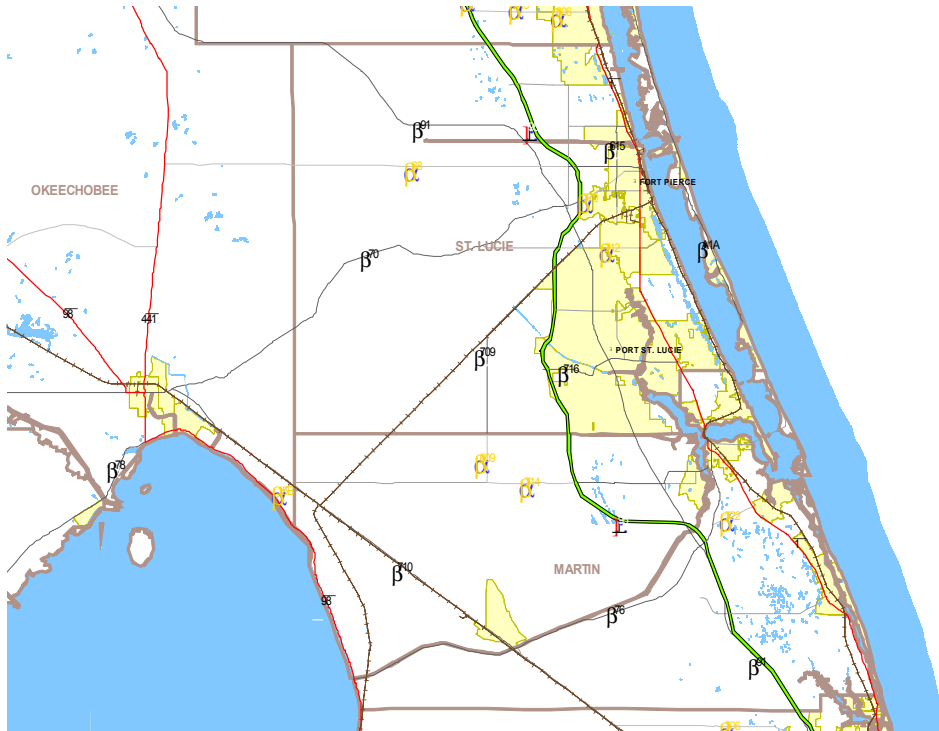
**Weaknesses**

- Relatively high cost of living
- Economy highly sensitive to national economic adjustments
- Income significantly tied to level of interest rates and stock prices
- One of the weakest manufacturing sectors in the nation
- Slowing residential construction activity

**Fort Pierce – Port St. Lucie**

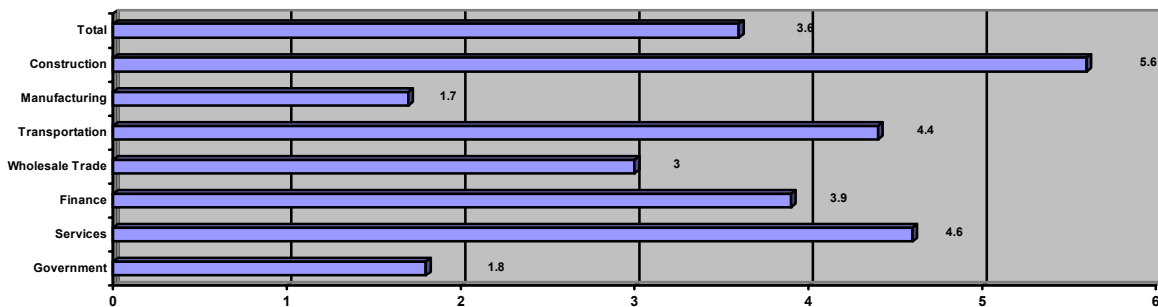
The Fort Pierce – Port St. Lucie MSA is the second metropolitan area in the Treasure Coast District with a total estimated population in 1998 of more than 302,000. It encompasses Martin and St. Lucie counties and is approximately 1,130 square miles in size.

**Fort Pierce – Port St. Lucie MSA**



Considering gross metropolitan product, job creation and personal income growth, the Fort Pierce economy is growing at a reasonable rate. Job creation is keeping pace with the national average. Approximately 1,300 jobs were added to the Fort Pierce economy over the past year from August 1998 to August 1999.

