

State Specific Training Module for Florida

Purpose of this Module

This module will provide some general information that TSPs need to conduct conservation planning in our state. This information is general in nature so the TSP may need to follow up with additional reading or training to make sure they have the knowledge, skill, licenses and certifications to conduct conservation planning in this state.

Review of State Laws Pertaining to NRCS Vegetative Conservation Practices

Nutrient Management

- Nutrient Management Plans (NMP) are required by the Florida Department Environmental Protection (DEP) for:
 - Biosolids (<https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-640>) application of which require a NMP that must be developed and signed by a person with NRCS Nutrient Management Certification or a FL licensed Professional Engineer (PE)
 - Concentrated Animal Feeding Operations (CAFO) as defined by FAC 62-670 (Feedlot and Dairy Wastewater Treatment and Management Requirements <https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-670>) require a management plan prepared by NRCS or a FL licensed PE.

Review of State Laws Pertaining to NRCS Vegetative Conservation Practices

Nutrient Management (cont'd)

- Agriculture Best Management Practice (BMP) Program regulated by the Florida Dep. Agriculture and Consumer Services (FDACS) Office of Ag Water Policy <https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Best-Management-Practices> requires:
 - Nonpoint source contributors (like agriculture) enroll in FCACS BMP program if their operation is in a FDEP established Basin Management Action Plan (BMAP)
 - Enrolled producers must have a conservation plan which “...means a record of the decisions and supporting information for treatment of a unit of land or water, approved by USDA/NRCS or certified by a Technical Service Provider, which meets the requirements of Rule 5M-12.004, F.A.C.”

Review of State Laws Pertaining to NRCS Vegetative Conservation Practices

Pest Management

- Currently the State of Florida does not require any type of licensing or certification for individuals recommending or planning the use of restricted use pesticides (<https://www.fdacs.gov/Business-Services/Pesticide-Licensing/Pesticide-Applicator-Licenses>)

Review of State Laws Pertaining to NRCS Engineering Conservation Practices

Florida Statute Title XXXII, Regulation of Professions and Occupations, Chapter 471, Engineering, Section 471.005 defines the term “Engineer” and “Engineering”

Conservation practices deemed as “engineering” by NRCS, **may be considered “engineering”** by the Florida Board of Professional Engineers (FBPE, <http://www.fbpe.org/>).

Review of State Laws

Cultural Resources

- State of Florida regulations related to Cultural Resources can be found at:
http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&URL=0200-0299/0267/0267ContentsIndex.html&StatuteYear=2013&Title=%2D%3E2013%2D%3EChapter%20267
- NRCS requirements for compliance with state and federal law regarding cultural resources can be found on Florida FOTG, Section 2, C.

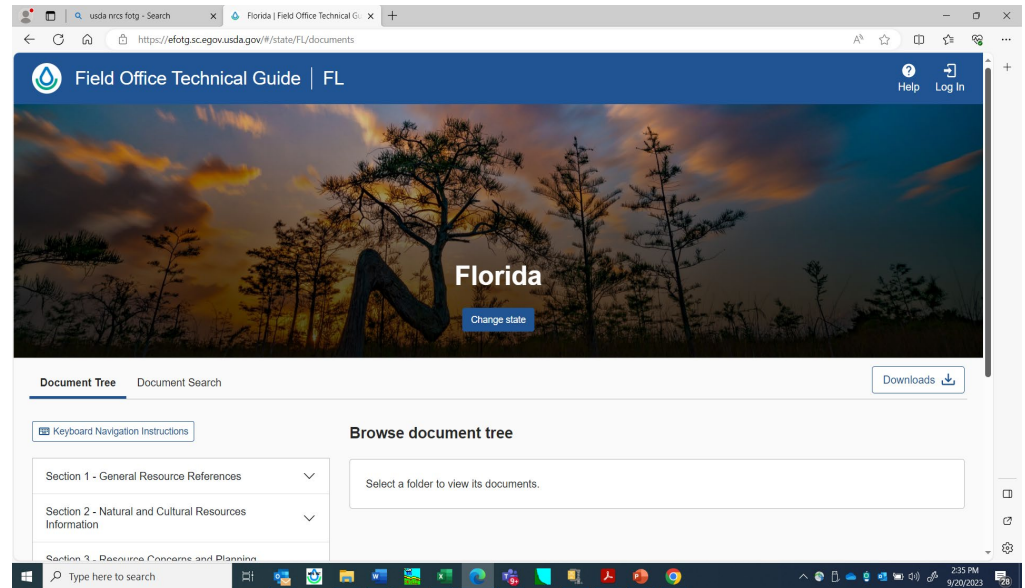
Review of State Laws

More information on the current Florida Administrative Code and Florida Administrative Register can found at the Florida Department of State website (<https://www.flrules.org/>).

