

Economy

- 537 [Some History and Statistics](#)
- 547 [Utilities, Licenses, and Bonds](#)
- 556 [Citrus Production and Processing](#)
- 561 [General Farming and Truck Crops](#)
- 566 [Livestock](#)
- 571 [Florida's Mineral Industry](#)
- 578 [Tourism](#)
- 581 [Highways: Trails to Turnpikes](#)
- 584 [Florida's Scenic Drives](#)
- 586 [Military Installations](#)



Florida's Economy

Some History and Statistics

Florida's Economic History, an Overview

Florida's economic base has changed dramatically since territorial times and early statehood. Not one major industry of that time is a major industry today. Factors such as competition and technological advances, combined with those features of climate and geography that make Florida unique among the states, transformed a sparsely populated territory with a southern cash-crop economy into a tourism and agricultural powerhouse—becoming the nation's fourth largest economy with the fourth largest population by 2000.

Antebellum Florida was much like the rest of the South, relying on slave labor to harvest primarily cotton, tobacco, sugarcane, and rice. Of these crops, only sugarcane remained a significant crop during the 20th century, and that was largely due to the trade embargo on Cuban exports (Stronge 217). Cotton fell to competition as agriculture expanded westward into Texas, and though wrapper-tobacco and the making of cigars was once a major industry in Florida, the Great Depression, competition, changing consumer tastes and, later, health concerns reduced it to near oblivion. Only specialty portions of these markets remained, such as the long staple sea-island cotton, which was a superior variety and grew well in Florida (Stronge 4). By 1960, these crops accounted for no more than 1 percent of the state's economic base (Stronge 182).

In his book *The Sunshine Economy*, William B. Stronge describes Florida's opportunity for economic growth:



Florida State Archives

Workers in a Johnson-Wolfe Tobacco Company field beneath a slat covered shelter, Leon County, circa 1910. The farm was located four miles north of Tallahassee off Thomasville Road.

As the twentieth century began, a number of preconditions were in place that facilitated the rapid growth of Florida's economy. These included national and local transportation networks that enabled Florida to export goods and services from its position on the nation's periphery to the developed center of the economy, an endowment of cheap undeveloped land that accommodated the state's economic expansion, and new industries whose competitive advantage stemmed from the state's geographic position. (55)

The young state's economy was now based on its supply of natural resources rather than the product of its plantations. Timber was cut down and shipped

north from the port at Jacksonville, phosphate mining grew in importance, and men harvested sponges by the ton from reefs in the Gulf of Mexico and off the Florida Keys. When Juan Ponce de Leon landed in Florida in 1513, with him came seven Andalusian cattle that would eventually evolve into the Texas longhorn breed (Clark 9). The descendants of these cattle multiplied on Florida's lush grass, fed the Confederate Army, and by 1900 the state contained 750,000 head—considerably more than the state's human population (Stronge 11). The timber and cattle industries have both experienced fluctuations over the years and have been overshadowed by the tourism-retirement sector, but they remain a significant portion of the state's economic base. Florida's fishing industry has also been a relatively steady resource and includes catches of mullet, snapper, pompano, mackerel, trout, grouper, shrimp, blue crabs, and oysters (Stronge 177-178). The sponge industry, however, was nearly wiped out by a strong hurricane in 1926, an outbreak of red tide in the late 1940s, and the invention of synthetic sponges (Stronge 179). In

recent years, the sponge industry in Tarpon Springs has begun to make a comeback.

Soon, a different kind of agriculture grew in the state. Fruit, especially citrus, grew well on the warm hills of Central Florida, and other fruits and vegetables such as tomatoes, pineapple, strawberries, cabbage, potatoes, limes, melons, and mangoes also did well in what was becoming known as the "Sunshine" State. Florida's warm winters gave it a great advantage over farming states to the north; the state could "supply northern markets with vegetables earlier in the year than any other production region in the nation" (Stronge 65). The winter crop, which became ever more valuable as new methods of transportation expanded the reach of Florida's produce, became the dominant part of the state's economy during the middle of the 20th century and remains significant today.

Citrus, which originated in Asia and is believed to have been brought to the New World by Columbus, was growing in abundance surrounding St. Augustine by 1600 (McGovern 342). Despite regular freezes, citrus production expanded steadily in the 20th century. During World War II, the military ordered 500,000 pounds of powdered orange juice and a new company moved in to supply it. The order was canceled when the war ended, but the company stayed, evolving into the Minute Maid brand and helping develop the frozen concentrate process, which retains much more of the fruit's flavor (Stronge 174).

Also because of its climate, during WWII, Florida became a training ground for the nation's military. By 1943, the state had 172 military installations (Stronge 144). Along with Uncle Sam's soldiers came his dollars, and this source of income grew as the number of permanent installations increased. The Navy took up residence in Florida because of the state's strategic position on the southeastern edge of the continent and its good harbors. By 2000, military payroll had become the second largest component of the economic base behind tourism-retirement (Stronge 267).

In the late 19th century, the writings of Harriet Beecher Stowe and others advertised Florida to the northern imagination, and the first tourists, traveling by river, came south to enjoy its warmth and beauty. Stowe, a winter resident herself, wrote that Florida was good for your health (Stronge 78). Besides the climate, among the first tourist attractions in Florida



Florida State Archives

Timber dock of the Putnam Lumber Company, Shamrock, Dixie County, 1929.

were ostrich races and an alligator farm, both begun in the 1890s (Clark 86). As transportation methods expanded in the state—the trains of Henry Flagler and Henry Plant and a growing network of highways—tourists poured south for the winter and many decided to stay permanently. Florida’s population especially surged following WWII, when many people had money saved during the war. In 1951, technology brought Florida safe, efficient, and inexpensive window-unit air conditioners, plus the development of pesticides that greatly reduced the more-than-annoying mosquito population (Stronge 158). Tourism and in-migration had begun as a trickle but quickly became a flood. The opening of Walt Disney World and other theme parks, plus the 825 miles of sandy beaches on the Atlantic and Gulf coasts, drew more and more people to the state (McGovern 50). Waves of retirees moved here, culminating in the current in-migration of the Baby Boom generation. The number of hotels, motels and condos soared in the 1970s. By 1980, tourism-retirement accounted for more than 50 percent of the state’s economic base—by 2000, more than 65 percent (Stronge 204, 243).

In the mid-1950s, and with the coming of the space program, technological manufacturing industries grew in Florida. A General Electric manager found that “the area’s climate and recreational advantages made the problem of recruiting high-caliber professional people less difficult” (Stronge 189). Plus, the state’s tax system was business-friendly. IBM came to Palm Beach in the 1980s, and other information technology and manufacturing companies followed. Today, the state government continues to shape policy that makes Florida attractive to businesses of all types.

According to Stronge, the future will bring new challenges and transitions to the state:

And for more basic economic information, visit Enterprise Florida Inc.’s economy resource webpage, www.enterpriseflorida.com/research-data/statewide-indicators/.

Bibliography

Clark, James C. *200 Quick Looks at Florida History*. Pineapple Press, Inc., Sarasota, Florida, 2000.

McGovern, Bernie, (ed.) *Florida Almanac, 2007-2008*. Pelican Publishing, Inc., Gretna, Louisiana, 2007.

Stronge, William B. *The Sunshine Economy: An Economic History of Florida since the Civil War*. University Press of Florida, Gainesville, Florida, 2008.



Florida State Archives

Tourists aboard the river steamboat “Okeehumkee,” Silver Springs, circa 1885.

As the impact of the retirement of the Baby Boomers fades, the economic development of the state will increasingly depend on the actions of Floridians rather than the willingness of people elsewhere in the country to buy a group of products reflective of Florida’s unique geographical location. (268)

The following pages provide a more detailed look at the industries and statistics of Florida’s economy.

**Personal Income In Millions of Dollars
1980-2010**

Year	Florida	United States
1980	96,078	2,254,076
1990	241,836	4,664,057
1995	328,135	6,137,878
2000	455,313	8,398,871
2005	617,179	10,284,356
2006	663,077	10,968,393
2007	713,490	11,879,836
2008	739,403	12,380,225
2009	722,328	12,168,161
2010	738,373	12,530,101

Transfer Payments 2009

Government payments to Individuals	134,550,549
Retirement and disability insurance	48,428,703
Medical	57,615,922
Income Maintenance	12,827,104
Unemployment Insurance	5,941,236
Veterans benefits	4,035,449
Federal education and training assistance	3,981,435
Other payments	1,720,700
Payments to nonprofit institutions	1,980,730
Business payments to individuals	1,387,073

**Per Capita Personal Income In Dollars
1980-2010**

Year	Florida	United States
1980	9,764	9,919
1990	19,701	18,696
1995	23,139	23,395
2000	28,366	29,760
2005	34,798	34,757
2006	36,720	36,714
2007	39,036	39,092
2008	39,064	40,166
2009	37,780	39,138
2010	39,272	40,584

Social Security Monthly Cash Benefits (in thousands)

Year	Total	Retired Workers	Disabled Workers	Spouses	Children	Widows Widowers
1996	2,080,042	1,520,535	176,101	79,698	71,123	232,583
1998	2,235,695	1,635,929	206,575	80,093	76,613	236,484
2000	2,482,741	1,820,651	241,904	82,956	85,839	251,392
2002	2,703,153	1,979,591	282,705	83,295	95,485	262,077
2004	2,984,641	2,182,745	337,647	84,740	104,908	274,601
2006	3,444,546	2,349,812	407,768	170,863	230,154	286,449
2008	3,791,084	2,799,667	463,789	91,763	126,029	309,835
2010	3,784,225	2,617,763	488,461	159,442	242,421	276,138

Source for all tables this page: Florida Statistical Abstract 2011

Employment in Florida Monthly Average 2010

All industries	6,045,020
Goods, producing	740,390
Services, producing	5,304,630
Wholesale trade	308,451
Merchant wholesalers, durable goods	154,887
Merchant wholesalers, nondurable goods	112,961
Electronics markets and agents and brokers	40,604
Mining	3,635
Oil and gas extraction	73
Mining, except oil and gas	3,021
Support activities for mining	541
Utilities	22,553
Construction	394,916
Construction of buildings	67,872
Heavy and civil engineering construction	49,548
Specialty trade contractors	229,526
Manufacturing	307,613
Computer and Electronics	42,959
Transportation equipment	33,525
Machinery	22,992
Nonmetallic mineral products	15,463
Fabricated metal products	28,977
Electrical equipment and appliances	8,886
Furniture and related products	9,790
Primary metals	4,463
Miscellaneous manufacturing	27,169
Food	27,272
Beverage and tobacco products	9,179
Textile mills	909
Textile product mills	4,154
Apparel	3,626
Leather and allied products	796
Wood products	8,444
Petroleum and coal products	2,628
Paper	9,108
Printing and publishing	17,580
Chemical	18,631
Plastic and rubber products	11,063
Transportation and warehousing	197,237
Truck transportation	40,841
Air transportation	30,421

Water transportation	12,192
Rail transportation	54
Pipeline transportation	253
Scenic and sightseeing transportation	2,303
Postal service	161
Transportation support activities	44,500
Warehousing and storage	25,128
Couriers and messengers	27,863
Transit and ground passenger transportation	13,522
Agriculture, forestry, fishing, and hunting	82,227
Crop production	48,317
Animal production	5,074
Forestry and logging	2,759
Fishing, hunting, and trapping	472
Agriculture and forestry support activities	25,605
Information	135,703
Publishing industries, except Internet	31,360
Motion picture and sound recording industries	11,428
Broadcasting, except Internet	14,195
Telecommunications	57,418
ISPs, search portals, and data processing	16,647
Other information services	4,655
Retail trade	928,178
Motor vehicle and parts dealers	108,316
General merchandise stores	181,300
Food and beverage stores	186,613
Building material and garden supply stores	67,001
Gasoline stations	37,273
Clothing stores	104,873
Health and personal care stores	71,346
Furniture and home furnishings stores	30,991
Electronics and appliance stores	35,218
Sporting goods, hobby, book, and music stores	33,016
Miscellaneous retail	49,417
Nonstore retailers	22,814
Finance and insurance	317,206
Credit intermediation	151,821
Securities, commodity contracts, investments	39,350
Insurance carriers	123,237
Funds, trusts, and other financial vehicles	2,337
Real estate and rental and leasing	150,516
Real estate	114,218

Rental and leasing services	34,722
Lessors of nonfinancial intangible assets	1,576
Administrative, support, waste management, and remediation services	553,134
Administrative services	514,693
Waste management and remediation services	18,441
Arts, entertainment, and recreation	182,875
Amusements, gambling, and recreation	143,991
Museums, historical sites, zoos, and parks	5,779
Performing arts and spectator sports	33,105
Health care and social assistance	925,529
Ambulatory health care services	388,844
Hospitals	254,047
Nursing and residential care facilities	175,350
Social assistance	107,188
Professional, scientific, and technological service	433,527
Management of companies and enterprises	78,210
Accommodation and food services	736,615
Accommodation	151,533
Food services and drinking places	585,062
Educational services	123,626
Other services	230,861
Membership associations and organizations	70,413
Repair and maintenance	65,938
Personal and laundry services	80,485
Private households	14,025
Unclassified	409
Total Government	1,164,763
Total Federal Government	142,289
Total State Government	187,299
Total Local Government	735,175

Source: Florida Statistical Abstract 2011

Public Employment in Florida 2009

Item	State and local	State Only
Full-time equivalent employees, all functions	882,597	185,630
Education, total	416,439	58,794
Higher education, instruction	83,613	55,623
Elementary and secondary schools, instruction	329,655	n/a
Other education	3,171	3,171
Libraries, local	6,438	n/a
Public welfare	16,685	9,747

Hospitals	52,176	3,749
Health	27,920	20,902
Social insurance administration	2,547	2,547
Streets and highways	22,134	7,791
Airports	4,896	n/a
Water transportation	1,405	n/a
Police, arrest	44,153	2,281
Police, other	23,438	2,075
Firefighters	30,571	n/a
Correction	48,095	29,962
Natural resources	15,470	9,823
Parks and recreation	19,143	1,417
Housing and community development	6,111	n/a
Sewerage	8,790	n/a
Solid waste management	6,803	n/a
Government administration, total	72,075	28,915
Judicial and legal	34,223	19,815
Financial	23,908	6,715
Other government	13,944	2,385
Public utilities total	27,049	700
Water supply	12,542	n/a
Electric power	3,839	n/a
Gas supply	585	n/a
Transit	10,083	700
All other and unallocable	30,259	6,927
Payroll, total (March)	3,516,107,313	707,932,180

Source: Florida Statistical Abstract 2011

**Licensed Members of Professions Regulated
by the Department of Business and Professional Regulation
2011-2012**

Professions (Active and Inactive)	Cumulative License Totals
Accountancy	35,825
Architecture and Interior Design	16,909
Asbestos Consulting	437
Athlete Agent	189
Auctioneer	2,615
Barber	17,197
Building Code Administration/Inspection	8,500
Community Association Manager	17,844
Construction Industry	85,427