**Figure I.26: Fort Pierce MSA, First Quarter 1999  
 Employment Growth**



**Table I.15: Top Employers in Fort Pierce MSA**

<b>Employer</b>	<b>Average Number of Employees</b>
Staff Leasing	2,375
Columbia Health Care	2,220
Martin Memorial Health Systems	2,100
Publix Super Markets, Inc.	1,970
Florida Power & Light	790
Winn-Dixie, Inc.	575
Armellini Express Lines, Inc.	540
Sheriff's Department	527
Bell South Corporation	500
Northrup Grumman Aircraft Systems	400
Wal-Mart Stores, Inc.	456
Indian River Community College	446
Club Med/Village Hotels of Sandpiper	408
VIA Tropical Fruits Caulkins, Inc.	381
Tropicana	320
Indian River Foods	320
New Horizons Health Care	290
Fort Pierce Utilities Authority	283
Harbor Branch Oceanographic Research	270
Riverside National Bank	220

Source: Enterprise Florida Website, Florida County Profile, 1999

The area has recently experienced major call center expansion activity with QVC, most notably, constructing a call center facility in Port St. Lucie in 1999, which will eventually employ 1,600 people. Another major call center expansion is the relocation of Liberty Medical Supply to Port St. Lucie from Palm City (also in the MSA). This call center will expand from its current employee count of 350 to 500 operators. The metropolitan area's labor market remains loose and this is reflected in an unemployment rate which is more than twice the State rate. Economists also note that despite the growth in call center expansion, call center jobs are relatively low paying and are sensitive to changes in the national economy. In an economic slowdown, discretionary spending would decline and offset call center job growth.

Net migration gains into the Fort Pierce – Port St. Lucie MSA have averaged approximately 5,000 per year in this decade and are projected to increase as residents from Palm Beach, Broward and Dade Counties continue to move north.

**Table I.16: MSA Select Statistic Rank**

	Metropolitan Ranking ( )
Population Growth, Percent Change (1990-1997)	17.8 percent (29)
Average Annual Pay, 1996	\$23,601 (177)
New Private Housing Units Permitted, 1990 – 1996	21,550 (69)
Personal Income Per Capita, 1994	\$22,565 (44)
Unemployment Rate, 1996	10.3 (15)
People of All Ages in Poverty, 1993	13.9 percent (150)

Source: State and Metropolitan Area Data Book 1997-1998

Note: Ranking based on 273 metropolitan areas.

According to Regional Financial Associates, the Fort Pierce – Port St. Lucie MSA economy is characterized by the following strengths and weaknesses:

**Strengths**

- The MSA's relatively loose labor market allows room for industrial expansion
- A relatively high per capita income
- The Port of Fort Pierce can handle ocean-going vessels

**Weaknesses**

- Metropolitan economy sensitive to national economic cycles
- Low industrial diversity
- Low cost of doing business

**D. WHERE ARE WE HEADING? TRENDS IN THE DISTRICT ECONOMY**

**OVERVIEW**

Overview  
  
Our Economic Strengths  
  
Our Economic Challenges

The Region’s attractive quality of life will continue to draw residents and support sustained population growth well into the next century. Sustained population growth supported by strong in-migration of about 25,000 per year will continue to drive economic growth in the near future. This will be especially true in the fastest-growing sector in the economy - services. Employment is projected to increase over the short-term by between 2.5 to 3.0 percent. Job creation in the Region’s metropolitan areas (Boca Raton Fort-Pierce) soared over the past year with over 28,000 new jobs being created between September 1998 and September 1999<sup>9</sup>. In fact, between 1996 and 1998, the Palm Beach MSA, lead the nation in overall job growth at 13.2 percent. Business and health service industries have generated the largest number of jobs and are projected to do so into the future. These include such jobs as accountants, computer programmers and call center operators.

By most accounts, the District’s economy is strong and has positive growth prospects for the future. In the next decade, employment growth will continue to outpace that for the State and the nation. Per capita income will continue to rise and the gap between the national average annual wage and the District’s annual average wage per worker will narrow. Despite these indicators of relative prosperity however, ensuring the economic sustainability of the Treasure Coast District is tempered by persistent structural problems in terms of stagnating high-wage growth, lack of good job opportunities for low-skilled residents and the growing shortage of skilled workers. Economic sustainability is also affected by the State’s level of economic development as reflected in its relatively poor performance in job quality and earnings.

