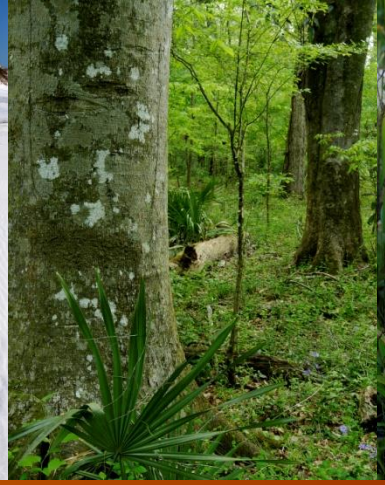




Florida Natural Areas Inventory
Natural Communities of Florida




Program Background

- established in 1981
- long term relationship with Florida Department of Environmental Protection
- affiliated with Florida State University
- Entirely contract-funded
- part of a nationwide network using similar methodologies

Types of Data Developed and Maintained by FNAI

- Rare species occurrences
- T&E species habitat and range models
- Wildlife aggregation sites
- Rare or high quality natural community occurrences
- Invasive plant occurrences
- Conservation lands
- Environmental land acquisition projects
- Potential Natural Areas
- Current and historical land cover

Natural Community Guide

- For 20 years, the FNAI Guide has been widely used as a standard classification of Florida's natural communities
- The "natural community" concept
  - "a distinct and reoccurring assemblage of populations of plants, animals, fungi and microorganisms naturally associated with each other and their physical environment. "
- Each community type is "defined by a combination of physiognomy, vegetation structure and composition, topography, land form, substrate, soil moisture condition, climate, and fire. "
- Often called "plant communities"
- 81 natural communities

Benefits

- Statewide approach benefits communication
  - Statewide ranks aid in acquisition priorities, etc.
  - FNAI Natural Community types are embedded in state land management plans
- Manageable number of categories (currently 81)
- Focus on management
  - Ecological classification vs. land cover
- Intuitive classification that incorporates traditional categories of Florida communities
- Mappable types

Factors to consider in classifying natural communities

- Physiognomy – overall appearance of the community
- Soils
- Plant composition and structure
- Landscape position
- Natural processes
  - Coastal processes
  - Fire frequency
  - Hydrology (seepage, hydroperiod)
  - Climate

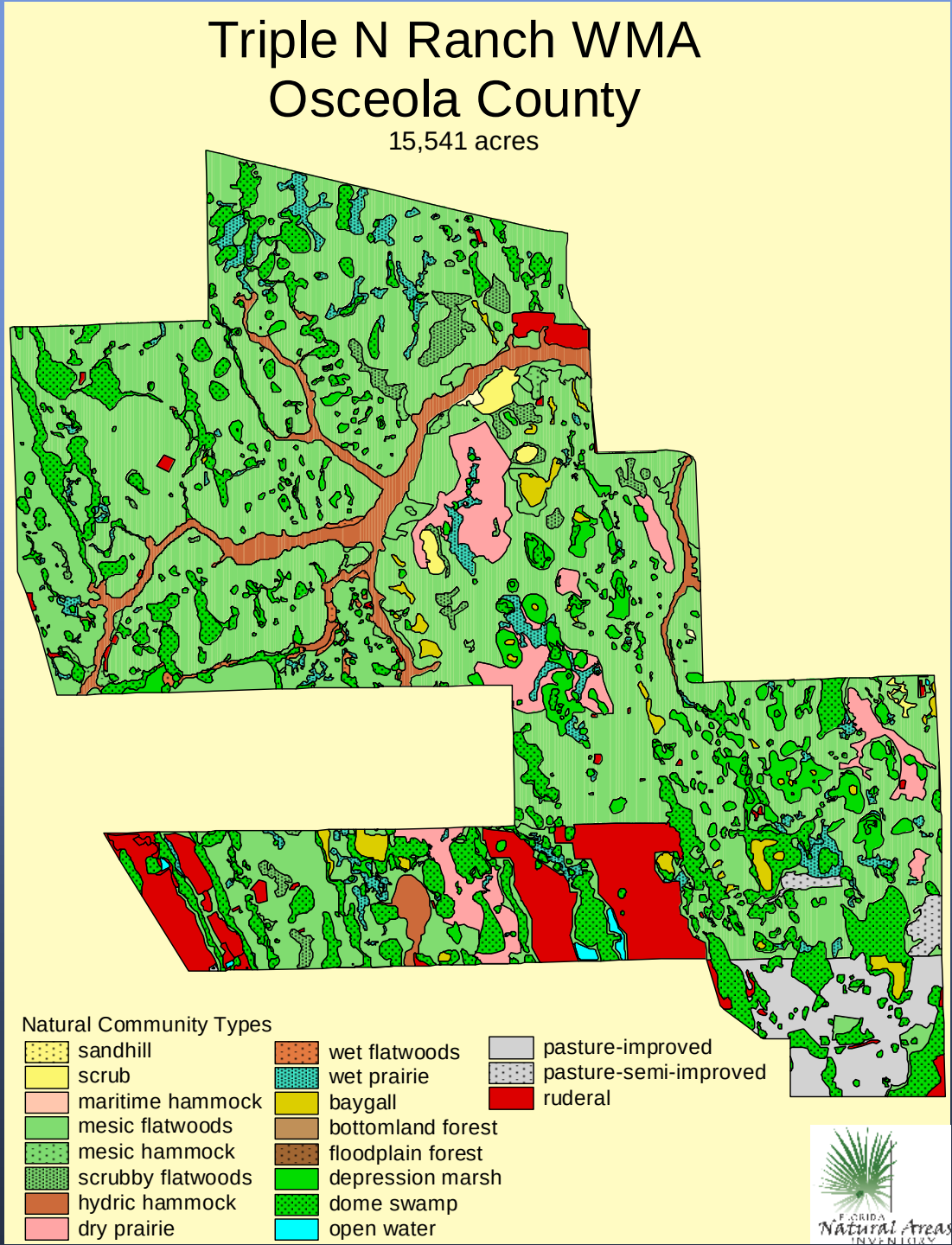
Higher Level Groups

- Hardwood Forested Uplands
- High Pine and Scrub
- Pine Flatwoods and Dry Prairie
- Coastal Uplands
- Sinkholes and Outcrop Communities
- Freshwater Non-forested Wetlands
  - Prairies and Bogs
  - Marshes
- Freshwater Forested Wetlands
  - Cypress/Tupelo
  - Hardwood
- Marine and Estuarine Vegetated Wetlands
- Pond and Lakes (Lacustrine)
- Rivers and Streams (Riverine)
- Subterranean
- Marine and Estuarine