Review of State FOTG Requirements

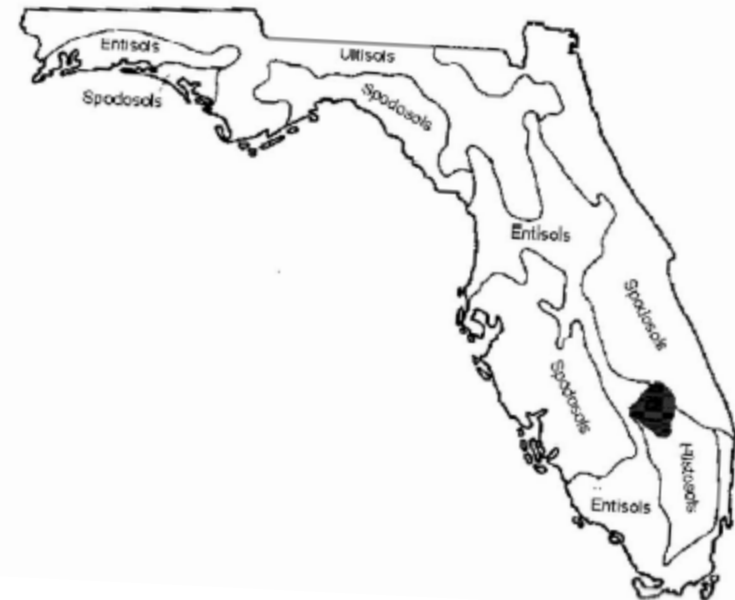
Vegetative and Engineering Practices

Specific information regarding the conservation practices used in the state and their accompanying guidance and specification documents are located in [Florida | Field Office Technical Guide | NRCS - USDA](https://efotg.sc.egov.usda.gov/#/state/FL)



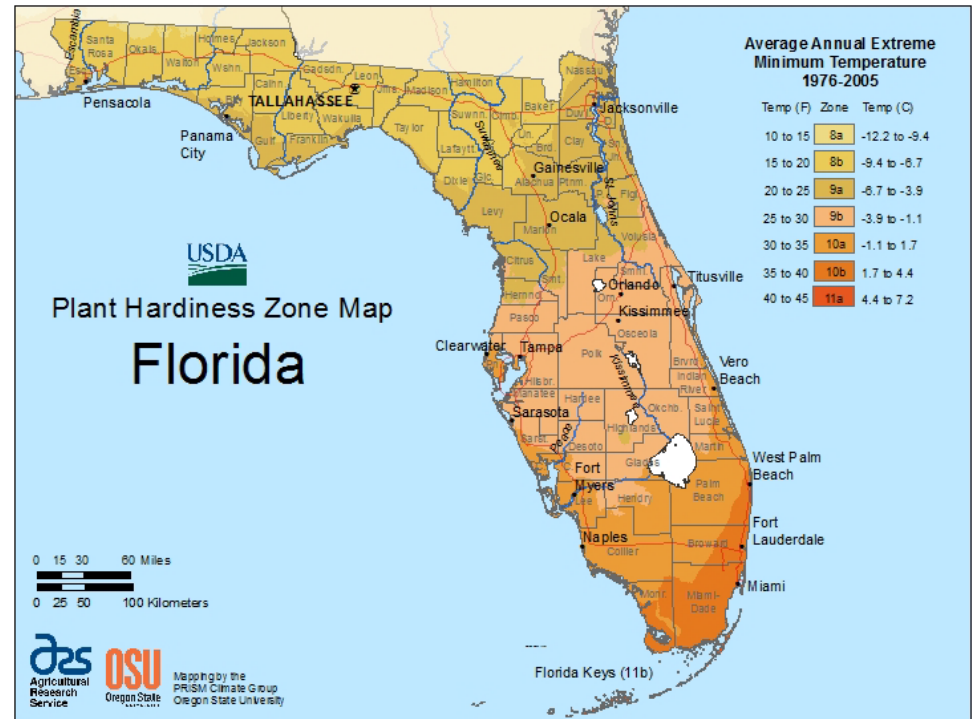
Florida Soils

- Entisols (7.5 millions acres), Histosols (4 million acres), Spodosols (8.4 millions acres) and Ultisols (6.9 million acres) are the four dominant soils orders in the state
- Alfisols (4.6 million acres) are fairly common but widely dispersed throughout the state
- Minor amounts of Inceptisols (1 million acres) and Mollisols (1 millions acres) occur



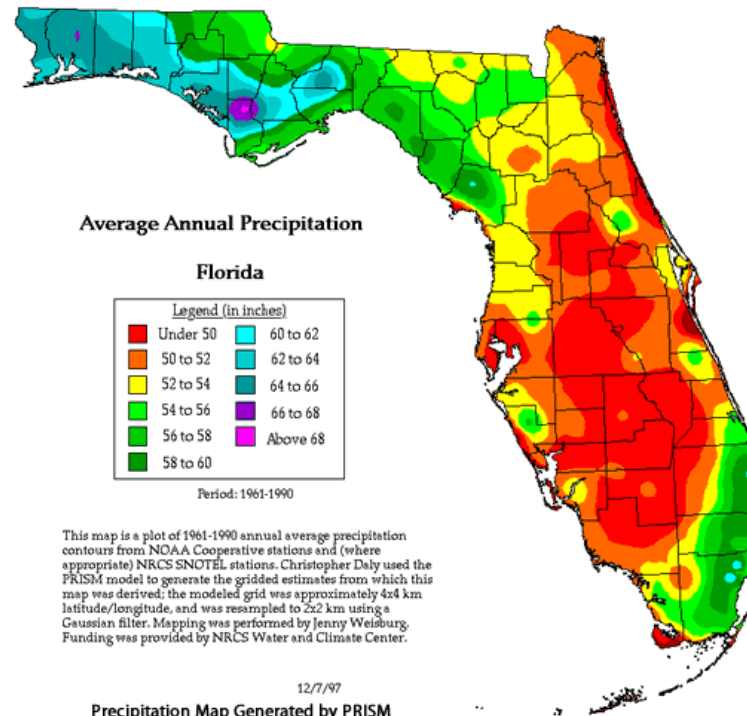
Florida Climate – Minimum Temperatures

Minimum temperatures in Florida range from about 40°-45° F in Miami and the Keys, to 10°-15° F in the Panhandle.