Cosmetology	209,311
Electrical Contracting	12,629
Employee Leasing Company	741
Engineering	53,945
Geology	2,314
Home Inspection	6,804
Landscape Architecture	1,513
Mold-Related Services	4,529
Pilot Commissioner	110
Real estate	289,329
Real Estate Appraisal	8,159
Talent agent	268
Veterinary medicine	8,994
Total	783,589

Source: Department of Business and Professional Regulation Annual Report

Physicians and Dentists 2011-2012

Medical Doctor	64,175
Medical Doctor Limited License	207
Medical Doctor Public Health Certificate	3
Medical Doctor Area Critical Need	281
Medical Faculty Certificate	46
Dentist	13,181

Source: Department of Health Annual Report

Licensed Members Professions Regulated by the Department of Health 2011-2012

Professions	Active License Total
Acupuncturist	2,291
Athletic Trainer	2,147
Audiologist	1,099
Certified Nursing Assistant	201,667
Chiropractic Physician	6,170
Clinical Laboratory Personnel	16,730
Clinical Social Worker	8,481
Dental Hygienist	13,461
Dietitian and Nutritionist	3,491
Electrologist	1,364
Emergency Medical Technician	37,425

Hearing Aid Specialist	1,018
Marriage and Family Therapist	1,812
Massage Therapist	39,232
Medical Physicist - Radiological	95
Mental Health Counselor	9,060
Midwife	171
Nursing - Registered	256,600
Nursing - Licensed Practical Nurse	77,941
Nursing Home Administrator	1,853
Occupational Therapist	8,091
Optician	4,020
Optometrist	3,217
Orthotist & Prosthetist	208
Osteopathic Physician	6,210
Paramedic	27,863
Pharmacist	29,311
Physical Therapist	14,722
Physicians Assistant	6,456
Podiatric Physician	1,846
Psychologist	4,871
Radiologic Technologist	44,056
Respiratory Therapist (registered)	8,188
School Psychologist	777
Speech-Language, Pathologist	8,027
Total licensed practitioners including MDs	1,059,958

Source: Department of Health Annual Report

Legal Profession - The Florida Bar's Members Eligible to Practice Law 2012

Statewide:

Florida	73,436
Out-of-state	21,876
Foreign	394
Inactive or temporarily incapacitated	10,417
Total	106,123

Members in selected counties:

Miami-Dade	14,514
Broward	8,985
Hillsborough	6,432
Orange	5,665
Leon	3,155
Pinellas	3,288
Duval	3,621



Utilities, Licenses, and Bonds

Electric Power

Before the turn of the century in Florida, enterprising business people installed small electric plants for their own use. They were soon asked by neighbors to sell some of the power produced perhaps as a surplus to, say, the making of ice. Thus, by accident rather than design, small electric utilities came into existence.

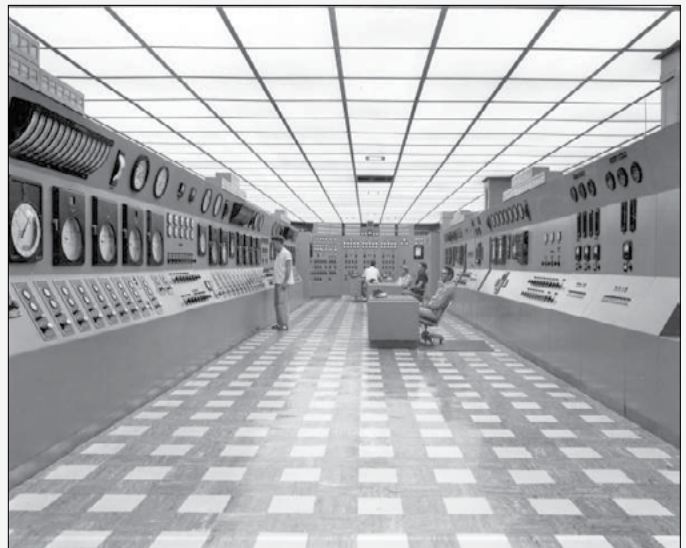
The first electric lights in Florida are said to have been installed at Jacksonville's luxurious St. James Hotel in 1883, with eight outlets in the lobby and eight outside. Since Edison invented the incandescent lamp in 1879 and the nation's pioneer central generating plant (New York's Pearl Street) was put in service in 1882, the St. James installation certainly was among the first in the country.

In Miami, Henry M. Flagler built the first plant in 1896 to serve his Royal Palm Hotel, then picked up private users in stringing a pole line to the depot of his Florida East Coast Railway some blocks away.

Florida has a significant place in the history of electricity for it was here at Fort Myers that Thomas A. Edison had his winter home and laboratory.

Sometimes the sale of electric power by ice makers, hotels, and others became another business. Again using Miami as the example, in 1904 Flagler built a plant separate from the Royal Palm installation.

The first plant for the production of electricity for the general public, in the Miami area, was a 200 kilowatt woodburning steam engine, on the former site of the Florida Power & Light steam electric station, near the mouth of the Miami River. Its first



Florida State Archives

In the central control room of a power plant circa 1965, vital data obtained from the many instrument panels keep plant operators constantly informed of every detail of the generation of electricity.

power customer was the *Miami Metropolis* (later known as the *Miami News*), which had a 3-horse-power motor to operate.

Individual electric systems furnished service to Lake City (1891), Palatka (1894), Jacksonville (first municipal, 1895), Monticello (1895), West Palm Beach (1895), Titusville (1895), Miami (1896), Fort Myers (1896), St. Petersburg (1897), Key West (1899), and Tampa (1900). Lake City's rates may serve as an example of those charged. There, in 1905, the rate was 35 cents a month for each 16-candle-power bulb.

By 1910, 24-hour service was quite generally available and most of the operations were no longer side-lines of other businesses. In the larger cities,

street railways were electrically operated, as were many of the ice plants. Many of the wood burning plants had been converted to fuel oil, and the diesel engine began to be widely used as a prime producer. In the following years, the utilities branched out and built lines to serve adjoining towns. Even at this time, however, the operations were primarily local in character and each small area was dependent upon its own plant.

The rapid development of the state in the 1920s was accompanied by a revolutionary change in the development of the electric power industry. During the early years of this decade, real estate developers who subdivided large tracts of land frequently found it necessary to put in their own electric and street railway systems. The existing local plants also expanded their facilities but were unable to keep up with the business growth. The generating stations were overloaded, breakdowns were frequent, and even in the major cities the service was frequently off on Sundays so that necessary maintenance and repair work could be done on the equipment.

The first major systems in the state came into existence beginning about 1925. The Florida Power Corporation, the Gulf Power Company, the Florida Public Service Company, and the Florida Power & Light Company were organized. Individual electric plants in numerous cities were purchased, and long-distance transmission lines were constructed connecting plants in the various cities.



Florida State Archives

Turkey Point Nuclear Power Plant, Dade County, 1972.

Florida's Electric Power Industry

Year	Capacity As of Jan. 1 in KW	Production in 1000 KWH
1940	499,096	1,769,591
1950	1,029,352	5,610,410
1960	3,846,402	19,710,996
1970	13,482,000	55,469,000
1975	19,059,000	77,047,000
1980	24,583,000	99,761,000
1985	30,391,000	120,149,000
1990	33,437,000	154,519,000
1995	38,954,000	179,512,000
2000	39,798,000	209,086,000
2005	48,368,000	240,317,000
2010	58,420,000	247,276,000
2011	57,605,000	237,658,000

“Capacity” measures the maximum power output of generating units in power plants. “Production” refers to the kilowatt hours generated.

Source: Florida Public Service Commission

Florida is somewhat less dependent on petroleum than it was during the 1960s and 1970s; however, the reduction is primarily due to switching the fuel used for electric generating capacity to a broad mix of fuels including coal, natural gas, and nuclear power.

Jacksonville Electric Authority, together with Florida Power & Light Corporation (FP & L), built two coal-fired generating plants in Duval County in 1987-88. About the same time, Florida Power Corporation completed change-over of two oil-fired units at Crystal River to coal.

A 320-mile-long interconnection between FP & L and the Southern Companies was completed in 1985. This 500kv “coal-by-wire” project allows FP & L to purchase 2,000 megawatts of power and transport it the length of the peninsula.

The \$350 million transmission line allows for a more diverse mix in the fuel used by Florida’s largest electric utility and assists in securing additional reliability.

Since the early 1990s, electric utilities have primarily constructed natural gas-fired units due to lower capital costs, improved efficiencies, and a smaller environmental footprint. In recent years, new supplies of natural gas have resulted in historically low prices. The state expects to increase its reliance on natural gas in the coming years.

Nuclear Power

Florida's first two nuclear generating units went on line in 1972 and 1973 at Florida Power & Light Co.'s Turkey Point Plant 25 miles south of Miami. Both units have capacity ratings of 666,000 kilowatts each.

FP & L's third and fourth nuclear power plants went on line in 1976 and 1983. These plants, called St. Lucie One and Two, are located midway between Ft. Pierce and Stuart on Hutchinson Island. Each unit is capacity rated at approximately 839,000 kilowatts.

On the west coast, Progress Energy's 880,000-kilowatt nuclear generating unit 7 miles northwest of Crystal River became operational in March 1977. The unit has been off line since 2009 due to a concrete delamination experienced during a steam generator replacement project. Recently, Progress Energy decided to retire the unit.

In 2008 the Public Service Commission approved FP & L's application for two more reactors at Turkey Point and approved Progress Energy's petition for determination of need for a nuclear unit in Levy County.

The governor and Cabinet approved Progress Energy's proposal to build a nuclear plant in Levy County in August 2009. This is the first such plant approved in the state in 33 years. Progress plans to start producing power from the plant by 2024.

Solar Power

Florida Power and Light Co. built the first of three solar plants in 2009. When completed, the 25-megawatt Desoto Next Generation Solar Energy Center, in Arcadia, was the largest solar photovoltaic plant in the country. The 10-megawatt Space Coast Next Generation Solar Energy Center, near the Kennedy Space Center, was launched in April 2010. The Martin Next Generation Solar Energy Center, in In-

diantown, completed in late 2010, is the world's first hybrid solar/thermal power plant and the largest of FP & L's solar projects, at 75 megawatts. It is the only system of its kind.

Customer-owned solar energy has experienced significant growth due to financial incentives and rules easing the interconnection with utilities. As of December 31, 2011, approximately 4,000 systems had been installed amounting to 29.3 megawatts of generating capacity.



Florida State Archives

Southern Bell Telephone and Telegraph Company public telephone room, Miami, 1925.

Telephone History

Florida's first telephone exchange opened in Jacksonville on May 24, 1880. This was just 28 months after the world's first "central office" started functioning in New Haven, Connecticut. Only 4 years had elapsed since the first intelligible sentence had been transmitted over Alexander Graham Bell's experimental instrument.

The first telephones in use in Jacksonville antedated the exchange by 2 years. According to George W. Sparks, in his *Chronology of the Telephone in Jacksonville*, "It appears the first telephones in Jacksonville (and probably the first in Florida) were on a private line connecting the office of A. M. Beck, corner of Pine and Bay Streets, with the Inland Navigation Co. at foot of Laura Street, constructed in 1878."

A comparative handful of the big wooden telephones were installed and linked through that pioneer exchange at Jacksonville. Development in Florida was quite slow. By 1900, there were only 6,285 telephones in the entire state. Of these, Jacksonville had 822, Pensacola 408, Tampa 375, Gainesville 103, St. Augustine 72, Key West 60, and Fernandina 34.

Miamians first were served in 1898, with 25 subscribers paying \$30 a year. The subscribers included Henry M. Flagler, Julia Tuttle, Flagler's Royal Palm Hotel, and the *Miami Metropolis*. The first service, from a switchboard at the rear of a drug store, was limited to daytime, with the first operator, Eunice Coons, leaving when the drug store closed at night. An occasional evening exception was made when John Dewey, the owner, arranged a musical program with all subscribers plugged in to enjoy the music.

The first dial central office in Florida was established in 1913 in Tampa by the Peninsular Telephone Company, now a part of Verizon. The largest company operating in the state, AT&T (formerly Southern Bell Telephone and Telegraph), converted its last manual office to dial service on June 4, 1961. This exchange was located in Lake City. The goal of 100% dial operation for all telephones in Florida was achieved on August 31, 1961, when GTC (formerly Gulf Telephone Company) at Perry converted.

Florida possesses the distinction of being the first state in the South and the fourth in the United States to reach full dial operation. The three preceding states were Connecticut, Rhode Island, and Delaware.

Women first replaced men as telephone operators in Florida at the Jacksonville exchange in 1884. By 1982, the trend had reversed, if only slightly. There were 148 male operators in Greater Miami. Long distance circuits were extended from Jacksonville to Miami in 1913 and to Key West in 1916.

The first commercial microwave system installed in Florida for long distance telephone transmission was completed in 1953 between Tampa and Bartow by Peninsular. Direct Distance Dialing, which enables a subscriber to dial his own long distance calls, was introduced in Florida in 1955 by the Intercounty Telephone & Telegraph Company (now CenturyLink). This made it possible for subscribers in Fort Myers to dial the neighboring exchange of Fort Myers Beach.

Telecommunications

The Public Service Commission uses the term "access line" as the element used to determine the amount of service provided. An "access line" is the line from the telecommunication company to the subscriber premises.

Since 2001, total traditional wireline access lines have declined 50%, from approximately 12 million in 2001 to 6 million as of December 2011. AT&T had 46% of total access lines in 2011. The other nine local telephone companies combined for the remaining 54%.

In 2001, 50% of Florida households were wireless subscribers. In 2011, 92% of households subscribed to wireless services, 72% subscribed to fixed broadband, and an estimated 41% subscribed to Voice over Internet Protocol services. According to the Centers for Disease Control, as of 2012, 36% of U.S. wireless subscribers have completely eliminated their wireline phones.

Federal Communications Commission statistics show that Florida's broadband (200 kbps) connections reached approximately 12.7 million as of 2011.

Florida pay telephone service providers have declined from 584 in 2002 to 100 in 2011. The Florida Pay Telephone Association estimates that, as of June 2012, there were approximately 5,100 pay telephones in Florida. This is a reduction of 3,200 from the 8,300 reported as of December 2010.

Source: Public Service Commission; Centers for Disease Control; Federal Communications Commission

Cellular Service

1982: The Federal Communications Commission approved cellular service. Telephones of the day weighed about 25 pounds, cost about \$3,500, and were usually mounted in a car trunk.

1987: The number of wireless subscribers in America hits 1 million.

1993: The first digital cellular service announced in Orlando, Florida.