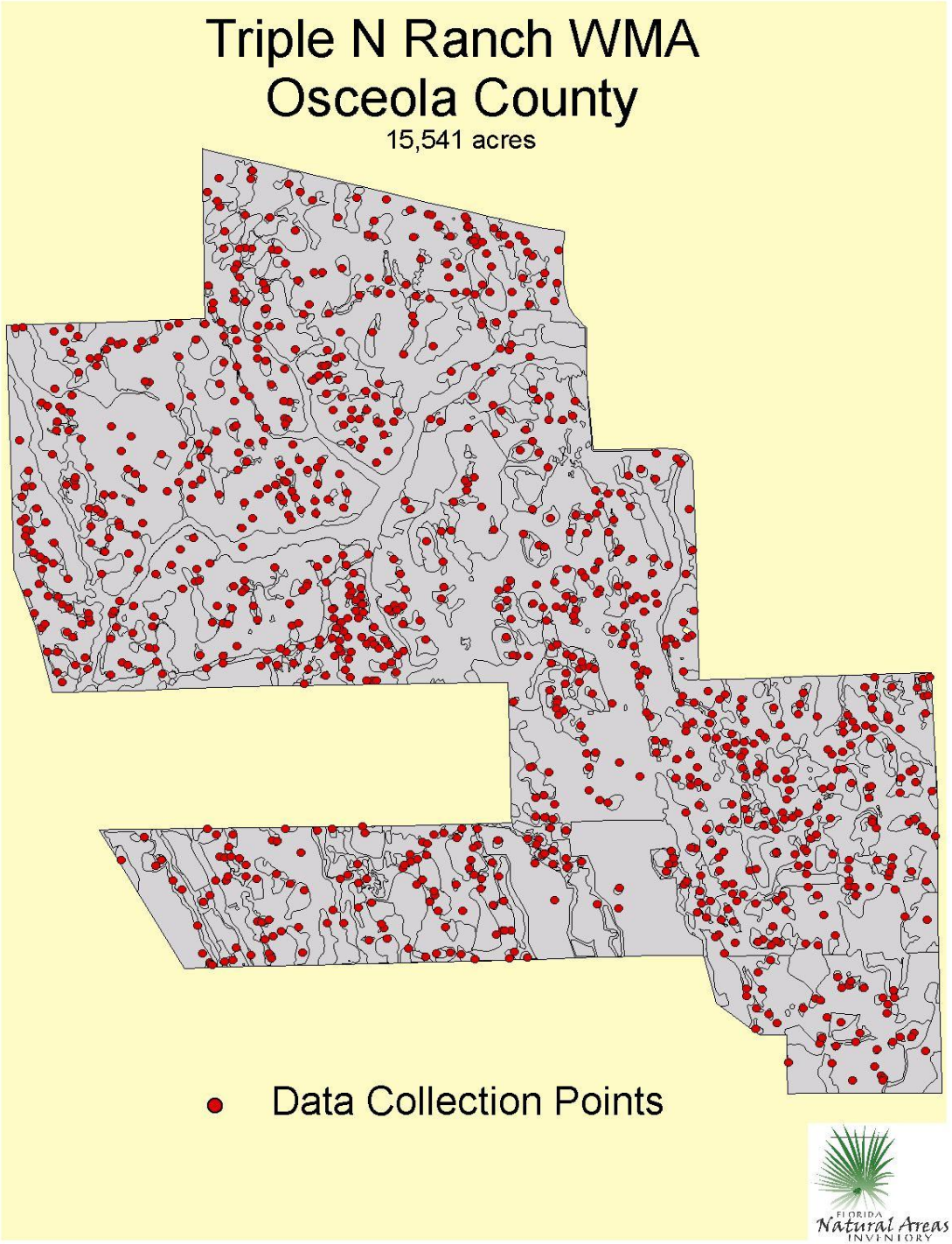
Natural Community Mapping and Ecological Characterization: Triple N Ranch example

989 natural community polygons

minimum mapping unit 0.5 acre



985 Data Collection Points



Date	20030522
Field_id	560
Point_id	183
Data_type	datalogger
Fnai_nc	wet flatwoods
Rud_type	ZZ
Includednc	ZZ
Historicnc	ZZ
Canopy_cov	6-25%
Canopy_ht	>30-45 ft
Basalarea	40
Canopy_age	mature
Subcan_cov	<1%
Subcan_ht	>15-30 ft
Tshrub_cov	<1%
Tshrub_ht	6-9 ft
Sshrub_cov	76-100%
Sshrub_ht	>3-6 ft
Totalshrub	76-100%
Dwarfshrub	1-5%
Palmetto	51-75%
Herb_cover	<1%
All_gramin	<1%
Wirygramin	none
Legume_cov	<1%
Litter_cov	51-75%
Lichen_mos	none
Epiphyte	none
Vine_abund	occasional
Bare_soil	none
Organic	1-2"
Aerialfuel	none
Fine_fuel	low
Med_fuel	moderate
Heavy_fuel	low
Fuel_conti	continuous
Lastfireyr	<2 yrs
Plotdist_1	natural
Plotdist_2	ZZ
Plotdist_3	ZZ
Plot_hydro	ZZ
Plot_sever	light
Polydist_1	natural
Polydist_2	firebreaks
Polydist_3	ORV trails or roads
Poly_hydro	ZZ
Poly_sever	light
Weedycover	none
Exoticscov	none
Comments	

Data Points

- GPS latitude and longitude
- 52 attributes
  - Composition
  - Structure
  - Fuels
  - Fire
  - Disturbance
  - Exotics

FNAI Natural Community Mapping 2003-2011

- Statewide mapping total:
  - Current condition 2,350,000 acres
  - Historical vegetation 1,600,000 acres
- Natural community polygons: 103,000
- Groundtruth points: 59,603
- Minimum mapping unit: 0.5 ac.