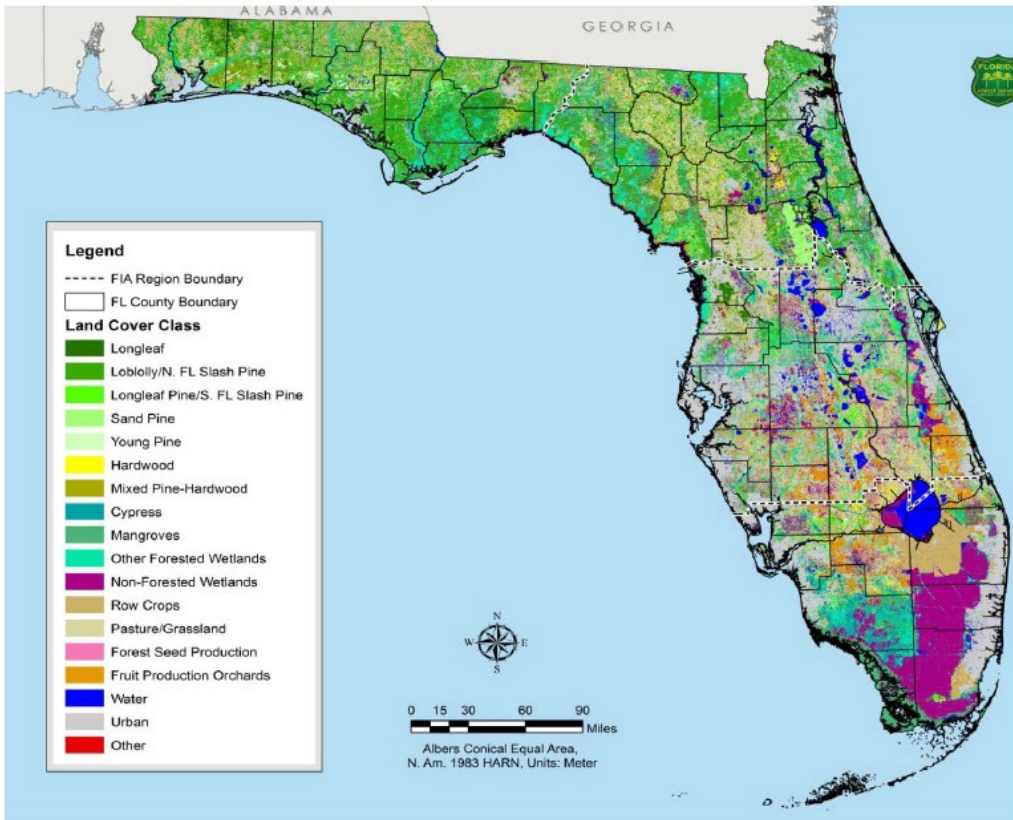


Florida Climate – Rainfall Amount and Distribution

Average annual precipitation across Florida ranges from under 50 inches in the central part of the state to over 68 inches in the western Panhandle.



Review of Major Land Uses



Urban – 17%

Agricultural – 19% (row crops/vegetable, pasture/grazing land, fruit production and orchards)

Wetlands – 29% (forested and non-forested, mangrove, and cypress)

Forestland – 31% (natural and plantation)

Water – 4%

Florida Agriculture

- Florida has 47,500 commercial farms, using a total of 9.25 million acres.
- Commodities produced include cattle, corn, soybeans, cotton, peanuts, citrus, blueberries, peanuts, and sugarcane.