2001: 8,937,063 Florida wireless phone subscribers.

2003: 10.8 million wireless phone subscribers, 63% of the population.



Florida State Archives

Currency for transportation issued by the Tallahassee Rail Road Company, late 19th century.

- 2005:** 12.5 million wireless phone subscribers, 69.8% of the population.
- 2007:** 15.3 million wireless phone subscribers, 81.3% of the population.
- 2009:** 16.2 million wireless phone subscribers, 86.1% of the population.
- 2011:** 17.6 million wireless phone subscribers, 92% of the population.

Source: *Public Service Commission Annual Report on Competition*

Florida’s First Railroads

Florida’s first operating railroad was the St. Joseph Railroad, which formally opened with mule power in March 1836. The 8-mile railroad linked St. Joseph Bay, on the Gulf of Mexico, with Lake Wimico, a bayou of the Apalachicola River.

The St. Joseph put the state’s first steam locomotive into operation on September 5, 1836, when “a train of twelve cars containing upwards of 300 passengers passed over the railroad . . . the trip . . . was performed in the short space of twenty-five minutes.”

The Leon Rail Way Company was chartered by the Legislative Council on February 11, 1831. This charter was repealed, and the Leon Rail Road Company was incorporated February 6, 1832. This, too, died. Each charter projected a railroad from Tallahassee to the St. Marks River.

A new company, the Tallahassee Rail Road, was incorporated by legislative act of February 10, 1834. Construction was commenced in January 1835. Months of haggling over land for the St. Marks River terminus ensued before the first steam locomotive traversed the 22 miles from Tallahassee to Port

Leon in December 1837. The locomotive alternated for a time with mules, and the locomotive finally was abandoned in favor of the more dependable mule power. The mules took 5 hours for the one-way trip.

Railroad Mileage

Miles of track and percentage of state system by railroad company, 2009:

	Miles of track	% of system
Alabama and Gulf Coast	45	1.5
Apalachicola Northern	96	3.1
Bay Line	70	2.3
CSX Transportation	1,651	53.8
First Coast	32	1.0
Florida Central	94	3.1
Florida East Coast	386	12.6
Florida Midland	37	1.2
Florida Northern	114	3.7
Florida West Coast	3	0.1
Georgia & Florida Railnet	45	1.5
Norfolk Southern	149	4.9
Seminole Gulf	103	3.4
South Central Florida Express	158	5.2
South Florida Rail Corridor	81	2.6
Terminal Companies	2	0.1
Total	3,066	100.0

Source: www.dot.state.fl.us/planning/trends/tc-report/

Alcoholic “Wet-Dry” Counties

There were 3 “dry” counties and 64 “wet” counties in Florida on July 1, 2012. A “dry” county is one in which only beverages not more than 6.243% alcohol by volume may be sold; a “wet” county is one in which malt, vinous, and spirituous beverages of up to 153 proof may be sold. The counties classified as “dry” were as follows: Lafayette, Liberty, and Washington.

Source: Department of Business and Professional Regulation

Alcoholic Beverage Licenses

The state issued 45,213 licenses for the sale, distribution, or manufacture of alcoholic beverages for the license year 2011-2012. Of that number, 19,477 authorized package sale only; 23,333 allowed package sale and consumption on premises; 1,722 were for entertainment clubs and tracks; 329 for distributors; 90 for manufacturers; and 262 for importers/exporters.

Motor Vehicle Licenses

The first certificates of registration (not plates) were issued in Florida for motor vehicles in 1905. A \$2 fee was collected. According to a report of the Secretary of State, by the end of 1906, there were 296 automobiles registered in Florida, of which 11 were owned by nonresidents. Interestingly, a fourth of the total number were in the city of Daytona Beach.

Napoleon B. Broward was governor at that time but, unlike today’s chief executive, the No. 1 license was not issued to Governor Broward since he had no car. Instead, License No. 1 went to R.E. Brand of Jensen, for a vehicle manufactured by the Locomobile Company of America.

In 1908, the total registration had increased to 437, although automobiles still were regarded as a curiosity. By the end of 1910 there were 2,394. County tax collectors began individually issuing metal plates in 1911, and the state started in 1918 through the county tax collectors.

In 1996, the Governor and Cabinet changed the standard tag of 20 years, with a silhouette of the state

in orange or green, to add an overlay of an orange capped with a green stem and two leaves. The state’s name, in a blend of yellow and orange, arched atop the tag and the names of counties, also in yellow and orange, appeared in cursive script below.

A revised standard tag debuted in December 2003. The light green silhouette of the state is overlaid with two oranges on a brown stem with three dark green leaves. Three white orange blossoms with five leaves are overlaid mostly on the lower orange. The official state website address, MYFLORIDA.COM, arches over the silhouette, with the state nickname, Sunshine State, below, both in dark green. An optional plate debuted in October 2008. The nickname Sunshine State is replaced by the words “In God We Trust.”

In 2004, for the first time, there were more than 100 different plates, tags, or decals, including individual and specialty plates as well as the kinds of vehicles licensed by the state. Some of these are mobile homes, recreational vehicles, wreckers, “horseless carriages” (vehicles manufactured in or before 1945), “goats” (vehicles used primarily off highways in fields and woods for harvest purposes), “antiques” (passenger automobiles manufactured 30 or more years prior to the current date), and “street rods” (modified motor vehicles manufactured before 1949 and used for exhibitions and special functions but not regularly for transportation).

Individual plates are made for members of the Florida Legislature, Congress, and amateur radio operators. Special tags are provided free of charge to members of the Seminole and Miccosukee tribes and qualified wheelchair or disabled veterans.

Specialty plates are available for National Guard members, former prisoners of war, survivors of Pearl Harbor, recipients of the Medal of Honor, foreign honorary consuls, members of the U.S. Reserve, volunteer fire departments, and the state universities. Among others, there are plates commemorating the loss of the spaceships *Challenger* and *Columbia* and honoring veterans, manatees, panthers, the Super Bowl, education, children, sea turtles, professional sports teams, family values, parents, soccer, marine research, home ownership, whales, oceans, animal friends, trees, and organ donation.

Since 2011, the most popular specialty plate is the University of Florida plate, selling 101,014. The

Florida State University plate is second at 64,520. Some of the most popular plates by category are the sea turtles plate in the environmental category, the U.S. Marine Corps plate in the military service category, and the Miami Heat plate in the sports team category.

A 2004 law requires a survey to prove at least 30,000 Floridians will buy a proposed tag before it can be approved, and in the future a tag with less than 1,000 sales a year may be removed from the selection. With the seven new tags added in 2010 there were 120 specialty plates available. The 2008 Legislature passed a 2-year moratorium on the approval of new specialty plates, and this moratorium has been extended to 2014. No new plates were approved in 2012.

During the fiscal year ending June 30, 2012, the Department of Highway Safety and Motor Vehicles estimated it had registered 18,579,187 vehicles, including mobile homes and recreational vehicles. Excluded were temporary licenses and replacement tags.

State-Supported Bonds

The ability of the state to issue bonds is detailed here by the Executive Director of the State Board of Administration. The Board of Administration has for its members the Governor, the Chief Financial Officer, and the Attorney General.

The Board of Administration has the responsibility for approval of fiscal sufficiency prior to the issuance of state bonds.

The State Constitution authorizes the issuance of the three general classifications of bonds:

- (1) State bonds pledging the full faith and credit of the state and payable from general revenue tax funds may be issued to finance the cost of state capital projects upon approval by a vote of the electors (Article VII, Section 11(a)).
- (2) Revenue bonds payable solely from funds derived from sources other than state tax revenues, or rents or fees paid from state tax revenues, may be issued without a vote of the electors to finance the cost of state capital projects (Article VII, Section 11(d)).
- (3) Bonds payable from a constitutionally

designated tax source, most of which must or may be additionally secured by the full faith and credit of the state, are authorized.

Revenue bonds that can now be issued under the 1968 Constitution, as amended, include bonds issued to finance toll roads or bridges, university dormitories, student centers, state office buildings, parking areas, etc., and payable from the revenue derived from the facility or other designated revenues.

Types of revenue bonds authorized pledging a constitutionally designated tax source are as follows:

(a) Public Education Capital Outlay bonds are issued to acquire capital outlay projects for institutions of higher learning, junior colleges, vocational technical schools, or public schools. All of the proceeds of the revenues derived from the "Gross Receipts Taxes" are pledged to secure Public Education Capital Outlay Bonds. Public Education Capital Outlay Bonds are additionally secured by the full faith and credit of the state (Article XII, Section 9(a)(2)).

(b) State bonds to finance the acquisition of roads and bridges pledging the full faith and credit of the state may be issued without a vote of the electors. These bonds are payable primarily from motor fuel and special fuel taxes and are additionally secured by the full faith and credit of the state (Article VII, Section 17).

(c) State Board of Education capital outlay bonds may be issued to finance education facilities for school districts, the Florida College System, and the State University System. These bonds pledge a portion of the state motor vehicle license taxes and are additionally secured under existing law by the full faith and credit of the state (Article XII, Section 9(d)).

There are three types of bonds authorized to be issued that do not fit into the three general classifications above:

(1) State bonds pledging the full faith and credit of the state to finance the construction of pollution control and abatement facilities for a local governmental agency may be issued by the state without an election. The bonds are payable

from revenues from the operation of the facility and any other legally available tax or revenue legally available for such purposes and may be additionally secured by the full faith and credit of the local agency. The bonds are additionally secured by the full faith and credit of the state (Article VII, Section 14).

(2) Bonds pledging all or part of a dedicated state tax revenue may be issued by the state in the manner provided by general law to finance or re-finance the acquisition and improvement of land, water areas, and related property interests and resources for the purposes of conservation, outdoor recreation, water resource development, restora-

tion of natural systems, and historic preservation. Florida Forever Revenue bonds and Everglades Restoration Revenue bonds are issued pursuant to this provision and are payable from documentary stamp taxes (Article VII, Section 11(e)).

(3) Student loan revenue bonds are authorized by Section 15, Article VII of the revised constitution. These bonds are payable from loan repayments and are additionally secured by certain student fees and they are further secured by a government insurance guarantee, but they are not additionally secured by the full faith and credit of the state (Article VII, Section 15).

**Florida's Bonded Indebtedness
Administered by State Board of Administration
June 30, 2012**

Governmental Activities

Bond Type	Original Amount	Amount Outstanding	Interest Rates	Annual Maturity To
Road and Bridge Bonds	\$2,245,250,000	\$2,020,110,000	2–6.375%	2041
SBE Capital Outlay Bonds	807,420,000	558,925,000	3–5%	2030
Lottery Education Bonds	3,331,410,000	2,787,038,000	3–6.584%	2029
Public Education Bonds	13,303,450,000	10,825,600,000	2–9.125%	2040
State University System Bonds	268,560,000	195,720,000	3–6.5%	2033
University Auxiliary Bonds	1,074,730,000	838,852,000	2–7.5%	2042
Inland Protection Bonds	96,730,000	84,770,000	4.26–5.4%	2024
Preservation 2000 Bonds	587,855,000	69,885,000	5.5–6%	2013
Florida Forever Bonds	2,424,795,000	1,642,355,000	2.5–7.045%	2029
Water Pollution Control Bonds	614,775,000	501,875,000	2.4–5.5%	2031
Florida Facilities Pool Bonds	479,060,000	354,025,000	3.5–6.75%	2039
State Infrastructure Bank Bonds	123,615,000	80,575,000	4.25–5%	2027
Everglades Restoration Bonds	242,105,000	204,505,000	0.35–6.45%	2029
Gross Bonds Payable	25,599,755,000	20,164,235,000		
Unamortized premiums (discounts) on bonds payable		800,591,000		
Less amount deferred on refunding		(137,826,000)		
Total Bonds Payable	\$25,599,755,000	\$20,826,964,000		

Business-type Activities

Bond Type	Original Amount	Amount Outstanding	Interest Rates	Annual Maturity To
Road and Bridge Bonds	\$3,671,300,000	\$2,892,740,000	3–6%	2041
Florida Hurricane Catastrophe Fund Bonds	6,150,945,000	5,097,715,000	0.96705–5.25%	2017
Gross Bonds Payable	9,822,245,000	7,990,455,000		

Source: Department of Financial Services – Statewide Financial Statements

Bonded Indebtedness 1950-2012

Year	Total Bonds Payable
1950	\$202,436,091
1960	223,561,614
1970	212,856,246
1980	2,754,162,000
1990	7,396,062,560
2000	15,902,404,000
2005	17,601,970,000
2010	24,254,787,000
2012	22,984,820,000

Source: State Board of Administration



Florida State Archives

Railroad depot, Tallahassee, circa 1885.



Citrus Production and Processing

Although citrus is one of the major fruit crops in the United States, it is not native to Florida. Citrus originated in Asia and was not known in the New World until after Columbus reached the new continent. Art from Roman ruins depicts citrons, lemons, and possibly oranges. It is not clear whether oranges were cultivated in Roman days, but, if they were, cultivation fell by the wayside with the collapse of the Roman Empire. Sweet oranges did appear to stay much later, likely via the Genoese Trade Route, in the 1400's. Once introduced in Europe, sweet oranges were considered a novelty and growing them was limited to royalty and other wealthy people.

Records indicate that Columbus brought the first citrus to the New World on his second voyage in 1493. The first citrus groves were planted in St. Augustine not long after the town was settled in 1565. Citrus fruits came into the hands of the Native Amer-

icans as well, and citrus could soon be found growing wild along the rivers in the interior of Florida. The first commercial groves were not established until the 1800s and were planted along the east and west coasts as well as along the St. Johns River to make transporting the fruit to northern markets easier. Grapefruit was not introduced until the 1820s when Odet Phillipe first planted a grove at Safety Harbor.

Commercial production of citrus had reached about 5 million boxes by 1893-94, but a series of tree-killing freezes in the ensuing years reduced production dramatically. It was not until after the turn of the century that production expanded again. In 1979-80, Florida grew its largest citrus crop in history. That season, growers produced 206.7 million boxes of oranges, 54.8 million boxes of grapefruit, and just over 22 million boxes of tangerines, tangelos, and other specialty citrus. But another series of devastat-

Lakes and citrus-covered hills of Central Florida as seen from the Citrus Tower. The tower, on US Highway 27 in Clermont, was built between 1955 and 1956 and opened July 1956. Constructed of steel and concrete, it stands 226 ft. high, and was initially built to offer tourists views of the vast citrus groves. However, by the 1980s, several freezes and diseases wiped out most of the groves, and subdivisions replaced them.



Florida State Archives, Postcard Collection

ing freezes struck the industry during the 1980s, including a major freeze in 1989. By the 1984-85 season, production of oranges was cut in half to 108.9 million boxes. Grapefruit production dropped to a low of 39.4 million boxes by the 1982-83 season, and specialty fruit production dropped to less than 10 million boxes by the end of the decade.

