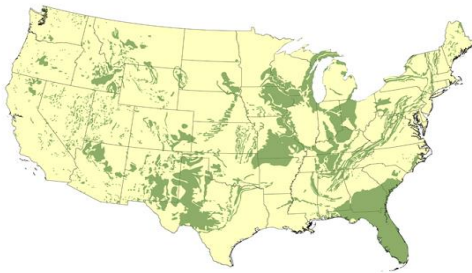


Ch 10: Florida



Karst Coverage

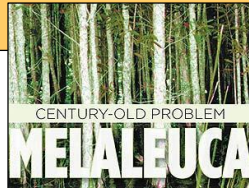


Karst

Peninsular Florida extends east to west across sand covered limestone strata. Elevation averages less than 100 feet above sea level, plethora of **karst**—where water has dissolved limestone bedrock—and produced underground springs, **sinkhole** lakes, as well as multiple wetlands and swamps.

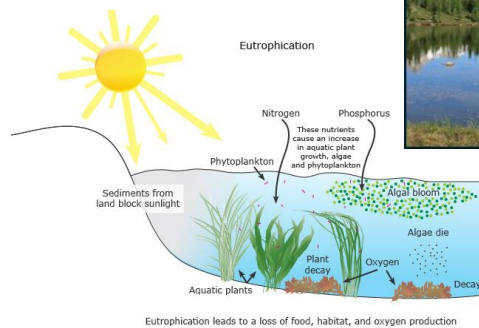
Problems in the Everglades:⁵

- Is massively engineered by US Army Corps of Engineers
- Construction of Lake Okeechobee levees has diminished water flow, competition for fresh water
- Crowded already After WW2 -2000 seven times increase in pop. 87 million tourist in 2011
- The State bought out United States Sugar Co. – largest US sugarcane producer
- Invasive species abound (Burmese python, Melaleuca tree)



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Agriculture and nutrients- Eutrophication



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Restoration efforts

- CERP (Comprehensive Everglades Restoration Plan) began in 2000 ..\$12billion
- Increase water flow
- Increase water-storage
- Improve water quality
- Improve water delivery
- Improve connectivity by removing canals.

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Water

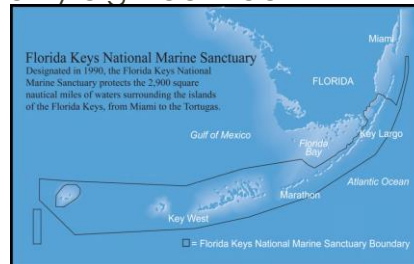


- Large aquifers (with artesian wells) are depleting- overconsumption-Tampa Bay nation's largest desalination plant. –economically and environmentally expensive.
- dredge and fill operation to create land for development- but taxpayers pay and siltation can bury reef systems and disturb many organism such as shrimp, juv. fish.
- Beach erosion- likely to increase due to sea level rise

Photo: © Richard Carey

Florida Keys

- The only living coral reef ecosystem in North America is the 1,700 island Florida Keys archipelago that curves 150 miles into the Gulf of Mexico.
- coral and limestone islands—the highest point on the Keys is only eighteen feet above sea level.
- **dissipate wave energy**



Florida Keys coral

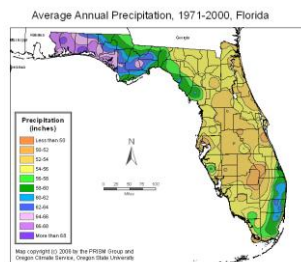
- 6,000 coral reefs
- grow slowly, about sixteen feet every 1,000 years,
- protected from harvesting or even touching,
- boaters will inadvertently damage them when anchoring.
- Silt
- Bleaching with increase in ocean temperature

Mangroves

- Red, black, white mangrove tree.. many species-”Walking trees”
- Able to use salt water
- Nursery areas for fish and shellfish.
- Habitat for fish-snook, tarpon, snapper.
- Rookeries for brown pelican and roseate spoonbills.
- Filters better water quality
- Stabilize land; reduce flood damage

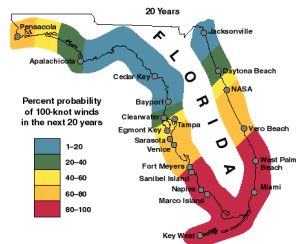


Climate



- 50-60 inches/yr
- Thunderstorms west
- S. Florida- 70s and 80s; North-below freezing

Hurricanes



- At least in path of 1 hurricane/yr
- S. Florida- struck once every 5.5 years.
–flooding, property damage
- Tax burden for U.S.
- Risk of hurricanes (June-Nov)**

- Grown double the nation's rate
- Only CA, NY, TX have more inhabitants
- 1/5 of Floridians are over 65
- 19 mill. (75% white), 22.5% Hispanic (large Cuban population), 16% Black, 2.4% Asian.
- Snowbird communities
- Condos and mobile homes, live mostly on coasts
- 87 mill. tourists (sports fishing, Magic Kingdom – 20 mill. alone)