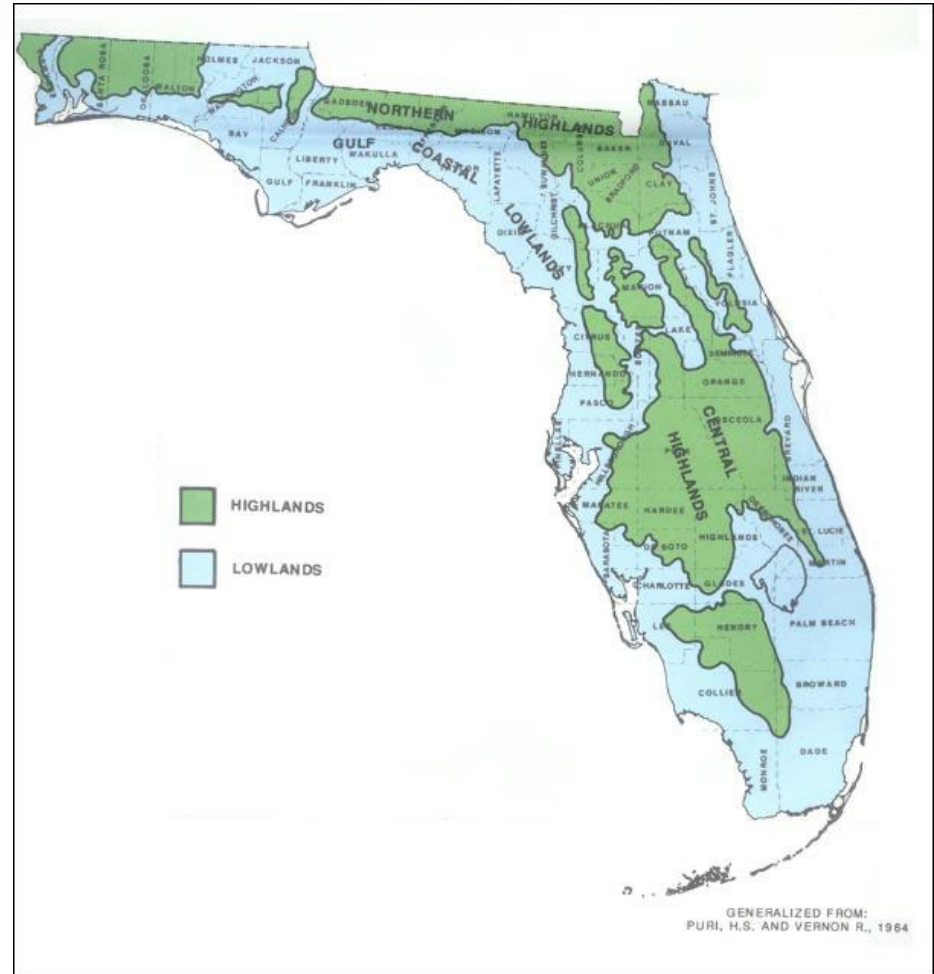
Review of Major Land Ownership

34.6 million acres in Florida

- 9.75 million acres or 28.2% of the state is public land (federal, state, water management districts, local government, etc.) most of which is managed for public access as conservation lands
- 154,200 acres or 0.4% of the state is tribal lands (Miccosukee Tribe of Indians of Florida and Seminole Tribe of Florida) much of which is managed for agricultural purposes, primarily cattle, by the tribal government
- 24.6 million acres or 71.4% of the state is in private land

Resource Concerns – Soil Erosion

- Although Florida is relatively flat, there are differences in elevation. They range from 0 to 345 feet above sea level.
- Classic water erosion issues can occur in the panhandle and the central ridge area of the state.
- Generally, south of I-4, soil erosion is not an issue due to flat topography.



Resource Concerns - Soil Quality Degradation

Subsidence from soil oxidation

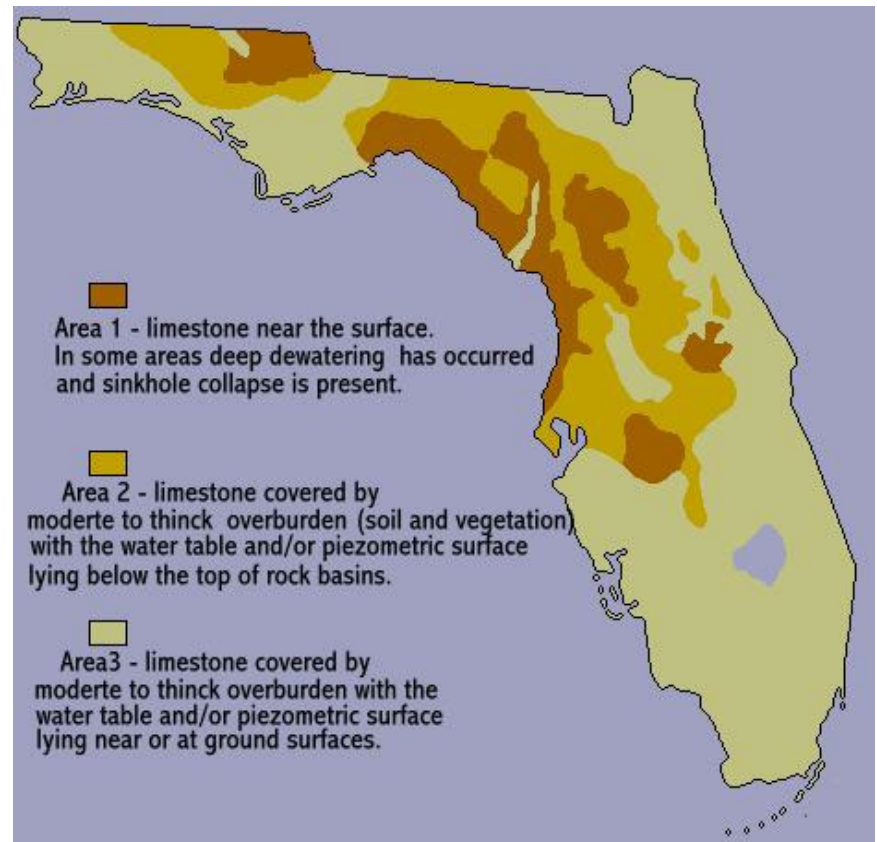
- Organic soils occur in areas throughout the peninsula, especially in southern and central Florida. Large organic deposits used for vegetable production occur south of Lake Okeechobee.
- Histosols consist largely of decomposing plant material and are largely underlain by calcareous deposits. With time, the organic matter decomposes, and the muck subsides. Thus, the pH in the muck can increase because of proximity to the underlying calcareous material.
- Muck subsidence causes problems for water and nutrient management.