As was true in the 19th century, Florida citrus growers remained resilient through the freeze years and replanted as quickly as possible. With advances in technology, trees were planted more densely on each acre, freeze protection methods were developed, and a number of growers moved their groves further south. By 1995-96, the industry had recovered and produced 203.3 million boxes of oranges and 52.3 million boxes of grapefruit. Production of tangerines, tangelos, and other specialty fruit climbed to 10 million boxes.

In 2011-2012, bearing citrus trees were planted on 495,100 acres in Florida, 8500 acres below the 2010-2011 season. The bearing acreage for 2011-2012 was the lowest since the 1958-1959 season. Development, hurricanes, tristeza virus, citrus root weevil, and citrus canker have contributed to the decline. The 2011-2012 crop of 170.89 million boxes was up considerably from the 133.6 million boxes produced in 2009-2010, a year that saw a January freeze. The citrus industry has a \$9 billion economic impact statewide and employs 76,000 full-time and part-time people.

Citrus is commercially grown in 30 of Florida's 67 counties. Alachua and Putnam Counties are at the northern boundary for commercial citrus production, while the newest and more densely planted groves are found south of Lake Okeechobee. A small cooperative in the Florida Panhandle is growing satsumas for market.

In 2011-2012, Florida ranked second in the world behind China in production of grapefruit and ranked second in orange production behind Brazil. The state continues to provide the vast majority of orange juice consumed in the United States.

The Florida Department of Citrus, a government agency funded through a grower assessment, conducts an aggressive marketing effort to enhance the sales of Florida-produced and packed citrus products in the United States and throughout the world. The department's marketing message centers on the

many health and wellness benefits of citrus.

Great strides have been made in the last five decades both in growing and processing citrus fruit. Prior to the 1940s, Florida citrus was sold primarily as fresh fruit with only a small portion of the fruit made into juice that was then canned. In 1945, the development of frozen concentrated orange juice changed the industry forever. By the 1960s, more oranges grown in Florida were sent to the processing plants than were sold fresh, and today citrus processing is big business. From the 2011-2012 crop, 94.9% of the orange crop was processed, while 56.8% of the grapefruit crop was processed. There are 39 citrus processors in Florida. Fourteen of those process raw fruit. There are seven reconstitution facilities, one storage-only facility, three plants for sections and salads, two beverage bases, two retail juice producers at gift fruit locations, two toll processors, three package goods only producers, and five "others."

Frozen Concentrated Orange Juice

The production of frozen concentrated orange juice experienced phenomenal growth following its development. From a beginning of 226,000 gallons produced in 1945-46, the production of this "Cinderella" product had grown to more than 321.9 million gallons in the 1988-89 season. Due to the freezes during the 1980s, production dropped to 286.9 million gallons in the 1989-90 season. In the 1990-91 season, production reached 305.4 million gallons but has dropped annually since to 106.4 million gallons in 2011-2012. Only the finest oranges are used in frozen concentrate, and a large proportion of them move directly from the grove to the concentrate plant. At the processing plants, the oranges are carefully washed, sorted, sterilized, and analyzed for uniformity. Every processing plant in Florida is required to have a state inspector at hand whenever the plants are running citrus to ensure that the fruit meets Florida's high standards. Any unwholesome fruit is removed in the grading process. Once the fruit passes inspection, juice is removed from the fruit automatically by giant extractors. Then the juice is sent to an evaporator where some of the natural water found in the juice is evaporated in a vacuum at temperatures ranging from 60° F to 80° F. Usually the juice is concentrated to 65% Brix or until it reaches about 65% soluble sol-



Florida State Archives

Bird's eye view overlooking a Minute Maid Corporation plant, circa 1955. Prominent in the industrial picture of Florida is the making of frozen orange juice concentrate.

ids. During the concentration process, essences are recaptured and added back to the concentrated juice before it is stored in large tanks. Some manufacturers take a portion of that juice and add enough water back to make a 42% Brix product which is then flash frozen in cans and stored at -10°F . When consumers add three parts of water to one can of this 42% Brix concentrate, they have a full-bodied, delicious orange juice. In the concentrated form, the product can be stored for up to a year in a freezer.

The same process is used with grapefruit juice. However, in addition to concentrating grapefruit juice, scientists have developed a way to remove bitterness from the juice to make it more palatable for consumers accustomed to sweet juice.

Frozen concentrated orange and grapefruit juice, as well as the manufacture of other types of citrus juice, is strictly regulated by laws established by the State of Florida and several federal government agencies.

Not-From-Concentrate Juice

The sales of ready-to-serve, chilled citrus juice have surpassed frozen concentrated juice in recent years and now account for more than half of all the orange juice sold in the United States.

As with the fruit used to make concentrate, oranges and grapefruit are washed, graded, and thoroughly inspected before they are sent to extractors. Seeds and large pieces of pulp are screened out of the juice, which is then pasteurized in a flash heat-

ing process similar to that used to pasteurize milk. The juice is then chilled rapidly to 30°F and put into waxed cartons or plastic or glass containers. This product is kept very cold until it is consumed.

Whether from concentrate or not, orange juice is one of nature's best sources of Vitamin C, potassium, and folic acid. Orange juice is also packed with phytonutrients which help ward off some diseases.

Another form of ready-to-serve chilled citrus juice is made from reconstituted frozen concentrate. Concentrate that usually is stored at bulk tank farms is shipped to a location near its final destination and has water added back to make a ready-to-drink juice. This product also is pasteurized before it is packed in waxed cartons or plastic or glass containers and chilled. The State of Florida and the U.S. Food and Drug Administration require that reconstituted frozen concentrated orange or grapefruit juice be clearly labeled as reconstituted.

Prior to the widespread use of refrigerated cases at grocery stores, canned citrus juice was the primary form of juice sold. Canned citrus juice still is manufactured in Florida, but not in large quantities. It is made much the same way as pasteurized chilled juice, but it is packed in tin cans and de-aerated to ensure maximum preservation. This is a shelf-stable product and can be stored at room temperature until it is opened. In addition, a new shelf-stable juice has emerged in recent years. This citrus juice product is made much the same way as other forms of ready-to-serve juice, but it is packed in aseptic packages, which give the product a longer shelf-life.

Citrus Salads and Canned Sections

Although canned citrus sections and salads are still made in Florida, they constitute a niche product for the industry. Fruit used for canned segments or salad is washed, graded, and inspected. Then the fruit is immersed in hot water for a few minutes, which plumps and loosens the peel without heating the fruit inside. The fruit is hand-peeled and placed in baskets that are immersed in an alkaline bath to remove any excess albedo (the white material under the peel) or loose fibers still adhering to the fruit. The alkali solution is washed off with fresh water, and the sections are pulled apart by hand or with the aid of a mechanical knife. The sections are placed in glass jars, covered with a sugar syrup, sealed, and sterilized. These fruit sections must be kept cold and generally are found in the refrigerated dairy case at the grocery store. A citrus salad is usually a mix of grapefruit and orange sections packed in the same manner.

In recent years, a new method of peeling fruit has been developed. After washing, grading, and inspecting the fruit, it is injected with a natural pectin enzyme to loosen the fruit peel. Then the peel is vacuum suctioned off the fruit. Most often, the whole fruit is then placed on Styrofoam trays and wrapped in plastic. This product must be stored at fairly cold temperatures. It currently is popular with restaurants and other institutions, although consumers may begin to see it in grocery stores in the future.

By-Products

Although juice is the primary product produced by the Florida citrus processing companies, nothing is wasted. The excess pulp and seeds strained from the juice as well as the peel are used to make a variety of by-products.

Stock Feed

Today, many citrus juice processors also make animal feed from leftover citrus peel. Annual production of this stock feed is approximately 1 million tons a year.

The leftover pulp and peel are ground into tiny pieces, and a small amount of lime is added. After a preliminary pressing to remove a part of the moisture present in the material, it is dried in giant rotating kilns until the moisture content is between 5 to 10 percent. The driers may be either direct fired or steam heated. Then the material is formed into nutritious pellets and used as a stock feed, particularly to fatten and condition beef and dairy cattle.

Citrus Molasses

The liquid pressed from the stock feed contains about 8% soluble solids. When the fluid is concentrated under vacuum, it yields a heavy syrup of golden to orange-brown color very similar to black strap molasses. This citrus molasses often is added back to the dried pulp when the pellets are made, or it is used in the production of alcohol.

Citrus Seed Oil

Citrus seed oil is pressed from dried orange and grapefruit seeds. The raw oil has a number of uses. The material left over after the oil is removed also is a high source of protein and is added back to the stock feed.

Peel Oil

Oil can be extracted from the peel before it is dried for stock feed. One component of peel oil is d-limonene. Among its other uses, d-limonene is a natural, nontoxic solvent used for cleaning. Both citrus peel and seed oil are used as flavorings in a variety of foods, beverages, and perfumes.

Citrus by-products are used to make alcohol, dyes, gum drops and other candy, wine, bakery goods, soap, air fresheners, furniture polish, cosmetics, and pesticides. Other processing waste may be used to make methane gas, yeast, and dextran gum. Even the wastewater from citrus processing plants is recycled and used to irrigate citrus groves.

Production of Oranges and Grapefruit in Florida

Season	Oranges		Grapefruit	
	1,000 boxes	% of U.S	1,000 boxes	% of U.S
1930-31	16,800	37.5	15,800	86.5
1940-41	28,600	40.6	24,600	59.0
1950-51	67,300	61.4	33,200	74.1
1960-61	82,700	76.6	31,600	75.6
1970-71	142,300	75.1	42,900	70.8
1980-81	172,400	70.4	50,300	74.1
1990-91	151,600	86.4	45,100	84.9
1995-96	203,300	75.0	52,350	79.0
1996-97	226,200	79.4	55,800	82.1
1997-98	244,000	80.3	49,550	81.2
1998-99	185,700	84.7	47,050	79.3
1999-20	233,000	80.6	53,400	82.1
2000-01	223,300	81.1	46,000	79.1
2001-02	230,000	80.3	46,700	78.9
2002-03	203,000	76.3	38,700	77.3
2003-04	242,000	82.0	40,900	78.4
2004-05	149,800	69.1	12,800	49.9
2005-06	147,700	70.0	19,300	63.0
2006-07	129,000	73.1	27,200	78.1
2007-08	170,200	72.6	26,600	70.1
2008-09	162,400	77.0	21,700	67.7
2009-10	134,000	69.8	20,300	67.4
2010-11	140,300	70.9	19,750	68.5
2011-12	146,600	73.2	18,850	68.5

Source: USDA, Florida Crop and Livestock Reporting Service, Orlando, Florida

NOTE: For more statistics about Florida Agriculture, visit the USDA National Agriculture Statistics Service and select Statistics by State, Florida. http://nass.usda.gov/Statistics_by_State/Florida/index.asp



General Farming and Truck Crops

Donald L. Brooke*

General farming in Florida is confined to the northern and western parts of the state. Those farms produce such crops as tobacco, corn for grain, peanuts, soybeans, wheat, oats, cotton, legumes, grasses for grazing, and hay for livestock.

Of the field crops and vegetables commercially important in Florida at the present time, only corn was being produced when the Spanish landed on our shores. The “Indians were growing maize, eating game, fish, ‘palm berries’, ‘coco-plumbs’, seaside grapes and other wild products”.¹ Wild rye and rice were available but were not cultivated. The St. Augustine colony was dependent upon its mother country and Cuba for almost everything. The Spanish did, however, introduce many vegetables, cattle, hogs, garlic, and oranges from Spain and sugarcane from the West Indies. These were grown inside or closely adjacent to the stockade for fear of Indian attacks.

Some eighty Spanish missions were established in Florida and along the East Coast up to the Carolinas. The priests instructed the Indians in religion and the rudiments of agriculture, and gradually helped them to establish a more settled agriculture.

There was little commercial agriculture in Florida until it was ceded to England in 1763.¹ Rice and wheat were cultivated in West Florida by that time, and indigo was a money crop. Sea Island cotton was introduced in the early 1800s. Cuban tobacco seed for cigar wrappers was introduced in 1828–29.² Florida’s commercial agriculture has been almost solely



Florida State Archives

Truck loaded with cabbages, Hastings, 1947.

dependent upon introduction and adaptation of plants from other states and other lands.

Field corn grown in Florida finds a ready market as feed for livestock on general and livestock specialty farms. The use of hybrid varieties of corn and the application of fertilizers are increasing the state average yield per acre.

Cotton production, once a mainstay of plantation economy in the 1860s, had declined in Florida. However, acreage harvested increased in the 1980s

**Donald L. Brooke, Professor-Emeritus, Institute of Food and Agricultural Sciences, received his training at the University of Florida and the University of Illinois. He was employed by IFAS from 1946, specializing in the economics of production and marketing of vegetable crops, citrus, tropical fruits and floriculture. He retired in 1980. Statistical information in this essay has been updated by editorial staff.*

from about 5,000 to 25,000 acres. Planted cotton acreage reached a high of 125,000 acres in 2001. Harvested acreage dropped by 40,000 acres to a low of 85,000 in 2005. In 2006, harvested acres increased to 101,000, but dropped again in 2009 to a new low of 78,000. Cotton production increased to 105,000 harvested acres in 2012.

The introduction of improved grasses and legumes adapted to Florida soils has made profitable hay production possible. Florida imports hay from other states each year because it does not produce enough to provide roughage for livestock on farms.

Peanuts may be grown alone and harvested for hay and nuts, or inter-planted with corn to provide a high-nutrient grazing crop for livestock. For the latter use they are second only to field corn in Florida. Peanuts harvested for nuts are an important source of income on many general farms.

Soybeans became an established crop for Florida growers after World War II for use as a summer cover crop from which the mature beans could be harvested for cash income. Mechanization of production and favorable prices resulted in rapidly expanding production.

Sugarcane for sugar, although classified as a field crop, is not produced in the general farming area of Florida. It is grown on the rich muckland soils of the Everglades around Lake Okeechobee. Large corporations grow and process sugar cane in that area. Following the end of purchasing sugar from Cuba, its production increased significantly in Florida. Sugarcane used for syrup is grown on a few farms in the northern and western parts of the state.

Florida produces type 14 (flue-cured) tobacco. In 2011, it was harvested from 482 acres, down from 1,000 in 2006 and 4,500 acres in 2002. It is the only field crop of importance whose production is controlled by government quota. In some areas of the state, farmers are using state tobacco settlement money to replace tobacco with wildflower seed culture. By 2008 there were 20 growers and associate growers of Florida wildflower seed.

Crops whose acreage and value are not recorded include lupines, velvet beans, millet, sorghum, field peas, sweet potatoes, and oats.