Reference Natural Communities

- 44 Sites
- Specific locations
- Photographs
- Narrative descriptions
- Quantitative data
- ARC IMS web interface

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iMapInvasives
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FLORIDA Natural Areas INVENTORY
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Tallahassee, FL 32303
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FLORIDA STATE UNIVERSITY
Florida Resources and Environmental Analysis Center at the Institute of Science and Public Affairs

natural communities

Reference Natural Communities

There remain today virtually no pristine examples of the biological communities that constitute Florida's natural landscape. There are still some places, however, where the ecological condition of existing natural communities is of sufficiently high-quality that these select examples can serve as models for that community type. As models, each reference natural community exhibits the species diversity, species composition, physical structure, and general ecological integrity expected for that FNAI natural community type. Reference natural communities provide a standard against which to measure the condition of similar communities—a starting point for establishing desired future conditions to inform land management and restoration. These data augment the ***Guide to the Natural Communities of Florida, 2010 edition***.

FNAI has identified 44 reference sites for ten natural community types for which we developed detailed descriptions and quantitative characterizations that are presented here in an **interactive map**. Emphasis in this first phase, which was funded by the Florida Fish and Wildlife Conservation Commission, was given to actively managed natural community types to support FWC's adaptive land management decision support tool—**Objective-based Vegetation Management**. Multiple reference sites were identified for each natural community type across the community's geographic range to account for expected regional variation. Similarly, multiple reference sites were specifically identified to account for natural variation in species composition (e.g., oak scrub and rosemary bald). All reference natural community sites are publically accessible.

Natural community types included in the first phase of the Reference Natural Community project, and the number of sites identified and described for each type:

Dry Prairie	**3 sites**	**Upland Pine**	**3 sites**
Mesic Flatwoods	**6 sites**	**Wet Flatwoods**	**4 sites**
Sandhill	**7 sites**	**Wet Prairie**	**4 sites**
Scrub	**8 sites**	**Floodplain Marsh**	**2 sites**
Scrubby Flatwoods	**4 sites**	**Basin Marsh**	**3 sites**

Selected Images of Reference Natural Communities


Dry Prairie


Mesic Flatwoods


Wet Prairie

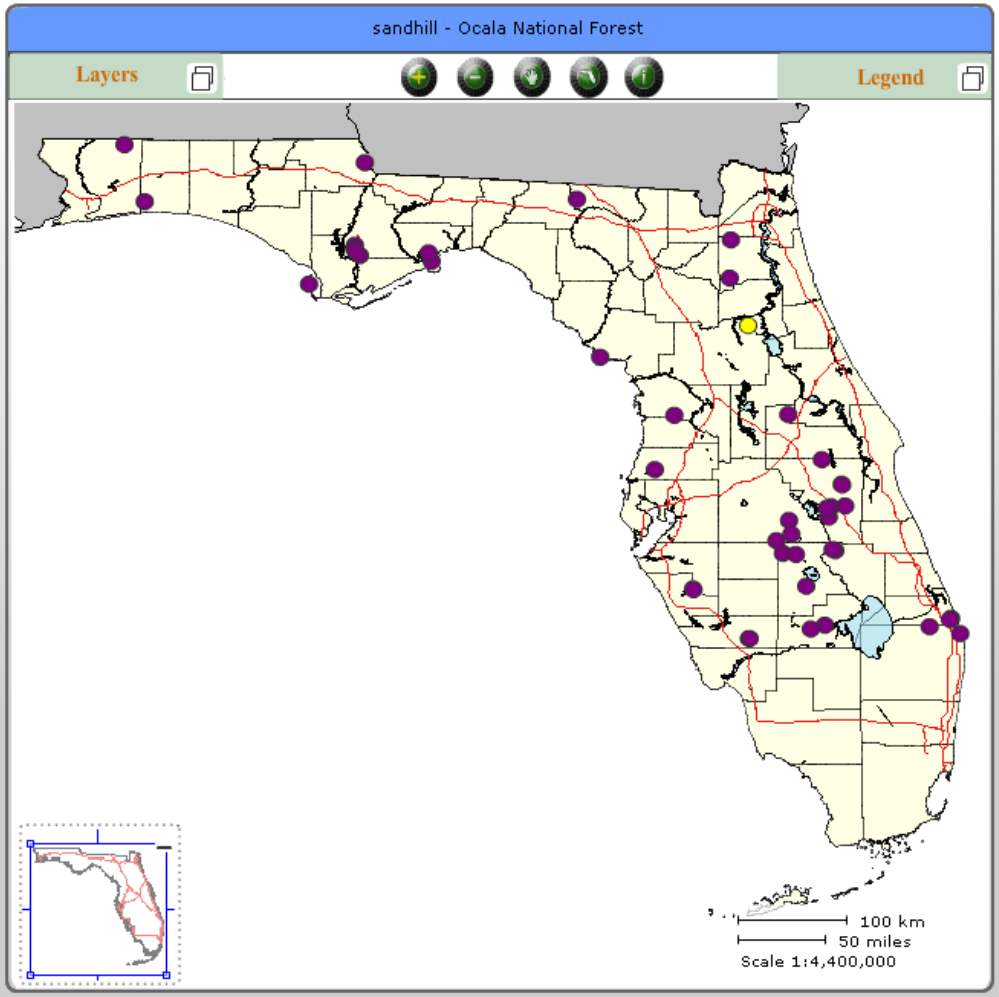

Sandhill


Scrub

View instructions for using the interactive map.