© 1992 MAGELLAN Geographics, Santa Barbara, CA

- Seminoles not until 1700s. (migrated in)
- Spanish, ceded Florida to the US in 1819. Became a state in 1845, then native peoples were in trouble. Guerilla-style war, 1835 removal to Indian Territory in Oklahoma.
- 300 Everglades continued guerilla warfare till 1858
- Then: Northern (plantations, “Old South”) vs. southern counties (‘empty,’ where agriculture was not lucrative)



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- 1902-dreams and speculators dredge and build a railway- Henry Flagler- Rockefeller partner in Standard oil initiated Florida tourism by bring railroad down East Coast.
- Rail lines export citrus, sugar, cattle, and phosphates and imported tourist.
- Coquina – from marine reefs, a bldg material
- Carl G. Fisher, Indianapolis auto promoter, led the land boom of Miami – in 1920s
- 1926 hurricanes, depression. —economy recovered after WWII



FloridaLightning.com

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AGRICULTURE

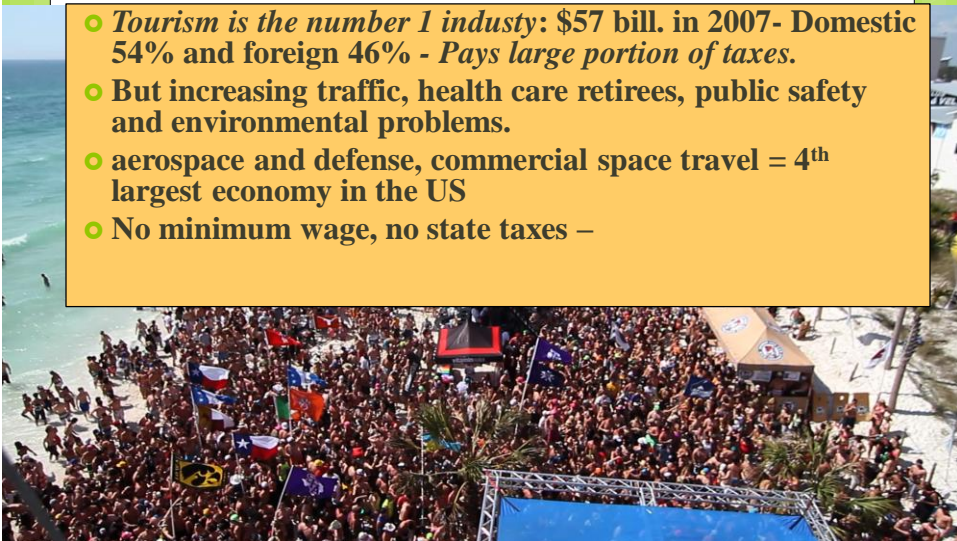
- Phosphates (East of Tampa Bay)- 75% of America's phosphate and 25% of worlds
- sugar cane – half of cane grown in Florida- More suited to tropical not subtropical climate of Florida- subsidized and polluting
- Citrus- 68% of nations oranges and 73% grapefruits about twice of California production.
- Nursery crops- 2nd only to CA.
- Long growing season and ample precipitation-provide out of season crops
- Winter vegetables: but profits are small, labor is low wage in ag. (competes with other NAFTA countries)




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ECONOMY

- *Tourism is the number 1 industry: \$57 bill. in 2007- Domestic 54% and foreign 46% - Pays large portion of taxes.*
- But increasing traffic, health care retirees, public safety and environmental problems.
- aerospace and defense, commercial space travel = 4th largest economy in the US
- No minimum wage, no state taxes –





- **Miami (5.9 mill. 2016 MSA):** tourism/beach images changed to one of high crime-Large Cuban population.
- **Rapid growth, a gateway city with Caribbean, South America**
- **Tampa: (2.9 mill.):** was Wild West until 1930s, today resources phosphates and fisheries, active shipping port serves Central America and Panama Canal, tourism
- **Orlando (2.4 mill.):** citrus, Jim Crow past- now economic separation, near Kennedy Space Center, 1965 Disney transformation- low paying tourist industry jobs. -



Boom, Bust Florida

- Florida real estate speculation- Part of history-"Some land for you in Florida"
- 2008 recession-led most states in mortgage fraud, foreclosures, and losing population

Celebration

2010 pop. 7,427



A sustainable future?

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- Impact of climate change? Sea level rise, increase of hurricanes?
- High use of energy for AC
- 3rd in nation for rooftop solar potential but 14th for installed
- 2010 largest solar photo voltaic power plant in U.S. Power 3000 home- drop in bucket but a start. ---move toward reducing emission utilities, clean cars, energy-efficient appliances.