Resource Concerns – Soil Quality Degradation

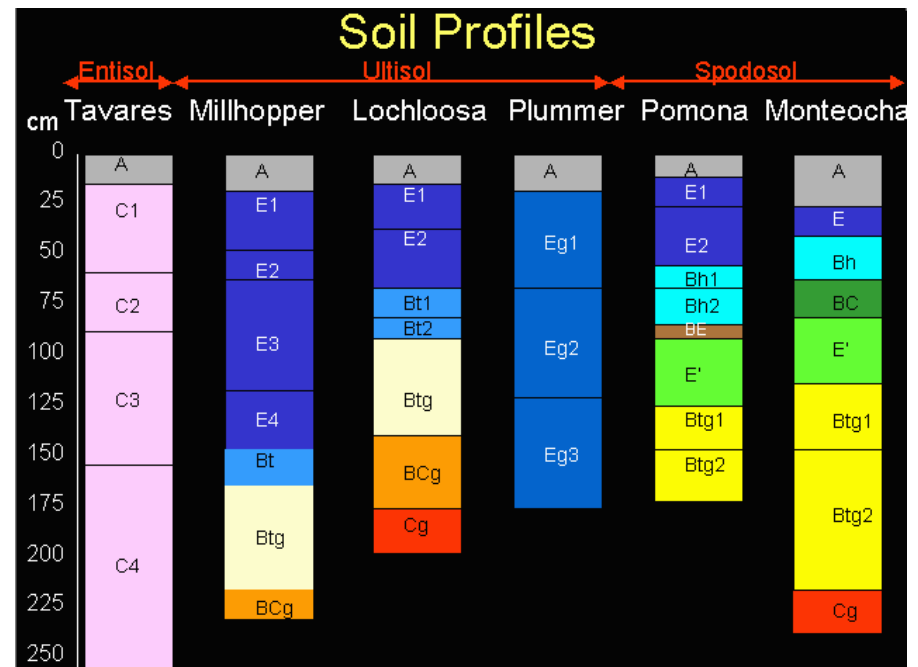
Subsidence from karst topography

- For much of geologic history Florida was below sea level as part of North America's continental shelf. Portions of the Florida peninsula have been above or below sea level at least four times. This created a layer of limestone hundreds (in some places thousands) of feet thick.
- As the Appalachian Mountains eroded, sand and clay were deposited over Florida's limestone layer. Much of the quartz sand covering the state today came from the rocks of that mountain chain.
- Sand overlaying porous limestone sets the stage for much of the subsidence and sinkhole concerns in the state



Resource Concerns – Soil Quality Degradation

- Low Organic Matter – In general, all soils in the state except Mollisols and Histosols have low organic matter
- Soil Compaction – In general, mineral soils that are somewhat poorly drained or wetter and soils with loamy or clayey surface layers can have compaction issues



Resource Concerns - Water

Florida is rich with fresh and marine water. In addition to its abundant surface water resources, Florida also sits atop the most plentiful freshwater aquifers in the United States, which supply water to hundreds of springs and provide the base flow for many of Florida's rivers and streams. The state's surface and ground water resources are intimately connected and support our drinking water supplies, agriculture, industry, wildlife habitat, and a thriving recreation-based economy.

All waters in the state are subject to regulation under the provisions found in Florida Statute Title XXVIII, Natural Resources; Conservation Reclamation, and Use, Chapter 373, Water Resources.

Florida Administrative Code (F.A.C.) 62-40, Water Resource Implementation Rule, guides the Department of Environmental Protection (DEP) and the five (5) water management districts in implementing the Water Resources Act (Chapter 373).

<http://www.dep.state.fl.us/water/rulesprog.htm#erp>



Resource Concerns - Water

Ninety percent of this state's population relies on these ground water resources for their drinking water. Additionally, over 50% of all other water needs including agricultural, industry, mining, and electric power generation are supplied by ground water resources.

Water management districts issue consumptive use permits (CUPs) or water use permits (WUPs) that authorize water use. The permits allow water to be withdrawn from surface and groundwater sources for reasonable and beneficial uses such as public supply (drinking water), agricultural irrigation, and industry and power generation.

More information on CUPs can be found at <http://flwaterpermits.com/>



Resource Concerns - Water

Excess/Insufficient Water

- Sands hold very little water; therefore, irrigation management is more critical for crop production in Florida.
- In South Florida, where seepage irrigation is used or fields prone to flooding are cropped using raised beds. Beds generally range from 3 to 8 inches in height, with high beds of 6 to 8 inches preferred where risk of flooding is greatest.
- Raised beds dry faster than if the soil was not bedded, requiring closer attention to irrigation management especially early in the season when root systems are limited.