Truck Crops

In 2008, vegetables, or “truck crops,” ranked first in value of production among Florida’s agricultural products. Citrus, livestock, and livestock products were second and third in value, respectively. Vegetables for commercial use are grown in the fall, winter and spring months. While small amounts of some Florida vegetables (snap beans, celery, tomatoes, Irish potatoes, and spinach) are processed, the bulk of the production is grown for fresh consumption. Vegetables are shipped under refrigeration by rail and truck to the northern and southern markets. Some even find their way by air and boat to foreign markets. Although the areas of production in Florida are scattered from Dade to Walton counties, the majority are in the central and southern portion of the state.

The largest and most important truck crop area is found in the Everglades around Lake Okeechobee. Sweet corn, celery, escarole, lettuce, and radishes are among the many crops of this area. Dangers of frost and torrential rains add greatly to the problems of production.

The introduction of a successful mechanical harvester has moved snap bean production from the muck soils of the Everglades to the sandy soils of the Pompano area and the marl and rock soils of Dade County. Snap beans require 50 to 60 days from seed planting to harvest and, weather permitting, two to three successive crops can be grown in the Pompano and Dade areas during Florida’s season. Pole beans, requiring 80 days to maturity, are an important late fall, winter, and spring crop in Dade County.



Florida State Archives

Farmer with sweet potatoes in the back of his truck, circa 1980.

Celery is produced on the mucklands of the Everglades, Oviedo, and Zellwood areas. The production and harvesting of celery require a large amount of costly hand labor. Celery growers are vitally interested, and have had considerable success, in developing mechanical equipment to offset the growing shortage and increasing cost of labor. Florida celery is marketed from November through June.

Sweet corn, a relatively unimportant crop in Florida until after World War II, is now an important source of income. The principal areas of sweet corn production are the Everglades and Zellwood; the Dade and East Palm Beach areas produce some winter corn. The weather is a major advantage in Florida's sweet corn production. It can be grown here during the late fall, winter, and early spring months when few other areas are able to compete. The introduction of varieties better adapted to Florida conditions and improvement in quality control measures have contributed greatly to our production possibilities.

The majority of Florida's pepper production is in the Pompano and Immokalee areas with harvest from November through May. Some May and June production is marketed from central and north central Florida areas.

Tomatoes have long been Florida's most important vegetable crop in value of production. Dade and Palm Beach counties, Fort Pierce, Immokalee-Naples, Manatee-Hillsborough, and Gadsden County are the principal areas of tomato production. South-

east and southwest production areas market from November until early May. Fort Pierce and Manatee-Hillsborough produce fall and spring crops for November-December and April-June marketing. Imports from Mexico compete continuously with Florida's production.

Watermelons are grown in many of Florida's 67 counties and by a greater number of farmers than any other truck crops. A few icebox melons are produced during the late winter in the Dade and Immokalee areas. Major shipments begin in late March and continue into July. This is one of Florida's few truck crops shipped to market without refrigeration in transit.

Among the vegetables not included in the accompanying table but grown in substantial quantity in Florida are greens, escarole, parsley, watercress, carrots, okra, and cauliflower.

In 2008, receipts from Florida agricultural products amounted to \$6.59 billion, an increase of \$564,561 from 2005. Nationally, Florida ranked first in the production value of oranges, grapefruit, and sugarcane for sugar and seed. Florida also ranked first in snap beans, fresh market tomatoes and cucumbers, squash, watermelons, and sweet corn. The state was second in the production of tangerines, strawberries, bell peppers, and cucumbers for pickles and fourth in the value of production of honey.

¹Gray, "History of Agriculture in Southern United States to 1860", Vol. I, pp. 108-9.
²Ibid, Vol. II, p. 756.

Land in Florida Farms by Use (In Acres)

Type	1992	1997	2007
Range-Pastureland	4,456,686	4,184,037	3,221,202
Woodland	1,922,035	2,214,235	2,330,336
Cropland, Total	3,841,505	3,610,304	2,953,340
Cropland, Harvested	2,400,704	2,434,379	2,112,129
Cropland, Pasture & Grazing	972,995	867,561	1,104,890
Cropland, Organic	(NA)	(NA)	11,493
Irrigated land	1,782,680	1,873,823	1,552,118
Other	914,642	996,717	726,692
Total land in farms	10,766,077	10,659,777	9,231,570
Total State acres	34,558,261	34,558,261	34,558,261

Source: U.S. Department of Agriculture. 2002 and 2007 Census of Agriculture www.nass.usda.gov/

Leading Field Crops, Acreage and Value of Production, 2009 and 2010

Item	2009		2010	
	Harvested Acres (1,000)	Value (\$1,000)	Harvested Acres (1,000)	Value (\$1,000)
Corn	37	14,800	25	12,338
Cotton	78	33,415	89	54,792
Cottonseed	na	4,185	na	5,720
Hay, all	300	110,970	320	108,288
Peanuts	105	69,552	135	91,341
Soybeans	34	12,274	23	7,590
Sugarcane (sugar and seed)	387	na	392	na
Wheat	14	2,589	7	1,400

Source: Florida Statistical Abstract 2011

Vegetables and Berries: Acreage Planted and Harvested, by Crop Year

Crop	Acreage planted	Acreage harvested	Production (1,000 Cwt)	Total value (\$1,000)
Crop year 2007–2008				
All crops, total	227,600	217,490	50,736	1,929,759
Vegetables, total	165,500	153,590	32,279	1,357,021
Snap beans	37,800	33,200	2,656	155,642
Cabbage	10,400	9,190	3,217	43,430
Sweet corn	45,300	42,000	6,720	158,592
Cucumbers	12,000	11,600	3,248	71,131
Bell peppers	19,000	17,800	4,984	253,187
Squash	8,600	8,300	996	52,788
Tomatoes	32,400	31,500	10,458	622,251
Watermelons	26,700	26,100	8,613	140,392
Potatoes	28,500	27,900	7,952	131,040
Strawberries	6,900	6,900	1,794	249,366
Blueberries	(X)	3,000	98	51,940
Crop year 2008–2009				
All crops, total	237,300	227,200	51,793	1,885,054
Vegetables, total	164,900	157,300	33,051	1,249,150
Snap beans	33,700	32,800	2,132	112,783
Cabbage	10,100	9,500	3,658	60,357
Sweet corn	46,900	43,100	6,681	227,154
Cucumbers	11,600	11,300	2,656	78,618

Bell peppers	18,900	18,200	4,482	198,553
Squash	9,100	8,800	1,144	51,480
Tomatoes	34,600	33,600	12,298	520,205
Watermelons	27,700	25,800	8,179	135,771
Potatoes	32,600	28,900	7,700	135,201
Sweet potatoes	3,300	3,200	352	(D)
Strawberries	8,800	8,800	2,376	313,632
Blueberries	(X)	3,200	135	51,300

Crop year 2009–2010

All crops, total	235,700	223,500	44,914	2,086,849
Vegetables, total	164,300	151,400	26,919	1,425,256
Snap beans	36,400	32,200	1,932	135,047
Cabbage	10,500	9,700	2,910	70,131
Sweet corn	45,100	42,100	5,894	189,197
Cucumbers	12,000	11,600	2,320	47,792
Bell peppers	18,800	17,700	4,071	295,555
Squash	9,500	9,100	1,092	56,784
Tomatoes	32,000	29,000	8,700	630,750
Watermelons	25,900	24,600	7,503	112,545
Potatoes	33,200	31,800	7,950	138,783
Sweet potatoes	3500	3,400	442	(D)
Strawberries	8,800	8,800	1,936	362,032
Blueberries	(X)	3,500	164	48,233

Cwt Hundred weight.

(X) Not applicable.

(D) Data withheld to avoid disclosure of information about individual operations.

Source: Florida Statistical Abstract 2011; U.S., Department of Agriculture, National Agricultural Statistics Service, Florida Agriculture Statistical Bulletin, 2010, Internet site <<http://www.nass.usda.gov/>> (accessed 27, July 2011)



Livestock

Robert L. Degner*

Several classes of livestock are produced commercially in Florida. Beef and dairy cattle, horses, swine, sheep, goats, poultry, rabbits, other small animals, and bees are all raised commercially in the state. In recent years, traditional livestock production has been expanded to include numerous aquacultured species such as alligators, clams, ornamental fish, and edible finfish such as catfish and tilapia.

Much of Florida's modern livestock production has grown from animals brought by European explorers and settlers, beginning over four centuries ago. Spanish explorers brought horses as early as 1527 and the DeSoto expedition (1538-41) distributed hogs throughout Florida and other southern states. Later, colonists brought cattle, sheep, goats, and poultry. By the late 17th and early 18th centu-

ries, large numbers of cattle, horses, and swine were ranging over north and central Florida.

Horses were the primary means of travel until the 1850s. Hunting from horseback and horse racing were popular sports from Spanish times, and continue to be popular today. In early times, Florida cattlemen drove animals from the interior to port cities, where cattle were slaughtered, and their tallow and hides exported.

In the late 19th century, Florida beef cattle were still similar to those of 200 years earlier. Improved breeds of cattle were then introduced to replace or upgrade the native or "Cracker" cattle. As a result, Florida beef herds changed markedly during the first third of the 20th century. Brahman cattle added size, hardiness and resistance to heat and insects. Cross-

**Robert L. Degner is a Professor of Food and Resource Economics at the University of Florida. Statistical information in this essay has been updated by editorial staff.*



One of Billy Bellamy's yellow curs circles a herd at his Cedar Hill Ranch to keep the cows in a tight bunch. A few good dogs can maintain a large herd tightly grouped for hours if necessary, Morrison, 2006.

Photo by Robert L. Stone

ing with Angus, Hereford, and Charolais greatly improved the quality of Florida beef.

At the same time, eliminating insects like ticks and screwworms, plus identifying and correcting nutritional problems peculiar to Florida's sandy soils, paved the way for many other advances. Research and education in using improved grasses, better grazing management, selective breeding, and modern health care have helped Florida to become a leading state in beef cattle production. As of January 1, 2011, Florida ranked 11th nationally with respect to the number of beef cows on farms and ranches.

The state's beef producers raise their herds on pasture and primarily market weaned calves that go to feedlots for additional feeding before slaughter. Nearly all beef cattle in central and south Florida are on medium to large ranches. Beef herds in north and west Florida are generally smaller, and are usually part of farming operations. Very few cattle are fed to slaughter weights in Florida because of limited feedgrain production. Most calves destined for slaughter are shipped to feedlots in other states. Over half of Florida's feeder calves are shipped to Texas and Oklahoma.

Florida also has a large and progressive dairy industry, with 119,000 cows, ranking 19th in the U.S. in number of milk cows in 2012. Although dairy cow numbers decreased between 1996 and 2005, from



Photo by Robert L. Stone

About 2,500 head of cattle per week are auctioned, one at a time, at the Okeechobee Livestock Market, 2004. The cattle are then sorted into pens designated for each buyer. The day after an auction, the pens are emptied and the cattle are loaded into trucks and shipped.

162,000 to 137,000 head, milk production decreased only slightly, from 2.2 billion pounds in 1996 to 2.17 in 2006. In 2009, 115,000 head produced 2 billion pounds of milk.

Nearly all of Florida's dairy production is consumed as fluid milk within the state. Florida has some of the largest dairies in the U.S. with many having several thousand milking cows. Dairymen must purchase large quantities of feed, including grain from other states, and molasses and roughage in Florida.

Number and Rank of Cattle and Calves and Beef Cows, by County (January 2011)

County	Cattle and calves ¹		Beef cows ²	
	Number	Rank	Number	Rank
Florida	1,630,000	(X)	926,000	(X)
Alachua	44,000	12	26,000	8
Baker	5,500	37	(D)	(X)
Bay	1,000	45	600	28
Bradford	9,500	28	(D)	(X)
Brevard	25,000	19	(D)	(X)
Broward	3,000	41	2,000	26
Calhoun	3,500	40	(D)	(X)
Charlotte	19,000	22	15,000	13
Citrus	6,700	33	(D)	(X)
Clay	5,700	36	(D)	(X)
Collier	10,500	27	6,900	19
Columbia	21,000	21	11,500	15

DeSoto	70,000	5	40,000	5
Dixie	8,000	31	(D)	(X)
Duval	5,500	37	(D)	(X)
Escambia	6,000	35	(D)	(X)
Flagler	4,000	38	3,400	24
Gadsden	5,500	37	(D)	(X)
Gilchrist	36,000	14	8,000	17
Glades	54,000	9	(D)	(X)
Hamilton	8,000	31	(D)	(X)
Hardee	82,000	4	46,000	4
Hendry	57,000	8	(D)	(X)
Hernando	15,000	24	7,900	18
Highlands	100,000	2	62,000	3
Hillsborough	63,000	6	37,000	6
Holmes	31,000	16	16,000	12
Indian River	19,000	22	12,000	14
Jackson	51,000	10	28,000	7
Jefferson	11,500	26	(D)	(X)
Lafayette	30,000	17	4,900	22
Lake	21,000	21	12,000	14
Lee	11,500	26	8,000	17
Leon	2,000	44	1,500	27
Levy	31,000	16	18,500	11
Liberty	(D)	(X)	(D)	(X)
Madison	41,000	13	(D)	(X)
Manatee	36,000	14	22,000	9
Marion	46,000	11	26,000	8
Martin	22,000	20	(D)	(X)
Miami-Dade	2,900	42	2,000	26
Nassau	6,500	34	(D)	(X)
Okaloosa	2,500	43	2,000	26
Okeechobee	135,000	1	65,000	2
Orange	10,500	27	(D)	(X)
Osceola	100,000	2	74,000	1
Palm Beach	3,900	39	(D)	(X)
Pasco	34,000	15	22,000	9
Pinellas	(D)	(X)	100	30
Polk	95,000	3	(D)	(X)
Putnam	8,600	30	(D)	(X)
St. Johns	2,900	42	2,000	26
St. Lucie	21,000	21	(D)	(X)
Santa Rosa	7,000	32	3,900	23

Sarasota	16,300	23	9,000	16
Seminole	6,000	35	(D)	(X)
Sumter	34,000	15	(D)	(X)
Suwannee	59,000	7	20,000	10
Taylor	3,500	40	2,500	25
Union	9,000	29	6,000	20
Volusia	12,000	25	(D)	(X)
Wakulla	1,000	45	500	29
Walton	27,000	18	8,000	17
Washington	9,000	29	5,000	21

(X) Not applicable.

(D) Data withheld to avoid disclosure of information about individual operations.

¹All classes, beef and dairy.

²Beef production brood cows only, which have calved at least once.

³Includes Bay, Franklin, Gulf, Monroe, and Pinellas Counties.

Florida's swine production, while not as important as beef production or dairying, is a far cry from the bands of "piney woods rooters" roaming the state in its first 300 years. Hog farms, concentrated in north and west Florida, are generally small. However, high quality hogs are produced under modern conditions. In 2011, 48,900 head were marketed, generating about \$3.13 million in cash receipts.