Go directly to the interactive map

REFERENCE NATURAL COMMUNITIES



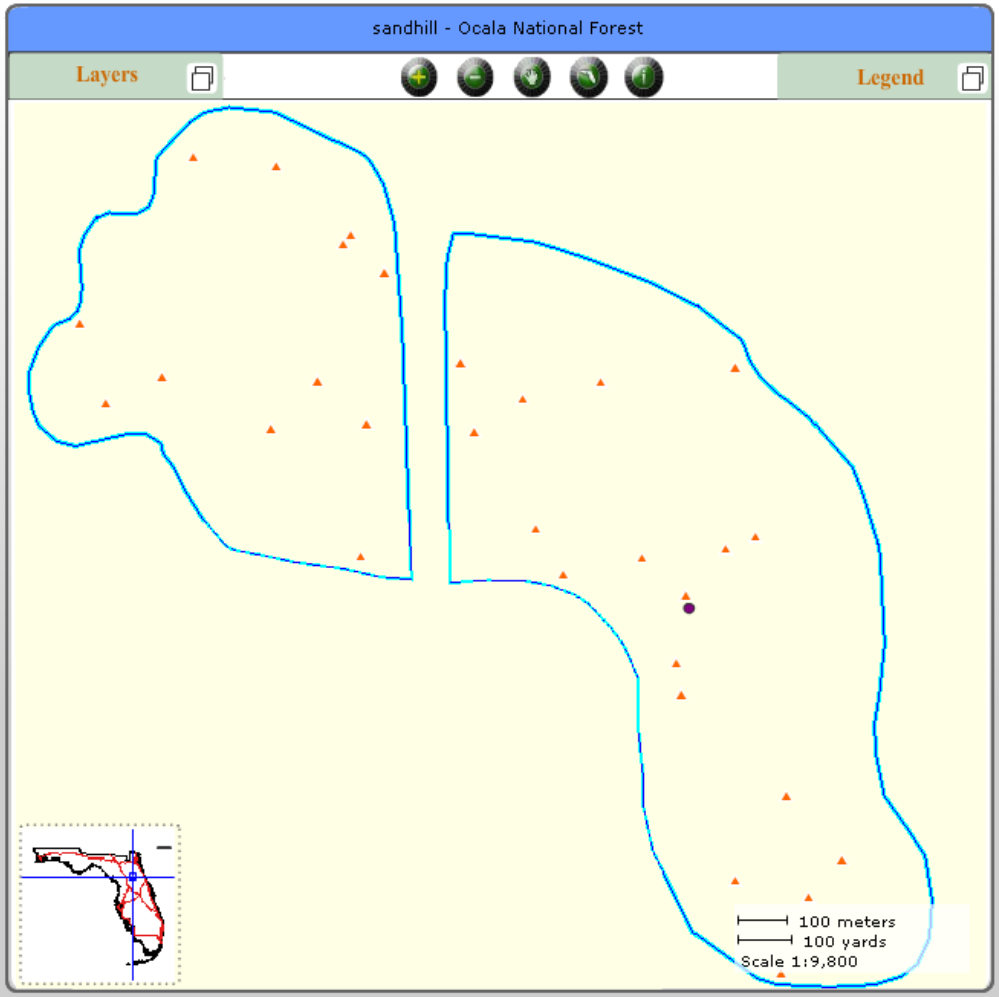
List of Reference Areas

(sort by clicking Community Type or Site - select site to zoom to site on map)

Download Data

Community type	Site
basin marsh	Fred C. Babcock-Cecil M. Webb Wildlife Management Area
basin marsh	Three Lakes Wildlife Management Area
basin marsh	John C. and Mariana Jones/Hungryland Wildlife and Environmental Area
dry prairie	Myakka River State Park
dry prairie	Kissimmee Prairie Preserve State Park
dry prairie	Three Lakes Wildlife Management Area
floodplain marsh	Fisheating Creek Wildlife Management Area
floodplain marsh	Fisheating Creek Wildlife Management Area
mesic flatwoods	Jonathan Dickinson State Park
mesic flatwoods	Apalachicola National Forest
mesic flatwoods	Jennings State Forest
mesic flatwoods	Triple N Ranch Wildlife Management Area
mesic flatwoods	Myakka River State Park
mesic flatwoods	Starkey Wilderness Park
sandhill	St. Marks National Wildlife Refuge
sandhill	Mike Roess Gold Head Branch State Park
sandhill	Eglin Air Force Base
sandhill	Ocala National Forest
sandhill	Withlacoochee State Forest
sandhill	Tiger Creek Preserve
sandhill	Wekiwa Springs State Park
scrub	T. H. Stone Memorial St. Joseph Peninsula State Park
scrub	Lake Wales Ridge Wildlife and Environmental Area, Silver Lake
scrub	Lake Wales Ridge Wildlife and Environmental Area, Holmes Ave.
scrub	Three Lakes Wildlife Management Area
scrub	Saddle Blanket Lakes Preserve
scrub	Lake Wales Ridge Wildlife and Environmental Area, Carter Creek
scrub	Juno Dunes Natural Area

REFERENCE NATURAL COMMUNITIES



sandhill - Ocala National Forest

Sandhill - Ocala National Forest

In the northern portion of the peninsular Central Ridge District, the Ocala Scrub Province forms a huge area of sand pine and scrub oaks. Occurring as a large linear patch within this scrub, Riverside Island is a solid stand of open sandhill on rolling hills with excessively drained gray to yellowish sand in Ocala National Forest. The reference sandhill is in the northern half of this "island" bounded by scrub to the north, east, and west, and Lake Kerr to the south.