Resource Concerns - Water

Water Quality Degradation

- Sandy soils are widely used for row crop and vegetable production, but issues with the leaching of mobile nutrients such as nitrogen, potassium and even phosphorus can occur with heavy rain or over irrigation.
- Fertility programs must be managed carefully.



Resource Concerns – Water Quality

Additional site-specific issues with water quality and quantity are addressed by both federal and state laws related to Everglades Restoration:

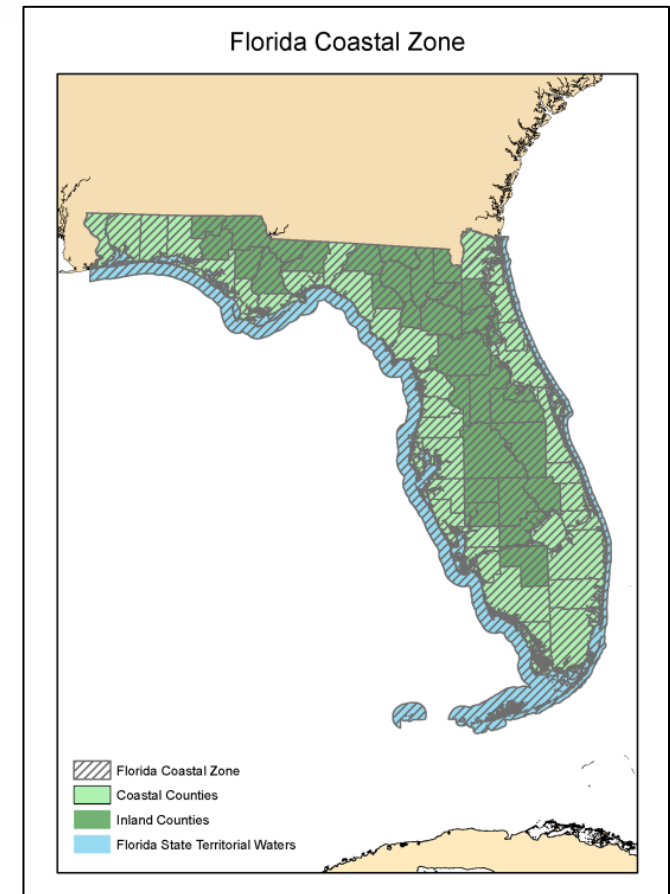
- Restoration initiatives are focused on improving water quality and restoring the hydrology and ecology of the Everglades ecosystem which extends further than many realize - stretching from the Kissimmee Chain of Lakes, to Lake Okeechobee, through the remaining Everglades and on to the waters of the Florida Bay - an area covering 18,000 square miles.
- The Everglades Forever Act, the Comprehensive Everglades Restoration Plan, the Northern Everglades and Estuaries Protection Program, and related efforts including Kissimmee River Restoration, Critical Projects Program, Herbert Hoover Dike Rehabilitation, and Modified Water Deliveries to Everglades National Park all specifically address either water quality and/or quantity issues in this area.
- Agricultural activities in this area, particularly as they relate to P sources, are subject to additional regulations and permits.
- More information on issues related to Everglades Restoration can be found at <http://www.dep.state.fl.us/everglades/>



Resource Concerns – Water Quality

Coastal Zone

- The Florida Coastal Management Program is based on a network of agencies implementing 24 statutes that protect and enhance the state's natural, cultural and economic coastal resources.
<https://floridadep.gov/fcmp>
- Based upon the geography of Florida and the legal basis for the state program, the entire state of Florida is included within the coastal zone.



Resource Concerns - Air

Florida DEP regulates certain stationary sources of pollutants. Use of Code 316 and Code 372 may require a FDEP Air General Permit. Consult your Area Office Engineer regarding potential permit requirements if using one of these practices.

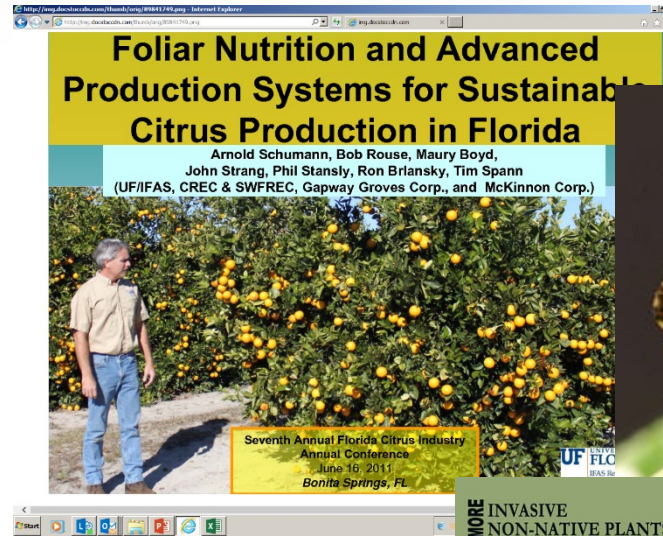
Local air quality regulations may exist for activities involving odors, fugitive dust, or outdoor burning (excluding Prescribed Burning covered by FFS permit). The following counties have local air quality regulations and some issue air permits: **Duval, Orange, Sarasota, Miami-Dade, Broward, Palm Beach, Hillsborough, and Pinellas**. Practices that may emit odors, dust, or VOCs may require notification or authorization in these counties.