The quality of the jobs that are being created reflects growth in locally-serving, non-basic industries such as business services, food stores and eating and drinking places. These sectors do not, generally speaking, bring in wealth from outside of the region. Additionally, high-wage job growth as measured by the proportion of regional jobs that

<sup>9</sup> Florida Department of Labor, Labor Market Trends, September, 1999

pay above the regional average annual wage has essentially stagnated. Almost two-thirds of the Region's workers earn relatively low wages.

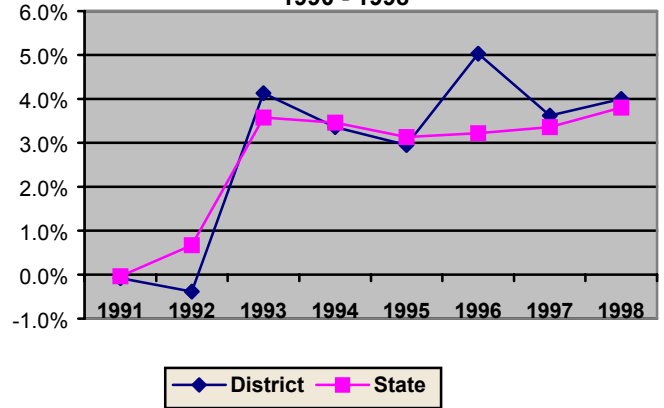
Persistent workforce inadequacy in terms of skills and labor availability is a problem that continues to be highlighted throughout the region. This problem has been noted at both the national and regional levels.

**OUR ECONOMIC STRENGTHS**

**HIGH EMPLOYMENT GROWTH**

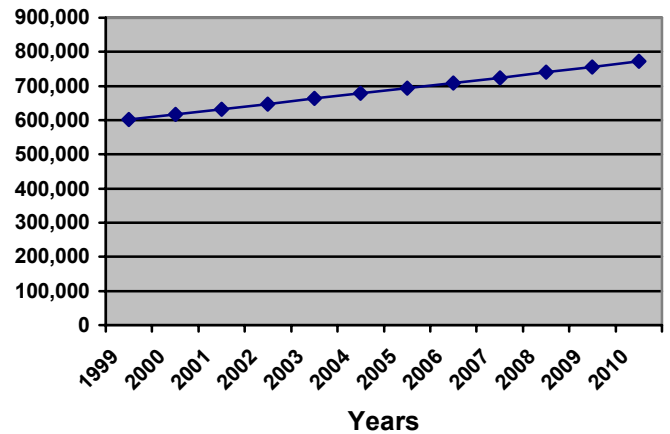
Employment gains continued for the sixth year in a row, increasing by 4.0 percent in 1998 for a total of almost 587,000 jobs. This rate of increase is slightly higher than that for the State, which added jobs at a rate of 3.7 percent in 1998.

**Figure I.27: Percent Change in Total Employment, 1990 - 1998**



The rate of employment growth is expected to decline over the next four years staying just slightly above 2.5 percent to the year 2003. At an estimated annual rate of growth of 2.5 percent, the Treasure Coast District would gain in excess of 200,000 jobs by 2010. By 2010, the District economy will sustain approximately 775,000 jobs.

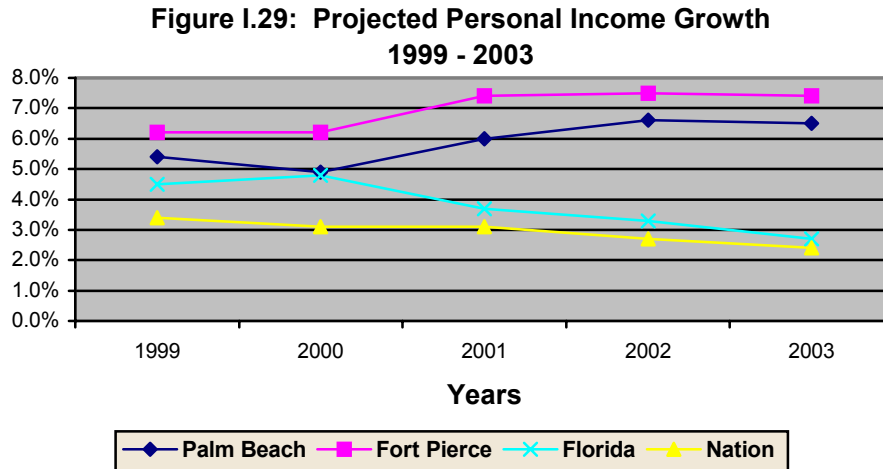
**Figure I.28: Projected Employment Growth 1999 - 2010**