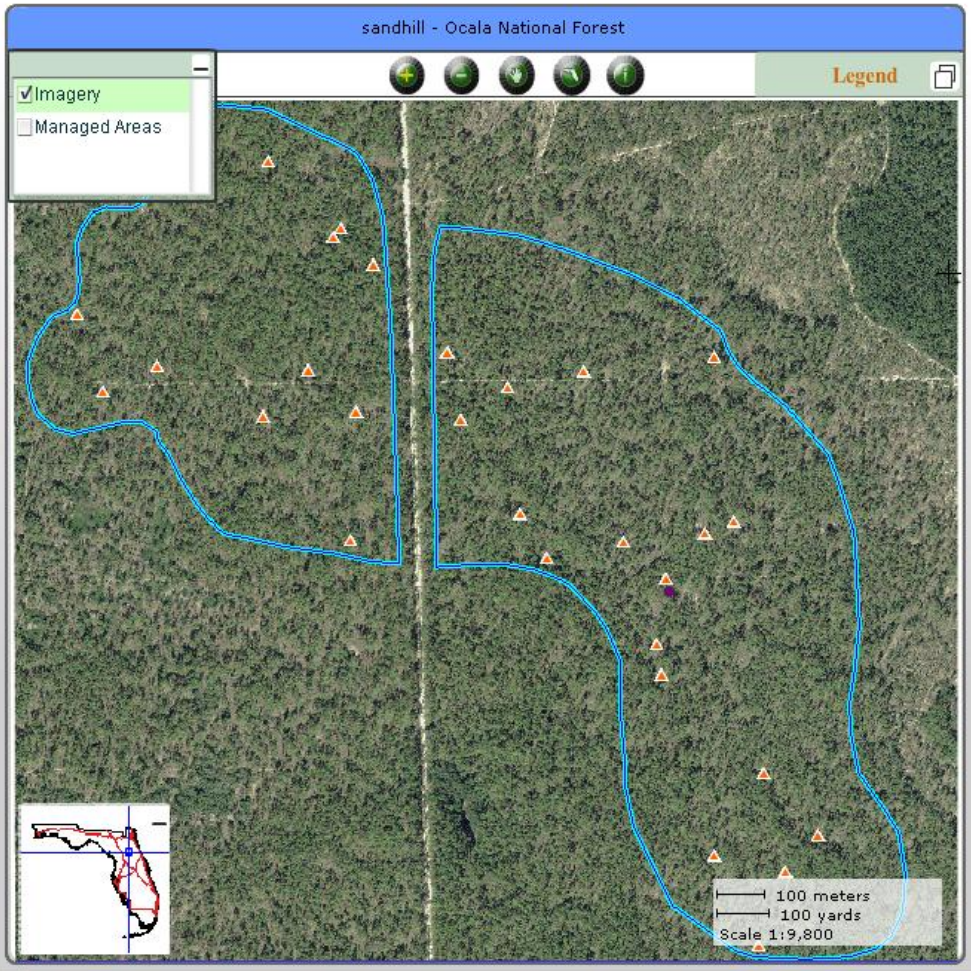
There is a moderately spaced canopy of tall longleaf pine (*Pinus palustris*) over a mostly herbaceous understory. Pines are commonly over 10 inches in diameter. Younger longleaf pines and seedlings are often clustered, with occasional turkey oak (*Quercus laevis*) and sand live oak (*Q. geminata*) dotted very sparsely in the midstory. Short shrubs and seedlings of these species are common, along with low (<2' tall) thickets of fire-pruned myrtle oak (*Q. myrtifolia*), but shrub cover is generally less than 10 percent and, in many areas, absent entirely. Other regularly encountered shrubs are gopher apple (*Licania michauxii*) and littleleaf buckbrush (*Ceanothus microphyllus*). Herbaceous cover is abundant, often a thick carpet of mainly wiregrass (*Aristida stricta* var. *beyrichiana*), frequently over 40 percent cover. Herb cover may also be thin with much exposed sand. Although wiregrass is the most frequent herb, pineywoods dropseed (*Sporobolus junceus*) is also abundant and in many places co-dominant with wiregrass such that individuals of the two species are difficult to distinguish. Although there is a high diversity of other herbs, these add very little cover to the herbaceous layer. The most common species include witchgrass (*Dichanthelium* sp.), narrowleaf silkgrass (*Pityopsis graminifolia*), Florida false sunflower (*Phoebanthus grandiflorus*), milkpeas (*Galactia* sp.), rabbitbells (*Crotalaria rotundifolia*), oblongleaf twinflower (*Dyschoriste oblongifolia*), dogtongue wild buckwheat (*Eriogonum tomentosum*), tall elephantsfoot (*Elephantopus elatus*), eastern silver aster (*Symphyotrichum concolor*), coastalplain

FLORIDA Natural Areas INVENTORY

ABOUT FNAI STAFF PARTNERSHIPS CONTACT US

REFERENCE NATURAL COMMUNITIES

List Description **Photos** Sample Station Data Data Summary



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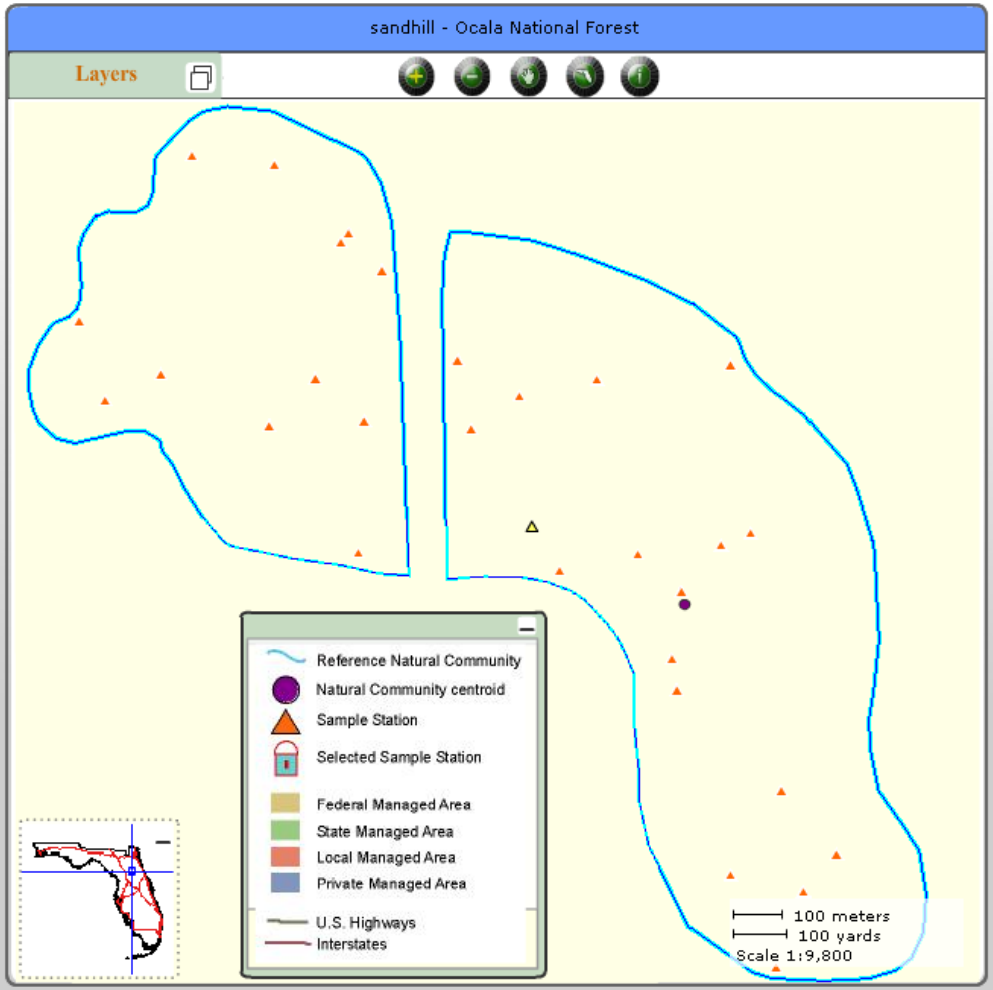
sandhill - Ocala National Forest