General Information:

<http://www.dep.state.fl.us/air/emission/permitting.htm>

Resource Concerns - Plants

- Disease
- Insects
- Invasive Species
- and other things



Resource Concerns -Animals

Livestock Production Limitation

Feed and forage quality or quantity is inadequate for the nutritional needs and production goals of the kinds and classes of livestock.

AN117: Florida Cow-Calf Management, 2nd Edition - Feeding the Cow Herd

Figure 4. Effect of maturity on forage protein.

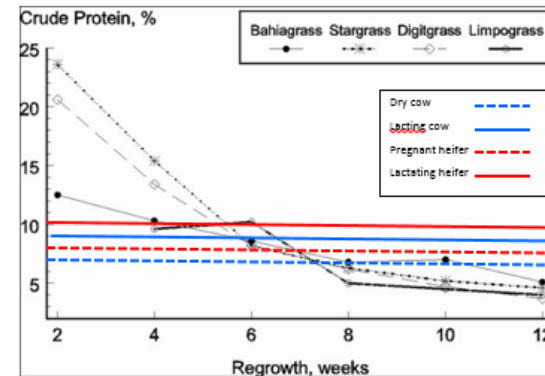
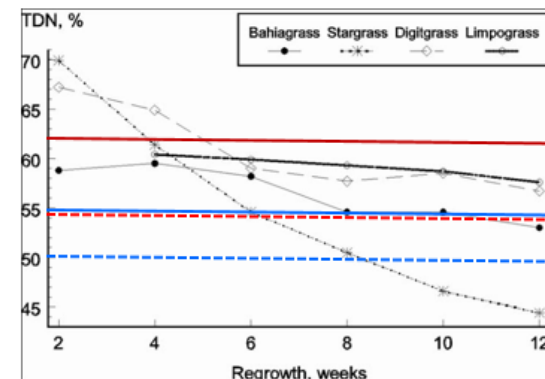


Figure 5. Effect of maturity on forage TDN.



Resource Concerns -Animals


Inadequate Habitat for Fish and Wildlife

Florida Natural Areas Inventory
Biodiversity Matrix

<https://www.fnai.org/BiodiversityMatrix/index.html>

Laws that protect wildlife

<https://journals.flvc.org/edis/article/download/119889/117895>




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State 200-C
Tallahassee, FL 32303
850-224-8277
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www.fnai.org

FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory
Biodiversity Matrix Query Results
UNOFFICIAL REPORT
Created 1/22/2015
[\(Contact FNAI Data Services Coordinator for an official Standard Data Report\)](#)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 1 Matrix Unit: 28613



Descriptions

DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

LIKELY - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; or
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

Matrix Unit ID: 28613
0 Documented Elements Found

2 Documented-Historic Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Drymarchon couperi</i> Eastern Indigo Snake	G3	S3	LT	FT
<i>Gopherus polyphemus</i> Gopher Tortoise	G3	S3	C	ST

Resource Concerns –Animals T&E

Threatened and Endangered
information can be found on:
FL FOTG 2, D, 2.1a Policy

[Florida | Field Office Technical
Guide | NRCS - USDA](#)

Part 410-- Threatened and Endangered Species Review Process for Conservation Planning

FL 410.1 Purpose

To provide guidance and procedures to ensure Florida conservation planners are following all policy and requirements related to Threatened and Endangered (T&E) Species reviews, consultation, mitigation, and avoidance.

FL 410.2 Background

General Manual (GM), Title 190 Part 410, Subpart B, Related Environmental Concerns, Section 410.22(e), Endangered and Threatened Species and Species of Concern, NRCS Policy, provides guidance on protecting T&E listed species as associated with conservation planning. This state instructions provides additional guidance.

FL 410.3 Guidance

- A. Pursuant to CPM 440-530 Subpart D – Application Processing, Natural Resources Conservation Service (NRCS) must adhere to applicable manuals and handbooks during the planning process (reference 530.31C):
1. When planning, NRCS must refer to and adhere to manuals and handbooks including Title 190, General Manual, Part 410, "Compliance with NEPA".
- B. Pursuant to Title 190 – National Environmental Compliance Handbook (NECH) Part 610 Subpart C, E, G – Overview of NRCS "Special Environmental Concerns" and NRCS Policy Endangered and Threatened Species, NRCS must ensure that T&E listed species are considered in all NRCS actions and programs:
2. NRCS is required by the ESA to protect and conserve federally listed species and species proposed for listing. This responsibility includes but is not limited to research, protection, habitat acquisition, restoration, enhancement, and maintenance.