Florida's poultry industry is a major contributor to agricultural income. The total value of Florida's chicken and egg production in 2011 was \$359 million. Egg production was valued at \$180 million. Broiler production was valued at \$179 million.

Chicken and Eggs: Cash Receipts in Florida, 2000-2010 (in thousands of dollars)

Year	Total	Broilers	Eggs ¹	Other chickens ²
2000	335,487	226,625	108,187	675
2001	376,238	253,680	122,253	305
2002	305,101	195,579	109,012	510
2003	324,346	178,955	145,027	364
2004	369,018	208,440	159,878	700
2005	302,922	201,564	100,723	635
2006	279,489	159,300	119,687	502
2007	366,941	179,654	186,471	816
2008	408,048	173,144	234,515	389
2009	268,178	115,164	152,616	398
2010	302,621	151,493	150,746	382

¹Total production, including consumption on farms where produced.

²Value of sales.

NOTE: Data for marketing years beginning December 1 and ending November 30. Data may be revised.

Sources: Florida Statistical Abstract 2011; State of Florida, Department of Agriculture and Consumer Services, Florida Agricultural Statistics Service, Livestock, Dairy, and Poultry Summary, 2010, Internet site <<http://www.nass.usda.gov/>> (accessed July 27, 2011)

Horses, important in Florida since the earliest explorations, are a major livestock enterprise. According to the Florida Department of Agriculture, there are 299,000 head in the state, 70 percent of which are used for competition and recreation. The horse industry generates more than 72,000 jobs, and has an overall economic impact of nearly \$6.5 billion. Thoroughbreds are the predominant breed, followed by American Quarter Horses, Appaloosas, Arabians, Standardbreds, Tennessee Walkers, Paso Finos, and Paints. Significant numbers of most recognized breeds are found in the state. Florida's fine winter weather has attracted breeders from many other states to take advantage of the racing and training opportunities. Marion County, Florida has more horses and ponies than any other county in the nation with more than 900 farms. Florida is home to some 600 Thoroughbred farms and training centers, with more than 75 percent of these located in the Ocala/Marion County area.

The Spanish imported sheep and lambs in large numbers as early as 1565. However, sheep numbers in Florida have been low for many years and are of relatively minor importance. In recent years, there has been a great deal of interest in goat production for milk and meat. The 2007 Census of Agriculture found that 4,040 Florida farms had over 57,696 head

of goats, a 30.7 percent increase over the 2002 Census of Agriculture. Rabbits are produced for meat and for laboratory animals, and mink and chinchilla for furs. Greyhound raising and training for racing is a lucrative industry in several counties.

Honey production is also a significant enterprise in Florida. There were 180,000 honey producing colonies in Florida in 2011. The value of Florida honey production in 2011 was \$18.1 million, down from the 2010 value of \$21.5 million. In early 2006 beekeepers began noticing that their bees were disappearing. A year later, many had lost half or more of their colonies to honeybee Colony Collapse Disorder. As of 2009, the number of reported cases of CCD in the U.S. has dropped considerably, but is still an unsolved problem.

Although aquaculture is not one of the traditional "livestock" enterprises, it has emerged as an important endeavor in Florida. The planting of clams, for example, has more than doubled since 2000. The state ranks third in the nation in value of sales. Receipts in 2005 for aquaculture products totaled 74.9 million, including tropical fish (\$33 million), clams, and other shellfish (\$18.0 million), alligators (\$2.4 million), and food fish, primarily catfish and tilapia (\$2.8 million).

Racehorse and trainer at Bonnie Heath Farm, Ocala, 1957.



Florida State Archives



Florida's Mineral Industry

Florida annually ranks as one of the top ten states in nonfuel mineral production and value. The state continues to lead the nation in phosphate rock mining. In terms of value, phosphate rock, crushed stone, cement (Portland and masonry), and construction sand and gravel continue to be the most important raw nonfuel mineral commodities produced in the state. Florida's nonfuel mineral production was valued at over \$2 billion and its national rank was 4th in 2012 (U.S. Geological Survey, Mineral Commodity Summaries 2013).

Exploration and Development

During 2008, the state issued 27 new permits (19 limerock, 7 sand, and 1 heavy mineral) for mining encompassing 11,866 acres (ac). Permits were issued for the expansion or modification of 32 existing operations that encompassed 6,877 ac. Dupont was approved to develop its northeast Maxville satellite heavy mineral mine, adding 5,239 ac to its operation. The Palm Beach County Commission approved new aggregate mines, encompassing approximately 10,996 ac operated by Rinker (now Cemex) and Florida Rock Industries (now Vulcan Materials), and one 556 ac mine expansion by Bergeron Sand, Rock, & Aggregate, Inc. In a similar action, the Florida City Commission gave final approval to Atlantic Civil, Inc., to expand an aggregate mining operation to 1,218 ac in Miami-Dade County.

During 2009 to 2012, the Department of Environmental Protection (DEP) issued one environmental resource permit for the expansion of the North Maxville Mine (heavy minerals) by 1,820 ac. Fifty-nine

permits were issued for new limestone mines or expansion or major modifications at existing limestone mines. This included the expansion of nine Lake Belt Area mines totaling approximately 18,000 ac of existing and expanded project area. Twenty-three permits were issued for new sand mines or expansion or major modifications at existing sand mines. One permit for a peat mine was modified. Twenty-five permits for nonphosphate mines were transferred to new permittees.

The U.S. Army Corps of Engineers initiated and is near completion of an Areawide Environmental Impact Statement (AEIS) for phosphate mining in the Peace River Basin. The final EIS report is expected to be released in 2013.

Commodities Review

Aggregates (crushed stone, sand, and gravel)

Florida ranks second nationally in production and fourth in consumption of crushed stone (limestone and dolostone). Most of the stone that is mined in Florida is used for road construction. Florida ranks approximately 15th in the country in sand and gravel used or produced. Sand and gravel is subdivided into construction and industrial sand, the bulk of which in Florida is construction grade (Florida Geological Survey—Geology Topics). In 2011, Florida consumed approximately 40.5 million metric tons (mt) of crushed stone aggregate, including imports from foreign suppliers, down from 68 million mt in 2008 and 96 million mt in 2007. Florida's construction sand and gravel production in 2011 was estimated

at 12 million mt in 2011, down from 28.1 million mt in 2008 (U.S. Geological Survey, Mineral Industry Surveys, 2013).

Cement

Limestone of high purity can undergo calcinations (heating), and, together with other ingredients, be used to manufacture Portland and masonry cement. Florida ranks in the top five states in production and consumption of Portland cement and is first in the production and consumption of masonry cement (Florida Geological Survey–Geology Topics). In 2011, Florida shipped 3,326,987 mt of Portland and blended cement and 198,609 mt of masonry cement. In January–November 2012, Florida shipped 3,569,330 mt of Portland and blended cement and 214,608 mt of masonry cement. Florida produced 3,029,215 mt of cement clinker in 2011 and 3,345,083 mt of cement clinker in January–November 2012 (U.S. Geological Survey, Mineral Industry Surveys, 2013).

Clays

Fuller's earth, kaolin, and common clay were mined in several locations in Florida. Fuller's earth (attapulgite and montmorillonite) mined in Florida is typically used in ceramics manufacturing, as additive to drilling muds, in paints as a gellant agent, and in cat litter. Kaolin is used in pigments, paper, and refractories. Common clay, mined in small quantities from various locations throughout the state, is used in the manufacture of brick, cement, and lightweight aggregate (Florida Geological Survey–Geology Topics).

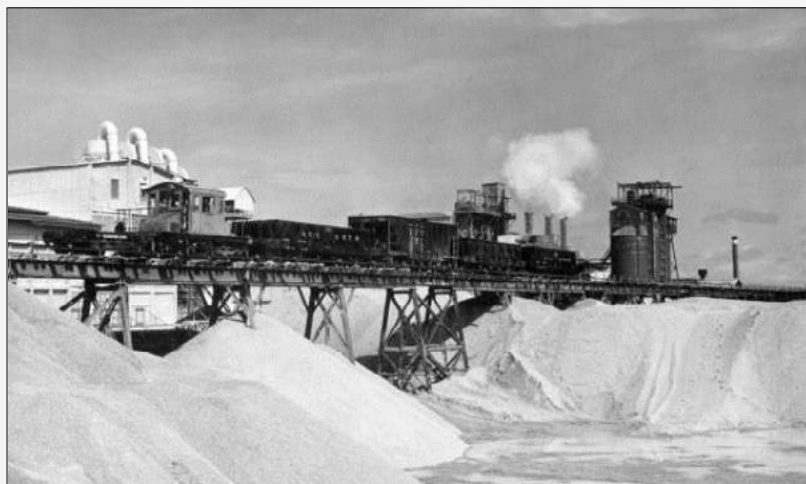
Peat

Peat is a natural product consisting of partially decomposed plant material typically occurring in wetland bogs, swamps, and marshes. Although not commonly thought of as a mineral, peat is classified by the U.S. Geological Survey as a non-fuel mineral. In 2011, Florida produced an estimated 449 thousand mt of peat, in seven active operations, leading nation-

ally in annual production (U.S. Geological Survey, Minerals Yearbook, 2011). Peat is principally used in horticulture as a soil improvement by nurseries and in potting soil, as earthworm and mushroom culture, packing for flowers and seeds, seed inoculant, and for vegetable cultivation. It is also used in industry as an oil absorbant and filtration medium for the removal of waterborne contaminants in drainage and septic systems.

Pebble Phosphate

In 2011, Florida's phosphate industry accounted for 65% of the national annual production. Phosphate is mined in five counties in Florida: Polk, Hillsborough, Hardee, Manatee, and Hamilton. The Mosaic Company operated four mines, CF Industries operated one, and PCS Phosphate Company operated one mine. In July 2011, Mosaic was forced to close its South Fort Meade Mine after an injunction was issued by the U.S. District Court for the Middle District of Florida to cease all mining in the Hardee County extension of the mine. The ruling was the result of an ongoing lawsuit filed by the Sierra Club in 2010 to block the extension of the South Fort Meade Mine. The mine was closed for the remainder of 2011. Mosaic permanently closed its Hopewell Mine in January 2011, when the reserves were depleted. This reduced U.S. annual production capacity by 500,000 mt. Beginning in late 2007 and extending into 2008, increased agricultural demand and tight supplies caused a dramatic rise in the price of phosphate. The average price per mt more than doubled from 2007 to



Florida State Archives

Phosphate mounds and ACL train, Mulberry, 1947.

2009, but it dipped 22% by 2011. Phosphate is used primarily for producing phosphoric acid utilized in the manufacture of fertilizer. Other uses include additives to animal feed, elemental phosphorous production, and as direct-application soil fertilizer; in central Florida, animal feed products, fertilizers, and phosphoric acid were sent by rail to domestic customers or to the Port of Tampa for export (U.S. Geological Survey, Minerals Yearbook, 2011).

Titanium and Zirconium

Titanium mineral concentrates of economic importance include ilmenite, leucoxene, rutile, synthetic rutile, and titaniferous slag. U.S. mineral concentrate producers were DuPont Titanium Technologies [a subsidiary of E.I. du Pont de Nemours and Co. (DuPont)] and Iluka Resources, Inc. of Jacksonville. DuPont's mining operations near Starke produced a mixed product containing ilmenite, leucoxene, and rutile that was used as a feedstock in DuPont's titanium dioxide plants. DuPont extended the mine life of its Starke operation beyond 2017 through the acquisition of a 788 hectare parcel of timberland in Baker

County from the Cummer Land Trust. DuPont has produced heavy-mineral concentrates from deposits along the Trail Ridge ore body since 1949 (U.S. Geological Survey, Minerals Yearbook, 2010).

Zirconium is primarily used in refractories, foundry sands, and ceramics opacification. DuPont Titanium Technologies and Iluka Resources, Inc., are producers of zircon. DuPont produces zircon from its heavy-mineral sands operation near Starke (U.S. Geological Survey, Minerals Yearbook, 2011).

Environmental Issues and Reclamation

In recent years, environmental concerns such as potential contamination of freshwater aquifers, blasting, dust, and truck traffic issues have been at the forefront during the mine permitting process in Florida. In some areas, housing development is adjacent to mineable lands. Communities generally understand the need for earth materials to supply the state's growth, but at the same time recognize the environmental fragility of many potentially productive mining areas. The result has been ongoing revision of local mining regulations, lengthy permitting processes, and, in some cases, mining moratoriums.

In response to the increasing aggregate costs during the construction boom, temporary closure of 12 Lake Belt Area mines in 2006, and the Florida Department of Transportation's strategic aggregates study, the Florida Legislature created a "Strategic Aggregates Review Task Force." The task force report was issued in 2008 to identify areas of improvement in policy and public investment as related to the supply of construction aggregate materials available for use in Florida.

The Lake Belt Area mine closures resulted from a 2005 lawsuit challenging the issued federal permits. The suit argued that the Environmental Impact Statement (EIS) prepared by the Army Corps of Engineers (Corps) and U.S. Fish and Wildlife Service did not adequately assess danger posed to Miami-Dade's drinking water supply and would destroy the Everglades' wetland habitats. This argument was further cemented by benzene from an unknown source having been identified in one of the Miami-Dade field wells. U.S. District Judge William Hovelevier sided with the plaintiffs, requiring the Corps to draft a supplemental EIS for the mining permit areas before the



Photo by Francis P. Johnson

A Crane Company geologist takes samples of sand for testing, Panama City, 1954.

temporary closures would be lifted. The federal appeals court upheld the decision to vacate the permits. During 2009, the Corps issued its Final Supplemental EIS. This was followed by the issuance of federal permits to resume mining operations. During 2009, Environmental Resource Permits were issued for nine Lake Belt Area mines totaling approximately 18,000 ac of existing and expanded project areas.

Palm Beach County had previously invoked a mining moratorium to further research the environmental impacts of mining the approximately 700,016 ac Everglades Agricultural Area (EAA). The primary concerns were: 1) the potential impact to the Everglades surface water flow; 2) lowering of the potentiometric surface in the regional surficial aquifer system; and 3) the potential increase in mercury concentrations from leaching of the EAA's famous mucky soils during mining. In April and May of 2008, Palm Beach County approved three new mines in or near the EAA. The Lake Harbor Quarry will include 7,356 ac, 4 miles south of Lake Okeechobee. U.S. Sugar, the landowner of the Lake Harbor Quarry, terminated the mining lease with Florida Rock Industries. The permit for mining was transferred to U.S. Sugar. South Bay Quarry will cover 3,776 ac situated 10 miles south of Belle Glade. The county also authorized a new 556 ac mine for Bergeron Sand, Rock, & Aggregate, Inc., adjacent to existing operations. Environmental groups mounted a legal challenge to the mines on the basis officials failed to address concerns that long-term mining could contaminate water supplies and interfere with Everglades restoration efforts. During 2010, the county approved a 1-year moratorium on new rock mines in the EAA while land use ordinances were under review. During 2011, two appeals court rulings blocked county permits for Bergeron and the South Bay Quarry. The court determined that the permittees could not meet criteria in the county's comprehensive plan limiting the use of limestone mined from the EAA. The decision could affect other county permits issued for mining in the EAA.