REFERENCE NATURAL COMMUNITIES



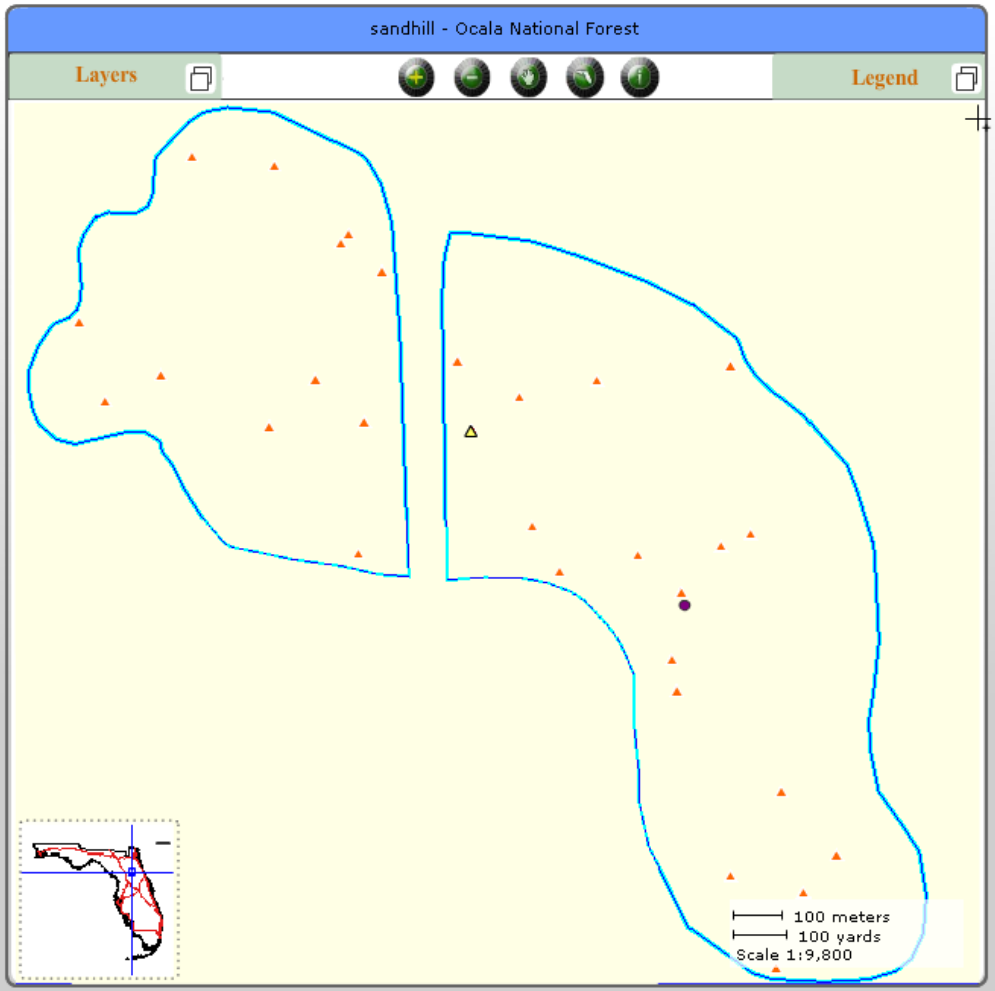
List Description Photos **Sample Station Data** Data Summary

open in new window Definitions of Vegetation Measures

sandhill - Ocala National Forest

{}	station id	community	avg_Percent_Bare_Ground	avg_Percent_Herb_Cover	avg_Percent_Wiry_Cover	avg_Exot
☐	76726	sandhill	0 %	55	55	
☐	76727	sandhill	0 %	45	38.3	
☐	76728	sandhill	0 %	21.7	18.3	
☐	76729	sandhill	0 %	38.3	38.3	
☐	76730	sandhill	0 %	6.8	6.7	
☐	76731	sandhill	5.2 %	15	15	
☐	76732	sandhill	11.7 %	8.3	5	
☐	76733	sandhill	6.8 %	11.7	5	
☐	76734	sandhill	8.3 %	15	8.3	
☐	76735	sandhill	0 %	78.3	71.7	
☐	76736	sandhill	0 %	85	85	
☐	76737	sandhill	0.2 %	18.3	8.3	
☐	76738	sandhill	0.2 %	31.7	25	
☐	76739	sandhill	0 %	41.7	38.3	
☐	76740	sandhill	1.7 %	25	25	

REFERENCE NATURAL COMMUNITIES



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sandhill - Ocala National Forest

Metric	Average Reference Site Value	FNAI Recommended Range for Sandhill
Basal Area of Pine (sq ft per acre)	57.7	20-60
Pine Regeneration (stems within 7 m radius)	9.3	>0
Bare Ground (%)	2.3	1-10
Herb Cover (%)	36.7	>25
Wiry Graminoid Cover (%)	31.6	>10
Exotic Plant Cover (%)	0.0	0
Weedy Species Cover (%)	1.0	<2
Average Maximum *Serenoa* Height (ft)	0.0	<3
Serenoa Cover (%)	0.0	<5
Serenoa Petiole Density > 3 ft	0.0	0
Average Maximum Shrub Height (ft)	0.9	<3
Shrub Cover (%)	4.8	10-20
Shrub Stem Density > 3 ft	0.0	0
Maximum Shrub DBH (in)	0.0	<1
Non-Pine Stem Density (stems within 7 m radius)	2.6	<3
Subcanopy (stems within 7 m radius)	0.0	<1

Cooperative Land Cover Map

- State Wildlife Grant 2008 – 2010
- Develop improved statewide land cover from existing sources & aerial photo review
- Focus on critical natural communities: scrub, sandhill, dry prairie, pine rockland, rockland hammock
- Uses new FWC Land Cover Classification