FL 410.4 Procedures

- A. Field Office (FO) personnel are responsible for ensuring that the provisions of this State Instruction are met.
1. On a site-specific basis, FOs must consider the effects of actions and alternatives on listed and proposed species and designated critical habitat as part of the environmental evaluation process. These effects, as well as other relevant informal communications, must be documented on Form NRCS-CPA-52, "Environmental Evaluation Worksheet,"
 - i. FOs will conduct a T&E listed species review for all projects prior to making a determination of effect. The review shall include:

(FI_190-410)

Resource Concerns – Humans Cultural Resources

Cultural Resources Links

<http://dos.myflorida.com/historical/archaeology/cultural-resource-protection/>

http://efotg.sc.egov.usda.gov/references/public/FL/CUR_FL_3.pdf

<http://efotg.sc.egov.usda.gov/references/public/FL/FL-CUR-04-Defining the Area of Potential Effects.pdf>



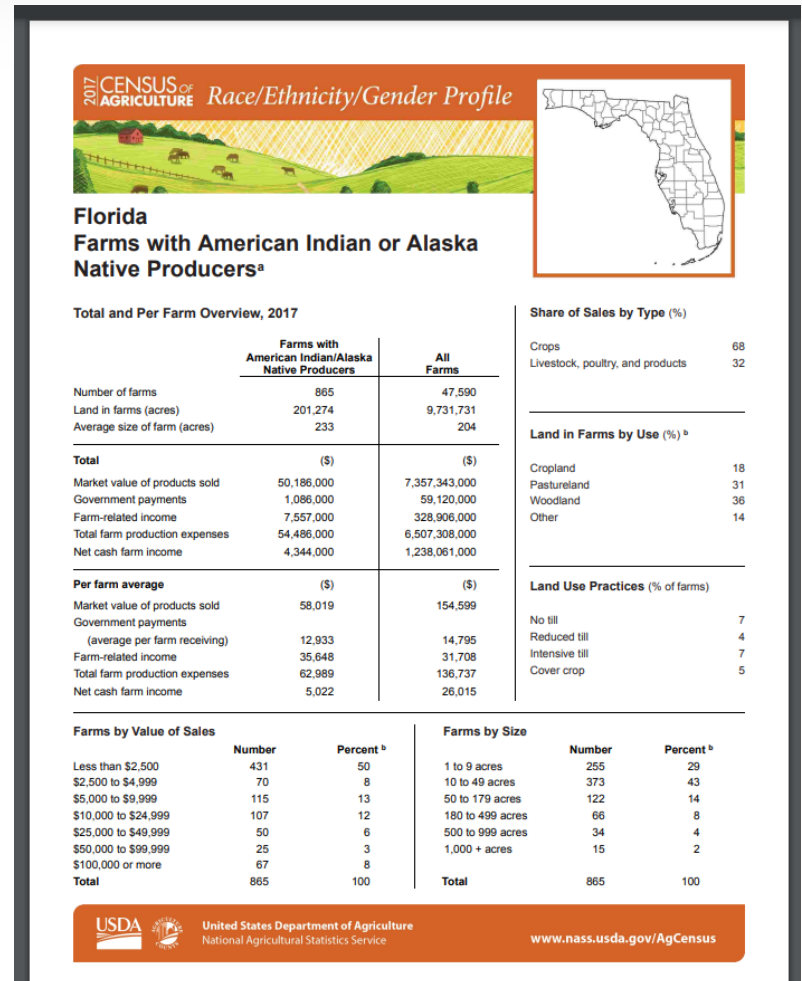
Ponce de Leon



Resource Concern - Humans

Link to 2017 Census of Agriculture Race/Ethnicity/Gender Profile for Florida

https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Race,_Ethnicity_and_Gender_Profiles/Florida/cpd12000.pdf



Resource Concerns – Inefficient Energy Use

- No specific licensing requirements for agricultural energy audits in Florida at this time.
- Planning, design, and certification of any energy related conservation practices may require Professional Engineer License or other certification

Top 15 Conservation Practices Used in Florida

Practice Code	Practice name
590	Nutrient Management
382	Fence
595	Pest Management Conservation System
512	Pasture and Hay Planting
614	Watering Facility
516	Livestock Pipeline
533	Pumping Plant
314	Brush Management
642	Water Well
338	Irrigation Field Ditch
528	Prescribed Grazing
449	Irrigation Water Management
394	Fire Break
340	Cover Crop
328	Conservation Crop Rotation

Expected TSP Workflow

- The State TSP Coordinator will be responsible for reviewing TSP conservation planning for the National Planner Designation.
- The first two plans prepared by a TSP as part of an EQIP contract will be Field Reviewed as part of Alabama's Quality Assurance Process.
- Subsequent conservation plans will be reviewed by the District Conservationist (DC) at the local USDA Service Center.
- The State TSP Coordinator will conduct plan reviews for TSP planner designation renewals.
- Up to 10% of TSP work will be spot check for technical adequacy.
- TSPs will work with the local District Conservationist to make sure the proper environmental evaluations (NRCS.CPA.52) are completed.

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Certificate of Completion

After viewing the State Specific Training module, please print and sign the completion certificate on the following slide.

The certificate is your acknowledgement that based on the information provided in this module, you have the proper knowledge, skills and ability to conduct planning in this State.

Within your NRCS Registry profile, enter the training and upload the signed certificate to verify completion.

STATE SPECIFIC TRAINING MODULE COMPLETION CERTIFICATE

I, _____ hereby verify I have viewed and understand the content of the *Florida State*
TSP Name
Specific Training Module and affirm I have the knowledge, skills, and ability to conduct conservation planning
services in this state.

TSP Signature

Date