**ROBUST PERSONAL INCOME GROWTH**

Personal income growth in the District's two metropolitan areas is expected to outpace the State and nation's projected income growth over the next four years. Personal income is defined by the U.S. Bureau of Economic Analysis as current income received by persons from all sources minus their personal contributions for social insurance. Personal income includes both monetary income and non-monetary income (food

stamps). Increases in personal income growth will peak<sup>10</sup> in 2002 at 7.5 percent (Fort Pierce – Port St. Lucie MSA) and 6.6 percent (West Palm Beach – Boca Raton MSA).



### EMERGING INDUSTRIES

A recent study commissioned by the U.S. Economic Development Administration notes that sustainable economic regions throughout the country recognize that healthy regional economies are composed of industry clusters and their supporting economic infrastructure. Industry clusters are better able to respond to the changing demands of the new knowledge-based, technology driven global economy and provide the necessary foundations for sustained economic competitiveness.

*“... The engines of growth in metropolitan regional economies today—the dynamic motors that are generating productivity and prosperity—are regions’ particular sets of industry clusters. A metropolitan region’s ability to grow and prosper in the 21<sup>st</sup> century depends on shifting its industry clusters to the new economy, increasingly by retooling to promote high value-added, knowledge-intensive, technology-based activities within each industry cluster.”*

Economic and business leaders in the Treasure Coast have recognized the inherent value of cluster-based economic development and have taken proactive steps to enhance the growth and development of industry clusters throughout the

<sup>10</sup> Regional Financial Associates, Make-a-Precis, Fort Pierce and Palm Beach MSAs

District. A notable example is Palm Beach County's research effort begun in 1992 which characterized its economy as being composed of clusters of related businesses and their supporting economic infrastructure – human resources, capital, technology, physical infrastructure communications, regulatory environment and quality of life. A companion study entitled, *Cooperating to Compete in the 21<sup>st</sup> Century: An Industry Cluster Development Strategy for Palm Beach*<sup>11</sup> identified the following industry clusters that drive Palm Beach County's economy.

- Medical/Pharmaceutical
- Communications/Information Technology
- Business Services/Financial Services
- Agribusiness
- Tourism/Recreation/Entertainment
- Medical Pharmaceutical and Health Care
- Aerospace/Engineering

**Medical/Pharmaceutical/Health Care.** This industry cluster employs more than 50,000 people in Palm Beach County and comprises companies that are involved in the manufacture of drugs, medical instruments, supplies and health care services. The Business Development Board (BDB) notes that the critical development issue for this cluster is finding qualified technician and machinist employees.

**Communications/Information Technology.** This cluster employs approximately 18,000 people and comprises manufacturers of electronic components, communications companies, software development companies and data processing firms. This cluster is represented by a wide range of high-technology industries and has, according to BDB, good depth. Again, the shortage of highly skilled personnel affects the ultimate growth of this cluster.

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<sup>11</sup> *Cooperating to Compete in the 21<sup>st</sup> Century: An Industry Cluster Development Strategy for Palm Beach County* prepared by the Center for Economic Competitiveness, SRI International, Arlington, VA January, 1998.

**Business/Financial Services.** The industries in this cluster employ over 47,000 people and comprises those companies providing business and financial support services to new and existing businesses such as advertising, personnel, legal, accounting, banking, insurance and investing. This cluster represents a wide and diverse array of businesses. Skilled labor supply is the most significant challenge that needs to be addressed.

**Aerospace/Engineering.** This cluster employs more than 7,000<sup>12</sup> people and represents companies involved in the manufacture and servicing of aircraft and aircraft components. The depth of this cluster is narrow, meaning the lack of complementary industries located in close proximity to each other poses a challenge in further enhancement.