During 2012, Lake County created the Green Swamp Mining Committee to review existing land use ordinances pertaining to sand mining in the Green Swamp Area of Critical State Concern. The final committee report made recommendations for

changes to county ordinances.

Lee County initiated a 1-year moratorium on mining in its southeastern region, the Density Reduction/Groundwater Resource (DR/GR) Area. After a detailed study of this area, Lee County adopted amendments to its land use plan. The amendments were challenged by a mining company and four landowners. In 2012, the court upheld the amendments. The court found that the county's comprehensive plan meets the standards to deny zoning for mining within the DR/GR. The department issued environmental resource permits for four new limestone mines totaling 6,389 ac of additional excavation area. Two permits were issued for expansion of existing mines.

Prior to 2009, Indian River County enacted a temporary mining moratorium to allow time to devise better protection for its groundwater. Citrus County enacted a similar moratorium, and adjacent Levy County was considering a proposal from Tarmac America to mine limerock on 4,804 ac of a 9,390 ac tract near the town of Inglis.

In 2000, Mosaic Fertilizer sought permits to mine their planned 10,304 ac Ona-Ft. Green mine location in Hardee County. A legal challenge citing potential mining impacts to the Peace River Basin was brought by Charlotte, Lee, and Sarasota Counties and the Peace River/Manasota Water Supply Authority. The permit was upheld in court, and the final permit was issued in June 2009.

In 2006, Mosaic Fertilizer sought permits to mine their planned 26,826 ac South Fort Meade mine location in Hardee County. A legal challenge citing potential mining impacts to the Peace River Basin was brought by Charlotte, Lee, and Sarasota Counties and the Peace River/Manasota Water Supply Authority. The permit was upheld in court, and the final permit was issued in February 2009.

In 2011, CF Industries received approval of an Environmental Resource Permit authorizing mining within its 7,512 ac South Pasture Extension Mine in Hardee County. This permit was challenged by an adjacent landowner who cited environmental concerns. The permit was upheld in court, and the final permit was issued in June 2012.

In 2012, PCS Phosphate received approval of a Wetland Resource Permit authorizing mining within its 1,155 ac Loncala Tract, which is an extension of

its Hamilton County Mine.

Since July 1, 1975, Florida has required that all mined lands be reclaimed, as administered by the DEP Bureau of Mine Reclamation (now the Mining and Mitigation Program). Department records indicate that as of December 31, 2010, 71% of land mined for phosphate has been reclaimed; mined phosphate land totaled 190,256 ac, with 72,759 ac having been reclaimed.

During 2012, Martin Marietta Materials was unsuccessful in an attempt to acquire Vulcan Materials Company, the parent company of Florida Rock Industries. The hostile takeover was temporarily blocked by the court based on Martin's use of confidential information in violation of previous confidentiality agreements.

During 2010, an environmental resource permit was issued to Tarmac America for the King Road Quarry in Levy County. The project includes 2,757 ac of limestone extraction and 987 ac of other disturbances supporting mining operations. The wetland mitigation includes 4,526 ac of habitat preservation and enhancement. The project still requires completion of the Corps environmental impact statement and federal permits.

Lake Point Restoration received permits to expand mining in Martin County. This unique public-private partnership includes the excavation of limestone creating two lakes totaling 872 ac within a 2,241-ac property. After mining is complete, it is expected that the property will be transferred to the South Florida Water Management District for use as a stormwater treatment area.

Harrell's, LLC, acquired the 300 ac Ram Peat property near Avon Park which includes a peat mine. Permits for continued mining at this facility were transferred to Harrell's Horticultural Products, LLC.

Permits were issued for expanded limestone mining at the Brooksville Quarry operated by Florida Rock Industries. In the meantime, the process of obtaining approvals to convert the property to a large residential/commercial community continues.

Sunwest Harbourtowne continued the process of obtaining approvals for the closure of limestone mining in Pasco County and the construction of a commercial/residential development on the site. This includes a land swap to provide a large contiguous area for black bear and scrub jay habitat, and a public

park with a boat launch.

Ocala Meadows Farms completed the process of obtaining approvals for the closure of a limestone mine in Marion County and the construction of a residential development on the site. This included an offsite wetland mitigation and preservation area.



Photo by Elias Howard Sellards

Limestone in Central Phosphate Company pit, Ocala, 1909.

Governmental and Related Programs

Florida's mineral resources reach beyond those of terrestrial origin, especially on Florida's broad continental margins in the Gulf of Mexico. One of the most important coastal resources is a reliable supply of sand to replenish the state's environmentally and economically important beaches. During 2008-2010, the Florida Geological Survey (FGS) partnered with the federal Bureau of Ocean Energy Management, Regulation and Enforcement and the National Oceanic and Atmospheric Administration to collect and characterize beach sands from all of Florida's beaches. This data, used in conjunction with the results of previous offshore sand deposit characterization studies, will assist in suitably replenishing and restoring storm- and erosion-depleted tourist beaches statewide. Studies commencing in 2011 will continue research on nearshore submarine sources of compatible sands for beach restoration.

As part of an ongoing cooperative effort through the STATEMAP component of the National Cooperative Geologic Mapping Program (a USGS/State of Florida/FGS jointly funded program), in 2008, the FGS completed geologic mapping for the western portion of the USGS 1:100,000-scale Perry quadrangle. In 2009, the FGS completed mapping the Ocala quadrangle, and in 2012, mapping was completed on the Inverness and Tarpon Springs quadrangles. The

completed products include a geologic map, cross-sections, and a physiographic regions map. Several cores and numerous hand samples have been archived in the FGS State Geologic Sample Repository for future reference. The completed maps and cross-sections are available as part of the FGS Open-File Map Series and FGS Open File Report.

Oil and Gas Production

Oil and gas have been produced from 22 oil-fields in the northwest Florida panhandle in Escambia and Santa Rosa Counties since 1970; and in Lee, Hendry, Collier, and Dade Counties in south Florida since 1943. There have been no new discoveries since McDavid Field (Escambia County) in 1988.

According to the *Oil and Gas Journal*, January 7, 2013, edition, Florida currently ranks 17th among oil producing states in the U.S. During calendar year 2011, Florida produced over 2 million barrels of crude oil; of that, approximately 60 percent was produced from fields in northwest Florida. Northwest Florida fields have also produced a cumulative total of approximately 670 billion cubic feet of natural gas. The Jay Field alone has produced approximately 424 million barrels of oil and 607 billion cubic feet of gas since 1970.

Drilling / Production

South Florida:

There are seven active oil fields in South Florida including: Sunniland (discovered 1943), West Felda (1966), Bear Island (1972), Lehigh Park (1974), Mid-Felda (1977), Raccoon Point (1978), and the Corkscrew Field (1985).

There are four companies, BreitBurn Florida, LLC, Hendry Energy, Century Oil, and OYRX/Anadarko, operating 39 wells in the region.

Northwest Florida:

There are two active oil fields in Northwest Florida including Jay (discovered 1970) and Blackjack Creek (1972). The Jay Field is by far the state's largest oil and gas field. Quantum Resources Management, LLC, and Petro Operating Company operate 121 wells at Jay and Blackjack Creek.

Florida Oil & Gas Section Statistics:

- Crude oil produced in 2011: 2 million barrels.
- Gas produced in 2011: 17 billion cubic feet.
- Saltwater (brine) produced in 2011: 61 million barrels.
- Net oil spilled in 2011: 1 barrel.
- Net brine spilled in 2011: 15 barrels.
- Percentage of produced oil and brine spilled in 2011: 0.000025 percent.
- Crude oil produced in Florida 1943–Oct. 2012: 610 million barrels.
- Natural gas produced in Florida 1943–Oct. 2012: 685 billion cubic feet.
- Peak Production Year (Florida ranked 8th among oil producing states): 1978.
- Crude oil produced in 1978: 48 million barrels.
- Natural gas produced in 1978: 52 billion cubic feet.
- Total number of oil/gas fields 1943–2012: 22.
- Current number of active oil and gas fields: 9.
- Current number of permitted oil and gas wells: 158.
- Current number of producing wells: 67.
- Total permit applications received 1943–2010: ~1400.
- Total known wells drilled prior to regulatory permitting in 1943: 120.
- Number of wells brought on line as producers



Florida State Archives

Humble Oil and Refining Company's tank farm at Sunniland Field, Collier County, 1952.

- 1943–2010: 356.
- Number of dry holes 1943–2010: 719.
- Drilling permit applications received during 2012: 11.
- Number of field inspections in 2012: 1977.
- Geophysical exploration applications 1984–2011: 164.
- Geophysical exploration applications in 2012: 0.
- Deepest attempted oil and gas well: Permit 778 in Collier County, 18,670 feet.
- Shallowest attempted oil and gas well: Pre-permit in Brevard County, 1921, 115 feet.
- Biggest oil and gas field: Jay Field, 424 million barrels crude oil, (1970–Oct. 2012).
- Smallest oil and gas field: Baxter Island Field, 1203 barrels crude (1977–1978).
- Deepest oil and gas field: McDavid Field, 16,810 feet (1988–1991).
- Most productive oil and gas well: Permit 923 (Jay Field) averaged 9,678 barrels per day in December 1978.

1943–2011 Florida Petroleum Production

Field	County	Oil (Thousand Bbls)	Gas (Million CF)	Discovery Date
South Florida Fields				
Sunniland	Collier	18,549	1,832	9/26/43
West Felda	Hendry	47,880	3,812	8/02/66
Bear Island	Collier	13,129	1,138	12/05/72
Lehigh Park	Lee	6,024	627	7/30/74
Mid-Felda	Hendry	1,518	10	10/13/77
Raccoon Point	Collier	19,928	2,378	6/20/78
Corkscrew	Collier	1,566	3	6/04/88
North Florida Fields				
Jay	Santa Rosa	424,181	606,674	6/15/70
Blackjack Creek	Santa Rosa	58,877	63,056	2/14/72
Plugged and Abandoned Fields				
Sunoco	Hendry	11,598	982	7/22/64
Mount Carmel	Santa Rosa	4,770	4,797	12/19/71
Seminole	Hendry	85	0	11/14/73
Sweetwater Creek	Santa Rosa	14	15	4/22/77
Baxter Island	Collier	2	0	8/11/77
Pepper Hammock	Collier	0.3	0	9/28/78
Townsend Canal	Hendry	535	0	6/27/82
Bluff Springs	Escambia	220	122	3/25/84
Coldwater Creek	Santa Rosa	81	14	6/04/88
McDavid	Escambia	121	48	6/14/88
Lake Trafford	Collier	302	0	3/30/69
McLellan	Santa Rosa	440	162	2/19/86

Sources: Department of Environmental Protection, Oil & Gas Program; Oil and Gas Journal, January 7, 2013, edition



Tourism is a major component of the Florida economy. Visitor estimates are one of several indicators of the importance of the tourism industry, which provides many tangible and intangible benefits to Florida residents. Each year millions of people visit the state to enjoy its many natural and man-made attractions.

On July 1, 1999, VISIT FLORIDA implemented a new system for producing visitor estimates. The primary data collection results in an estimate of domestic visitors by air for the 13 largest airports. Estimates of Canadian and overseas visitors are obtained by Statistics Canada and the U.S. Department of Commerce.

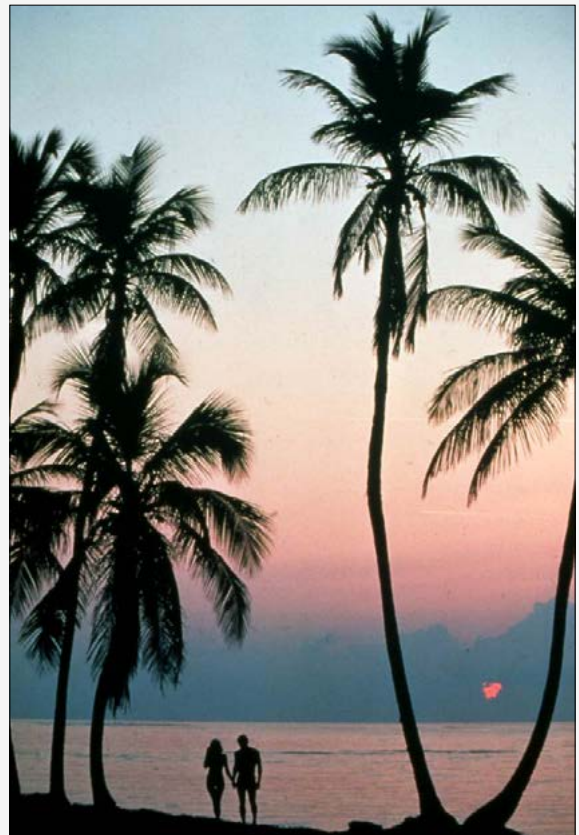
The Travel Industry Association's TravelScope data provides the ratio of domestic air and non-air visitors. This percentage, along with the number of air visitors, helps to infer the numbers of non-air visitors.

Tourist Count (Domestic) 1985–2011

1985	28,850,424	2003	68,726,000
1990	40,970,233	2004	73,379,000
1995	41,282,314	2005	77,200,000
1996	44,757,082	2006	77,600,000
1997	46,953,929	2007	77,300,000
1998	46,698,736	2008	76,100,000
1999	51,400,000	2009	80,900,000
2000	64,730,000	2010	71,200,000
2001	62,315,000	2011	74,700,000
2002	67,900,000		

Sources: *Florida Statistical Abstract*; VISIT FLORIDA© Research, 2013

Visit Florida tourism photo. Visit Florida operates under a contract with the Office of Tourism, Trade and Economic Development as Florida's tourism marketing agency. "Visit Florida" is not a government agency, but rather a not-for-profit corporation created as a public/private partnership by the Florida Legislature in 1996.