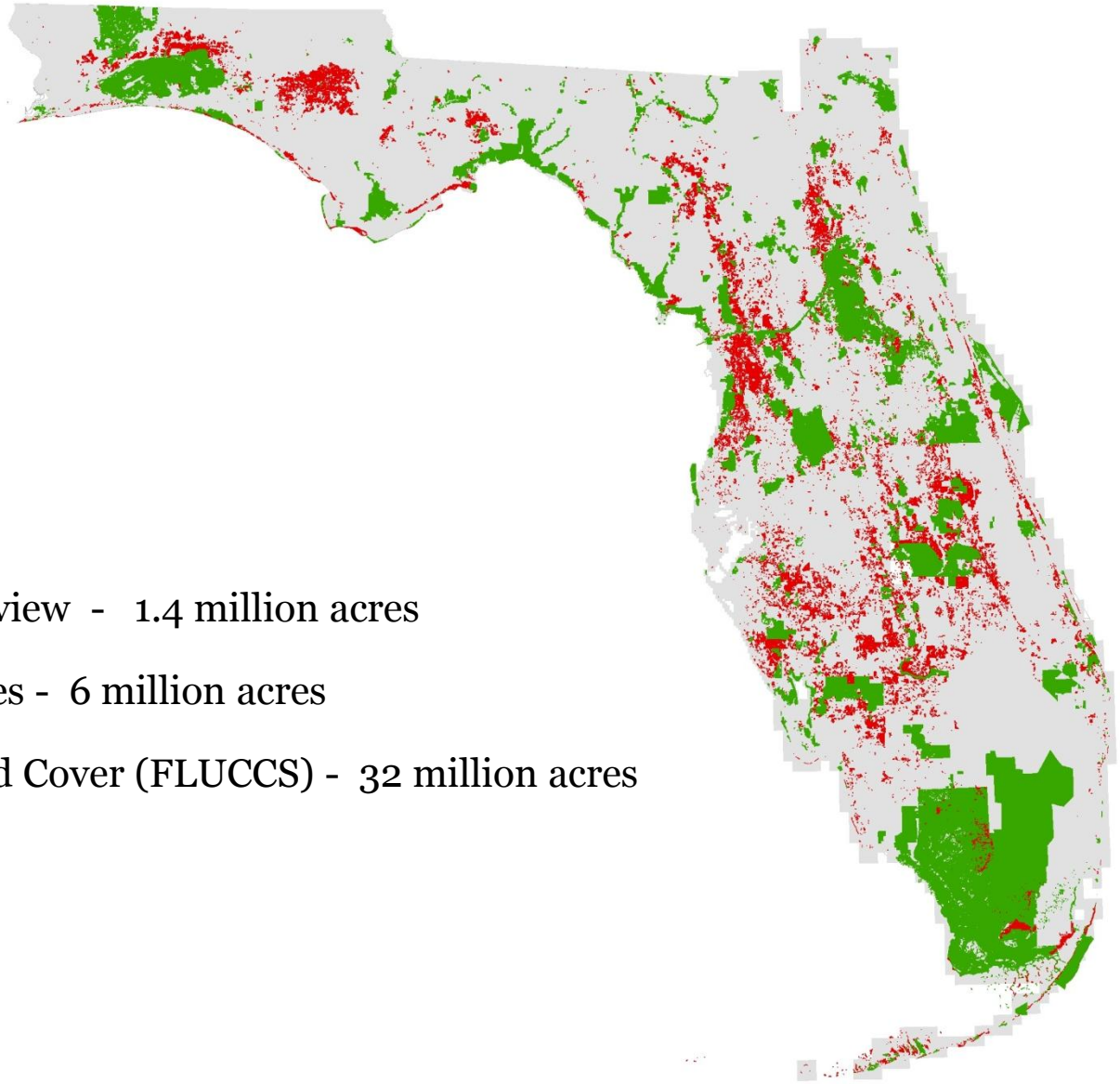
Local Data Sources

Data collected from 37 sources including:

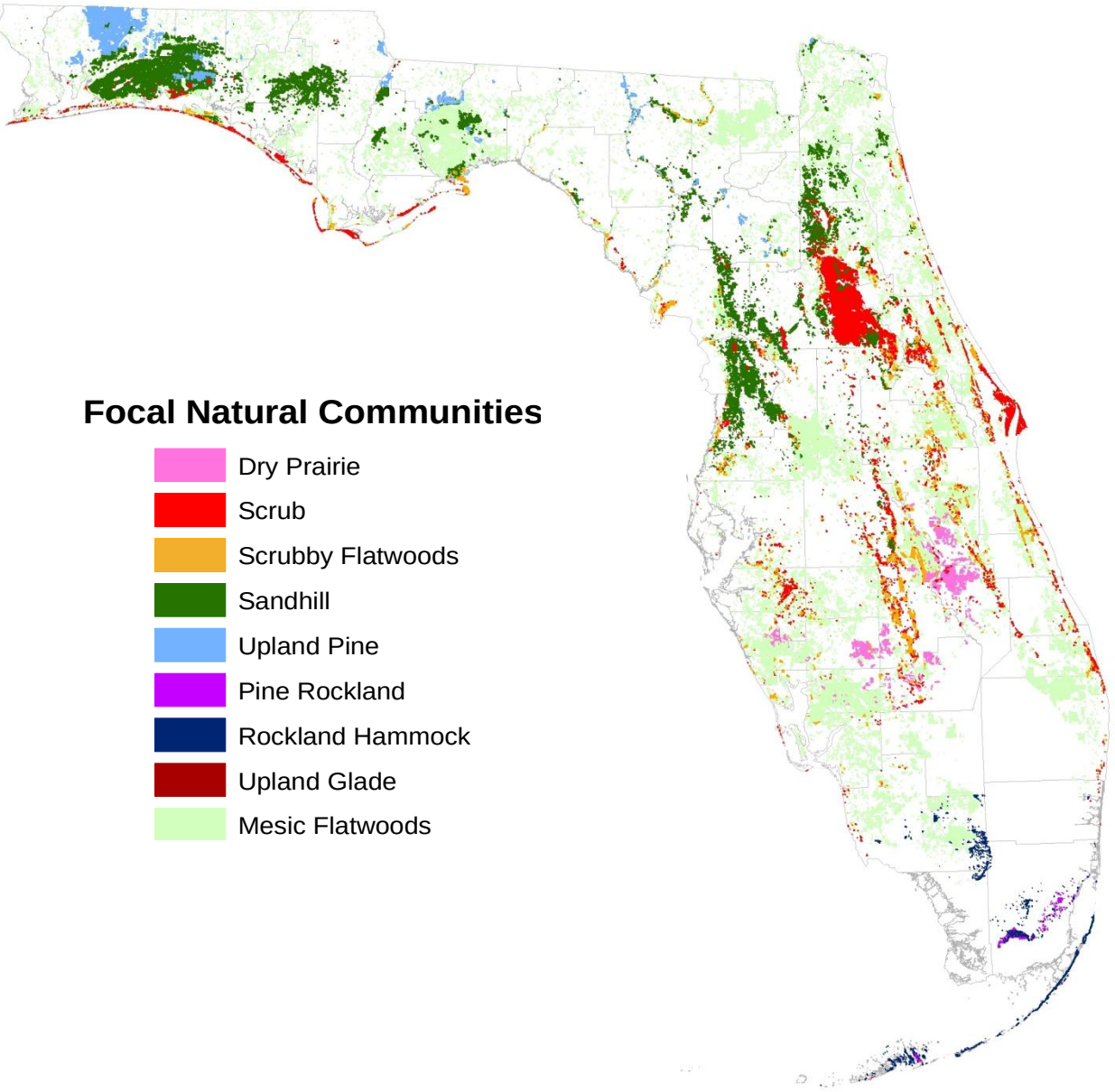
- Florida Park Service
- Archbold Biological Station
- Avon Park Air Force Range
- St. Johns River WMD
- Palm Beach County
- Brevard County
- The Nature Conservancy
- USFS
- USFWS
- Florida International University