**Agribusiness.** The agribusiness cluster employs more than 18,000 people and comprises companies involved in the manufacture and distribution of agricultural products to those providing specialized services such as crop spraying and animal services. Horticultural, equestrian enterprises and sugar industries have experienced steady growth. Grapefruit and citrus-growing industries are experiencing land encroachment pressures from westward urban expansion and foreign competition.

**Tourism/Recreation/Entertainment.** This cluster employs more than 50,000 people and constitutes a vast array of businesses involved in all aspects of tourism. It is a dominant industry throughout the Treasure Coast Region. Challenges for this cluster include increasing entry-level employment standards and providing local hospitality training.

Further north in the Region, St. Lucie County has defined aerospace, aquaculture and marine science related industries as emerging industries with the potential to become core clusters. The County's Economic Development Element in the Comprehensive Plan notes that the presence of the U.S. Department of Agriculture Research Lab, Indian River Research and Education Center and related institutions represent important assets

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<sup>12</sup> This number does not reflect the recent relocation announcement by Pratt & Whitney which is projected to result in a loss of 2,500 to 2,800 highly-skilled workers.

that can be used to further enhance the development of these emerging clusters. Indeed, a District-wide initiative designed to identify and enhance the existing and emerging industry clusters would foster overall regional economic performance. Developing a District-wide strategy to improve the competitiveness of individual clusters would be collaborative in nature and bring together all the relevant stakeholders in business and government to forge collaborative action plans.

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## OUR ECONOMIC CHALLENGES

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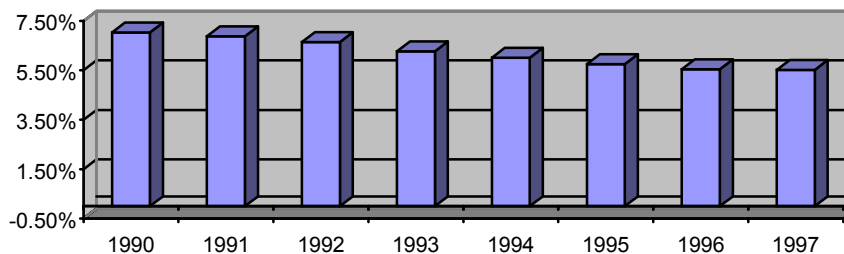
The District's economic challenges relate to chronic problems in workforce preparedness, declining manufacturing employment as characterized by the major relocation announcement of Pratt & Whitney, stagnating high-wage job growth and divergent occupational trends.

### DECLINING SHARE OF MANUFACTURING EMPLOYMENT

Employment in manufacturing is expected to experience slow growth into the new millennium as evidenced by State and national trends. Manufacturing jobs as a percentage of total jobs during a seven-year period have decreased from just over 8.4 percent in 1990 to approximately 6.7 percent of all jobs in 1998.

In August of 1999, United Technologies Corporation announced that up to 3,000 Jet Propulsion Division workers at the Pratt & Whitney aerospace plant located in northwest

**Figure I.30: Manufacturing Jobs as Percent of Total Jobs  
1990 - 1997**



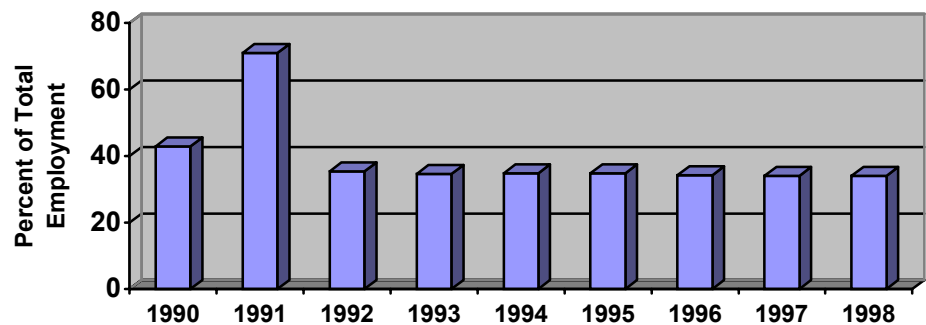
Palm Beach County would be relocated to Connecticut. The announcement to relocate these high-technology workers has tremendous impacts for the Region's manufacturing sector and poses serious economic restructuring challenges to the Region. The loss of 3,000 manufacturing jobs reduces the proportion of current manufacturing jobs to just over 5.0 percent of total Regional employment. An economic adjustment strategy that recognizes and develops the latent human capital potential of misplaced workers, through entrepreneurial initiatives for example, would help to alleviate the economic loss of this restructuring.