Florida State Archives

Public Lodging and Food Service Establishments, 2011

Classification of Business	Number of Licensed Establishments	Number of Rental Units
Apartments	17,510	995,419
Hotels	1,619	245,513
Motels	3,084	160,805
Rooming Houses	157	2,091
Rental Condominiums	13,213	114,041
Transient Apartments	1,219	17,008
Food Service Establishments	Number	Seating Capacity
	37,013	3,684,486

Source: Florida Statistical Abstract 2011

Tracking the Florida Tourist

Year	Mode of Travel	Tourists Visiting Florida	Number of Nights in Florida
1985	Air	13,049,211	9.5
	Auto	15,801,213	12.5
1990	Air	20,678,364	7.8
	Auto	20,291,869	14.8
1995	Air	21,518,096	8.3
	Auto	19,764,218	14.8
2000	Air	30,848,000	5.4
	Non-air	33,882,000	5.3
2005	Air	34,276,000	5.5
	Non-air	39,104,000	5.1
2010	Air	43,400,000	n/a
	Non-air	38,900,000	n/a

Source: VISIT FLORIDA© Research, 2013

Top Origins of Domestic Visitors 2011

Origin	Percent	Origin	Percent
Georgia	10.6	Michigan	4.4
New York	8.9	Ohio	4.4
Texas	5.7	Alabama	4.2
Illinois	5.6	North Carolina	4.1
New Jersey	4.5	Pennsylvania	3.9

Source: VISIT FLORIDA© Research, 2013

Top International Travelers by Country 2000-2011

Country	2000	2002	2003	2004	2005	2009	2011 (est.)
Canada	2,042,000	1,603,000	1,669,000	1,911,000	2,033,000	2,600,000	3,300,000
U. K.	1,651,000	1,294,000	1,378,000	1,480,000	1,490,000	1,238,000	1,300,000
Germany	325,000	202,000	225,000	265,000	282,000	280,000	n/a
Brazil	365,000	134,000	245,000	167,000	181,000	712,000	1,500,000
Venezuela	451,000	301,000	239,000	224,000	221,000	401,000	n/a
Argentina	338,000	75,000	86,000	74,000	74,000	190,000	375,000
France	160,000	134,000	110,000	122,000	121,000	227,000	n/a
Japan	147,000	65,000	60,000	82,000	66,000	n/a	n/a
Mexico	n/a	n/a	n/a	n/a	n/a	275,000	387,000

Sources: *Florida Statistical Abstract 2011*, VISIT FLORIDA© Research, 2013



Visit Florida tourism photo. Nighttime view of Miami's skyline, circa 1980.

Florida State Archives



Highways: Trails to Turnpikes

Many of Florida's modern highways have as their origin ancient Indian trails. Here and there, an old terminus has been deleted or a detour made to shorten distance, but in the main, today's complex network of roads, highways and bridges has remarkably followed the older trails.

The first Europeans to come to Florida, the Spanish explorers, often were compelled to rely upon the Indians to guide them overland. These Indian trails served as the major overland routes used by the Spanish in their colonization of Florida.

The Kings Road, built by the British in segments during the 1760s and 1770s, was the first in Florida graded and wide enough to accommodate wheeled vehicles for any appreciable distance. Miss Dena Snodgrass, the Jacksonville historian, reports the Kings Road, when completed, ran from the Georgia line (the St. Marys River) to New Smyrna, via St. Augustine. The road exists today in Duval and Nassau Counties in considerable sections and is still called the Kings Road. It also exists in small segments in Flagler, St. Johns and Volusia Counties. In Volusia the Interstate passes over it and the overpass is emblazoned "Old Kings Road" at the crossing.

After Florida became a territory in 1822, the United States government appropriated \$20,000 for construction of a road from Pensacola to St. Augustine. That leg from St. Augustine westward to the vicinity of Tallahassee came to be known as the Belamy Road, after its contractor. The road was completed in 1826, although settlers complained that it was only 16 feet wide, that tree stumps were left high above the ground, and that causeways and bridges were inadequate.



Photo by L. Brockway

Canopy road in Captiva, circa 1995.

A portion of present U.S. 27 generally follows a segment of the original road east of Tallahassee, while U.S. 90 generally follows the route west of Tallahassee.

Although these roads across North Florida follow routes similar to the Indian, Spanish and English trails, there is, of course, little resemblance in the specifications and construction plans used by the early road builders. Only a few paragraphs of specifications were laid down in building the Pensacola-St. Augustine Road. Today, the Department of Transportation has detailed specifications relating to every phase of highway construction on their website. The \$20,000 appropriated by Congress to construct the entire route from Pensacola to St. Augustine would not finance even a mile of one of our less expensive secondary roads.

Source: Department of Transportation

Notable Bridges

Name	Length (ft)	Spans
Seven Mile	35,716	Money Key Channel
Sunshine Skyway	21,872	Tampa Bay
Mid Bay	19,257	Choctawhatchee Bay
Garcon Point	18,420	East Bay at Garcon Point
Henry H. Buckman, Sr. (two spans)	16,296	St. Johns River
Howard Frankland, South	15,896	Old Tampa Bay
Howard Frankland, North	15,868	Tampa Bay
Philip D. Beall, Sr.	15,636	Pensacola Bay
Apalachicola Bay	14,171	Apalachicola Bay
Bayside Bridge (two spans)	14,007	Tampa Bay
Escambia (two spans)	13,594	Escambia Bay & CSX RR
Long Key	12,188	Long Key Channel
Napoleon B. Broward	10,643	St. Johns River/Mill Cove
Crosstown Express Viaduct	9,598	Hillsborough River
Apalachicola River	8,395	Apalachicola River
Trammell Bridge	8,360	Apalachicola River
Peace River (two spans)	8,281	Peace River
Lake Jessup (two spans)	7,911	Lake Jessup
Clyde B. Wells	7,532	Choctawhatchee Bay
John E. Matthews	7,374	St. Johns River
Midpoint Memorial	7,170	Caloosahatchee River
Bryant Grady Patton	7,114	Apalachicola Bay
Bahia Honda (two spans)	6,732	Big Spanish Channel
Alvin G. Shands	6,660	St. Johns River
Gilchrist	6,384	Peace River
Golden Glades Viaduct	6,354	Golden Glades Interchange
Escambia River	6,126	Escambia River
Dewey M. Johnson (Westbound)	6,100	Apalachicola River
Bryant Grady Patton	5,992	Apalachicola Bay
Ochlockonee Bay	5,835	Ochlockonee Bay
Dewey M. Johnson (Eastbound)	5,479	Apalachicola River
Edison	5,252	Caloosahatchee River
Nassau Sound	5,129	Nassau Sound
Barron Collier	5,089	Peace River
Caloosahatchee River	4,965	Caloosahatchee River
Arthur Sollee	4,594	Intracoastal Canal
Acosta	3,740	St. Johns River
Fuller Warren	3,667	St. Johns River
Hathaway	3,358	West Bay

Courtney Campbell	3,274	Tampa Bay
Blackwater Bay	2,931	Blackwater Bay
Dunn's Creek	2,699	U.S. 1
St. Johns River	2,655	St. Johns River
Navarre	2,640	Santa Rosa Sound
Isaiah Hart	2,504	St. Johns River
Manatee	2,225	Manatee River
East MacArthur	2,155	Biscayne Bay
Julia Tuttle Causeway	2,150	Biscayne Bay
West MacArthur	2,114	Intracoastal Canal

Source: Department of Transportation, Bridge Maintenance Office

Aerial view overlooking the Overseas Highway in the Florida Keys. The Overseas Highway and Railway Bridges were added to the National Register of Historic Places in 1979.



Florida State Archives



Florida's Scenic Drives

Jan Godown Annino*

Like poet Robert Frost, if you usually consider taking the path less traveled by, you'll want to know about Florida's scenic roads.

Perhaps the most well-known by name is A1A. This is the sunshine state's east coast highway that shimmers so prominently in classic beach movies. Jimmy Buffett added to the posterity of A1A by titling a hit record album with the breezy road's name. Legions of families with sand in their shoes claim this north to south ribbon of asphalt that slides through beach towns as their personal route into paradise.

Another romantic road, this one at the bottom of the state, is the Tamiami Trail. It's an east-west historic path with a simple name that comes from the way it linked Tampa to Miami in 1928. It slices directly across the most famous river of saw grass in the world and visits the state's fascinating Seminole and Miccosukee native people.

In Florida, local governments, the state Legislature, and the state Department of Transportation all designate scenic routes. In addition, many a shunpiker keeps track of personal favorites. The Florida Legislature has labeled at least 19 roads as scenic highways. The Florida DOT Scenic Highways Program, which has named far fewer, also links with a national scenic byways effort. Many county and city governments have free maps available of what they consider to be their best scenic drives.

Unique historic, cultural, and natural features must be in place so the traveler can enjoy them on a



Florida State Archives

Aerial view overlooking highway A1A south of St. Augustine, 1965.

visit along the route, in order for roads to earn scenic designations from most entities. For example, Florida's first official scenic highway under the DOT program resonates with Native American and Spanish explorer heritage dating to at least the 16th century. This road, Pensacola Scenic Bluffs Highway, encompasses the highest point along Florida's coastline. It hugs a shoreline explored by Don Tristan de Luna in

**Jan Godown Annino is the author of She Sang Promise: The Story of Betty Mae Jumper (National Geographic Childrens Books) Family Fun in Florida (Falcon/Globe/Pequot) and Scenic Driving Florida (Falcon). To share a favorite scenic drive, contact Jan at P.O. Box 14143, Tallahassee, FL 32308 or at jansmedia@juno.com.*

1559 at what later became historic Pensacola, along U.S. Highway 90. To heighten the allure of this drive, it helps to know that the ill-fated ship de Luna sailed still sits at the bottom of the bay just offshore.

Some of Florida's scenic roads hold stories dating back to native footpaths trod long before Europeans arrived in the 1500s. Their heritage is thought to be a national treasure. For example, the national Scenic America organization bestowed a Top 10 America honor upon some of the pokey-paced canopy roads of the Tallahassee area. These are narrow corridors hidden under the shade of 200-year-old live oak trees that border each roadside. The trees' horizontal branches stretch completely over the road, to form a canopy. Some of these canopy roads began as native footpaths. Others were routes for the ox-drawn wagons of the 1700s. Today they not only carry sightseers at a leisurely pace, they are clogged commuter corridors of the busy capital city.

Here is just a sample of scenic drives in Florida. Some are officially designated and others without that imprimatur are acknowledged scenic by those who know them well: Pensacola Scenic Bluffs Highway, Big Bend Scenic Byway (in Apalachicola National Forest), designated a National Scenic Byway in 2009; Tallahassee's Canopy Roads, US 441 Scenic Highway (near Gainesville), Fort Clarke Church Road (near Gainesville), The Buccaneer Trail (north-east of Jacksonville), William Bartram Scenic and Historic Highway (north of Palatka), Scenic and Historic A1A (St. Johns and Flagler counties), Old Dixie Highway and Walter Boardman Lane (Ormond Beach), State Road 361 (south of Perry), State Road 40 and County Road 445 (Ocala National Forest), Indian River Lagoon Scenic Highway (Brevard County), Snake Road/County Road 833 (west of Ft.

Lauderdale), Tamiami Trail Scenic Highway, Main Park Road/Everglades National Park and the Overseas Highway to Key West, which is an All-American Road.

The naturalist Joseph Wood Krutch, once said that roads are filters. The superhighway does very little filtering, allowing anyone with gas in the tank to reach a destination. But the unpaved, bumpy red clay road that can turn muddy in the rain does a lot of filter work, keeping many a speedy traveler from a meander along it.

When you tell friends about a great new, little restaurant, comes the day when you can't saunter in anymore and get a table on demand. The secret is out. Scenic drives are like that. And now you know the secret about some of Florida's best. Toward boosting their scenic health, you can support:

- Low speed limits on scenic roads.
- Maintaining the scenic drive as it is, without adding lanes.
- Development of alternate routes for speedier travel.
- Alternative transportation methods along scenic drives, or pairing of one-way corridors.
- Laws to protect scenic drive tree canopy from over-cutting or the dune line/ridge line from being excavated and flattened.
- Roadside wildflower planting.
- Adopt-a-road efforts.

For other information on Florida's scenic drives, and to become a member of a Corridor Advocacy Group, visit Florida Scenic Highways at <http://www.floridascenichighways.com/>.



Military Installations

Source: University of West Florida Haas Center*

In 2011, defense spending accounted for \$73.4 billion—nearly 10 percent—of Florida’s Gross State Product and generated an estimated \$5.41 billion in state and local tax revenues. Defense spending also accounted for 758,112 jobs, directly and indirectly. The Panhandle is home to the state’s largest military presence; approximately 32 percent of Northwest Florida’s Gross Regional Product comes from defense activities. All of Florida’s counties benefit from defense spending, and the economies of all but two see at least \$5 million in direct defense dollars.

More than 60,000 military personnel are stationed in Florida, supported by nearly 25,000 civilian personnel. Also, the state has more than 12,000 National Guard troops supported by about 400 civilian personnel. Florida is also a popular state for veterans to settle and currently boasts 1.6 million. According

to the Department of Veterans Affairs, Florida, Texas, and California have the largest veteran populations in the nation.

Florida’s military installations play an important role supporting the nation’s armed forces readiness. Two of the Navy’s four deep water ports in the U.S. are in Florida as well as one of only three Navy Fleet Readiness Centers. Florida also has the military’s only east coast space launch facility and several critical research, development, testing, and evaluation (RDT&E) centers. The Joint Gulf Range Complex includes training ranges extending from Northwest Florida to Key West—180,000 square miles of airspace. This valuable training area allows for coordinated maritime, air, and land training exercises.

**Statistical information in this section taken from the Florida Defense Factbook, produced for Enterprise Florida, Inc., by the University of West Florida Haas Center, January 2013. Available online at <http://www.floridadefense.org/public.asp>*



U.S. Marine RF-4, the Phantom II jet fighter, banks over South Florida, 1968. The jet was part of Squadron VMCF-2, which flew photo reconnaissance missions out of Key West during the early '60s.

Photo by Cory McDonald

Installations by Region

Northwest Florida

Tyndall Air Force Base
Naval Support Activity Panama City
Eglin Air Force Base
Hurlburt Field
Naval Air Station Whiting Field
Corry Station
Saufley Field
Naval Air Station Pensacola

North Central Florida

Camp Blanding
Pinecastle Bombing Range

Northeast Florida

Naval Station Mayport
Marine Corps Support Facility Blount Island
Naval Air Station Jacksonville

East Central Florida

Cape Canaveral Air Force Station
Patrick Air Force Base
Naval Support Activity Orlando

Tampa Bay

MacDill Air Force Base
US Central Command
US Special Operations Command
Coast Guard Air Station Clearwater

South Central Florida

Avon Park Air Force Range



Florida State Archives

Florida National Guard soldiers at Camp Blanding for training, 1941. Woodrow C. Butler is second from the left. He was born in Quincy on April 9, 1917, and joined the Florida National Guard 124th Infantry Company M in 1935. Seated at the far left is Sgt. Russell Buckhaller.



Florida State Archives

Launch of Thor-Able missile from Patrick Air Force Base, 1959.

Left: Aerial view of aircraft carrier Lake Champlain, Naval Station Mayport, 1961. Two of the Navy's four deepwater ports in the U.S. are located in Florida.



Photo by Karl E. Holland