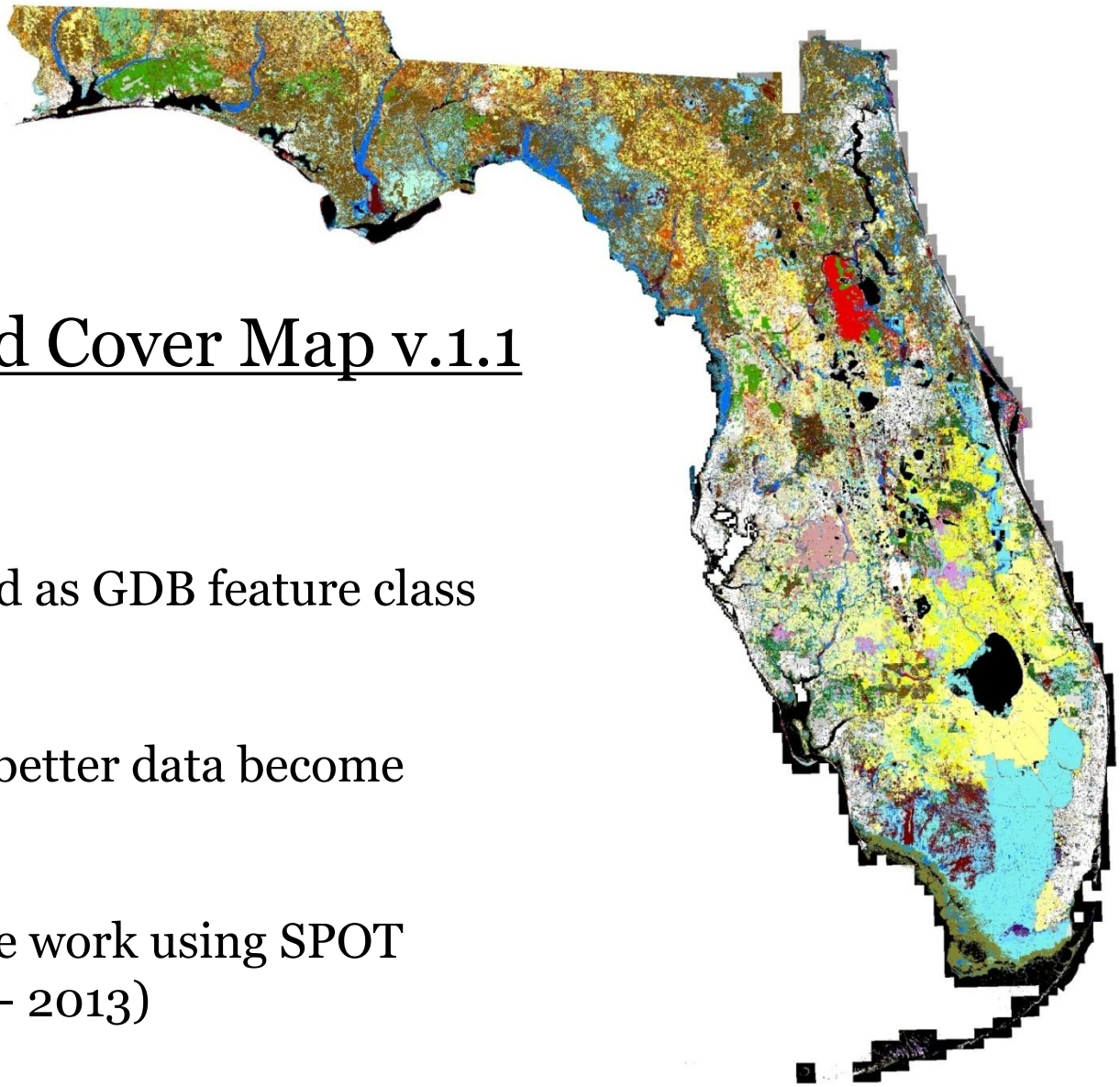
San Felasco Hammock State Park

Data sources



- FNAI Aerial Photo Review - 1.4 million acres
- Local/Regional Sources - 6 million acres
- Florida Land Use Land Cover (FLUCCS) - 32 million acres


Focal Natural Communities
Dry Prairie
Scrub
Scrubby Flatwoods
Sandhill
Upland Pine
Pine Rockland
Rockland Hammock
Upland Glade
Mesic Flatwoods



Cooperative Land Cover Map v.1.1

- 189 classes
- Available for download as GDB feature class or 15 m GRID
- Intent is to update as better data become available
- FWC plans to continue work using SPOT imagery (SWG 2010 – 2013)

FNAI on the Web

- Rare species field guides
- Natural community descriptions
- Florida conservation lands data
- Florida Forever projects
- Biodiversity Matrix
- Conservation Needs Assessment data
- Critical Lands and Waters Identification Project (CLIP) data (FNAI/GeoPlan/FWC)
- Invasive plant species occurrence data
- Cooperative Land Cover data
- LandScope Florida