### STAGNATING HIGH-WAGE JOB GROWTH

Despite the absolute increase in average wages that was mentioned earlier, the rate at which high paying jobs are created is relatively slow. Except for a brief period, the proportion of high-paying jobs has remained virtually unchanged at approximately 35 percent of total jobs. Another way to look at this is to realize that approximately two-thirds of the Region's workforce earn less than the average wage and historical patterns do not reflect rising wages.

*Despite increasing average wages, the rate of high-wage job creation has stagnated.*

**Figure I.31: Jobs Paying Above the Average Salary  
 1990 - 1998**

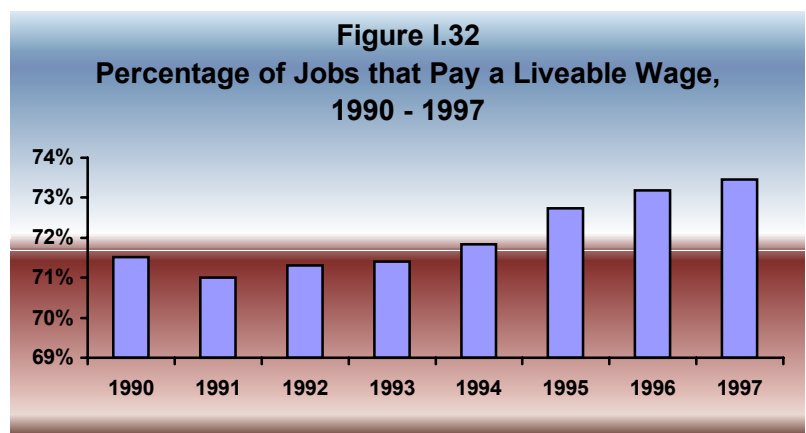


### SLOW INCREASE IN THE NUMBER OF LIVABLE WAGE JOBS

Another indicator that reflects relative regional wage disparity is the concept of a livable wage. This indicator considers a livable wage to be 85 percent above the poverty line wage for a family of two established by the U.S. Department of Labor. The 1998 poverty threshold for a two-person household was \$10,634. This means that the livable wage would be calculated as  $\$10,634 \times 1.85$  or \$19,673.

*“...more than 25 percent of the jobs in the Region do not provide sufficient wages to keep a family of two out of poverty.”*

**Figure I.32  
 Percentage of Jobs that Pay a Liveable Wage,  
 1990 - 1997**



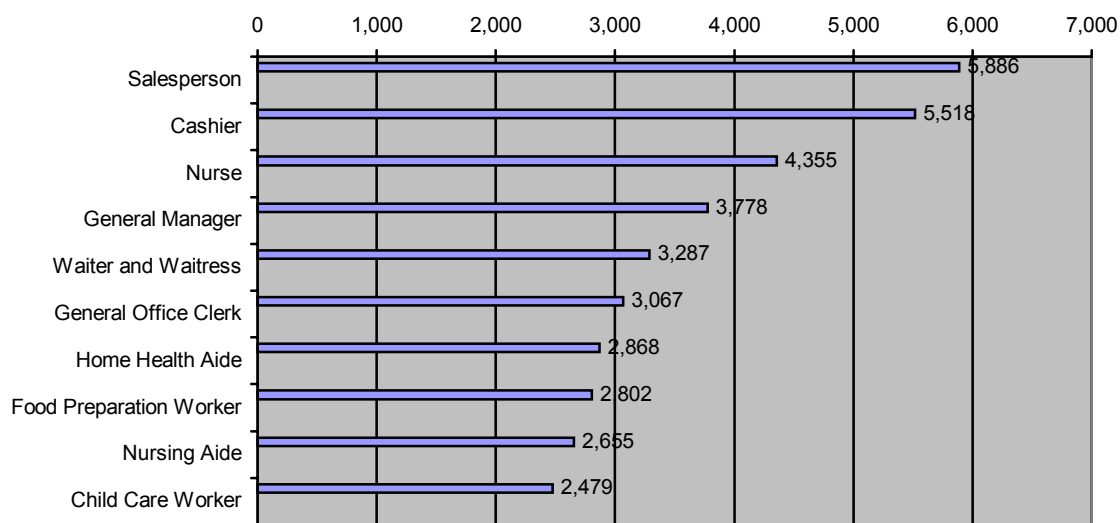
Since 1990 the percentage of jobs that pay a livable wage has increased from 71.5 percent to approximately 73.5 percent. This

suggests that more than 25 percent of the jobs in the region do not provide sufficient wages to keep a family of two out of poverty.

**DIVERGENT OCCUPATIONAL TRENDS**

The occupations that are expected to gain the most new jobs are primarily distributed between professional occupations and service occupations. These two occupational groups will provide almost half of the total projected job growth between 1996 and 2006. However, these two occupational groups are at opposite ends of the earnings spectrum.

**Figure I.33  
 Occupations Gaining the Most New Jobs  
 1996 - 2006**



Most of the service occupations have a large employment base, have low pay and require little or no training. Professional, paraprofessional and technical occupations, such as managers and registered nurses command salaries far in excess of the average annual District wage. In fact, eight out of the ten occupations gaining the most jobs as noted in Figure I.33 pay wages far below the average wage per employee on the Treasure Coast of \$30,279.

**WORKFORCE ADEQUACY**

In March 1998, a report prepared for the National Association of Counties (NACO) and the U.S. Conference of Mayors noted that since 1992, metropolitan areas had generated 89 percent of the nation's total economic growth and 84 percent of all the new jobs. The study determined that metropolitan areas

*“Concern is growing among large urban county leaders that the strong economic growth and prosperity which they have experienced during the 1990’s will not be sustained unless large metro labor markets are able to supply quality workers to expanding businesses.”*

generate more than 80 percent of the nation’s employment, income and production of goods and services.<sup>13</sup> Metropolitan areas have in fact become the engines of national economic growth. A companion study to the first report by Standard & Poor’s DRI indicates that as the national economy continues to grow a necessary ingredient for future growth is a diverse and ample labor supply. Federal and national organization reports note with growing alarm that the demand for skilled workers needed to maintain the economic prosperity of the 1990s is outpacing supply. To determine the extent of the problem, NACO surveyed its county members to examine the workforce challenges they face.

The survey examined:

1. The extent to which shortages of skilled workers are affecting counties
2. The sectors of county economies that are being affected
3. The counties’ responses to the problem
4. The extent to which federal and State governments are contributing to solutions.

The survey findings are summarized below.

### **Worker Shortages by Skill Level**

County officials in 85 percent of the survey counties reported a shortage of highly-skilled workers and 96 percent characterized the shortage as either serious or very serious. Across counties reporting shortages at the highly-skilled level:

- 67 percent said the shortage was affecting their ability to attract new businesses
- 53 percent said it was affecting their ability to retain existing businesses

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<sup>13</sup> U.S. Metro Economies: The Engines of America’s Growth

- 72 percent said it was affecting their ability to support expansion of existing businesses

Officials in 51 percent of the survey counties indicated that they faced a shortage of low-skilled or unskilled workers while 89 percent characterized the shortage as either serious or very serious. Across counties reporting shortages at the low-skilled level:

- 52 percent said the shortage was affecting their ability to attract new businesses
- 50 percent said it was affecting their ability to retain existing businesses
- 85 percent said it was affecting their ability to support expansion of existing businesses

**Local Economic Sectors Affected**

County officials were asked to identify the industrial sectors of their economy that were affected by the shortage of qualified workers. The sectors most often cited were technology (by 98 percent of survey respondents), communications (by 76 percent), health (by 76 percent) and manufacturing (by 68 percent). The following table represents by sector the percentage of counties which indicated a skill shortage exists.

**Table I.17: Skill Shortages Identified by Counties**

<b>Sector</b>	<b>% of Counties Indicating Skill Shortage</b>
Technology	98 percent
Communications	76
Health	76
Manufacturing	68
Hospitality	56
Construction	54
Personal Services	54
Government	44
Finance/Investment	38
Marketing/Sales	34

Source: National Association of Counties, Press Release, November, 1999

County officials were asked to identify which sectors of the economy were most seriously impacted by the shortage of qualified workers. Respondents most frequently cited technology (88 percent of respondents), manufacturing (36 percent), health (32 percent), communications (24 percent) and construction (22 percent).

### **County Responses to The Problem**

All of the responding county officials indicated that their efforts to enhance the workforce skills in their areas included partnerships or programs conducted by a range of local institutions and organizations such as colleges and universities, economic development agencies, businesses, workforce investment boards, non-profit organizations and technical/trade schools.

### **Regional, State and Federal Partnerships**

County officials were divided on the question of whether most efforts to develop the workforce in their areas were being approached on a regional level with 51 percent saying they are and 49 percent saying they are not. Almost two-thirds of county respondents indicated that their State government and the federal government is funding specific initiatives to reduce the shortage of skilled workers. However, they noted that the initiatives are not at an adequate scale to properly address the problem.

Locally, two surveys recently conducted on behalf of the workforce development boards of the Treasure Coast by the ERISS corporation presents data that support the findings of labor shortages by NACO. The regional labor market surveys reflect the finding that employers in many industries are encountering great difficulty in finding experienced applicants for available positions. The surveys also indicate that general business knowledge and work habits are two of the most common deficiencies among job applicants for large and small employers. In particular, business services, agriculture and construction industries have indicated that they have encountered great difficulty in finding experienced workers.

**Table I.18: Experienced Supply Research**

<b>Industry</b>	<b>% Great Difficulty</b>
Business Services	54
Agriculture	52
Construction	48
Wholesale	42
Services	36
Retail	35
Health Services	34
Finance	31
Transportation	28
Manufacturing	23
Lodging	16
Education	13
Government	3

Source: Palm Beach County Workforce Development Board, 1999 and ERISS.COM

The District will explore strategic partnerships with the workforce development agencies and economic development agencies to examine potential strategies to resolve these issues.

**STATE ECONOMY GENERATES TOO FEW QUALITY JOBS**

The recently released *1999 Development Report Card for the States* finds continuing structural problems in Florida’s economy and rates its overall performance as “D.” The Report Card rates each State’s economy by three composite indexes Performance, Business Vitality and Development Capacity. Performance measures the benefits and opportunities afforded to the State’s citizens. Business Vitality is designed to grade the dynamism of the State’s business sector while Development Capacity measures the State’s capacity for sustainable development.

**Florida’s Overall Performance** grade is “D” despite robust job growth and positive long-term employment growth prospects. This grade is largely influenced by poor earnings and job quality (average annual pay, employer health coverage and working poor, etc.) metrics. Additionally, Florida’s Quality of Life fared poorly and was affected primarily by a high teen pregnancy rate, the highest crime rate of any State and a poor voting rate.

**Business Vitality** has been downgraded from a “B” to a “C” in 1999 affected by weaknesses in competitiveness of existing businesses, manufacturing capital investment and business closings.

**Florida’s Development Capacity** index is given a “C” for the second straight year. This index is influenced by high marks in digital infrastructure and highway and bridge deficiencies and poor showings in Human Resources and numbers of highly skilled workers (Ph.D. Scientists and Engineers, University Research and Development and Science and Engineering Graduate Students).

**Table I.19: 1999 Report Card for Florida**

<b>Performance</b>	<b>D</b>
Employment	B
Earnings and Job Quality	D
Equity	D
Quality of Life	D
Resource Efficiency	B
<b>Business Vitality</b>	<b>C</b>
Competitiveness of Existing Businesses	F
Entrepreneurial Energy	A
Structural Diversity	A
<b>Development Capacity</b>	<b>C</b>
Human Resources	D
Financial Resources	C
Infrastructure Resources	A
Amenity Resources and Natural Capital	B
Innovation Assets	C
Source: The Corporation for Enterprise Development, News Release, 2000	

The next section asserts that the District's competitiveness is derived in part from a collaborative effort by regional leaders to adopt a cluster-based approach to regional economic development and the enhancement of the Region's economic infrastructure that makes this possible. Necessary economic infrastructure refers to highly specialized economic inputs (i.e. available infrastructure and adequate workforce skills) that are not provided solely by the private sector. These inputs are provided by various regional agencies and organizations. Therefore, what follows is an examination of:

- Strengths and weaknesses in regional economic infrastructure capacity
- The comparative strengths and weaknesses of the Region's economic foundations benchmarked against competing regions