

# Florida Soil Series and Natural Community Associations<sup>1</sup>

G. D. J. LaPierre, N. D. Medina-Irizarry, and M. G. Andreu<sup>2</sup>

## Abstract

The purpose of this publication is to provide Florida land managers an up-to-date table that links soil series to potential natural community types. Soils often dictate the presence of different types of natural communities. We synthesized land-management plans, the Florida Natural Areas Inventory (FNAI) documentation of exemplary sites, along with the UC Davis Soil Resource Laboratory Soil Web Survey mapping information system ([SoilWeb](#)) (FNAI 2010; UC Davis n.d.) to correlate soil series and natural communities. A table provides a list of soil series with GPS coordinates and conservation site names. Use of this table will help private landowners, land managers, and researchers detect potential, current, and former natural communities on sites. However, this publication is not designed to be used as a single absolute determinant; ground-truthing and historical mapping should always be used when mapping natural communities.

## Background

Florida is home to a diverse mosaic of soils and natural communities (FNAI 2010). Soils often dictate the occurrence of different natural communities (USDA 1989; Myers and Ewel 1990). These natural communities, in turn, are distinguished from one another based on differences in disturbance regimes and species present (FNAI 2010; Myers and Ewel 1990; Noss 2018). In Florida, the Florida

Natural Areas Inventory (FNAI) classification system is a standard most agencies and organizations use to identify and classify different types of natural communities (FNAI 2010). Distinguishing natural communities is a crucial task for land managers working to restore or conserve natural areas. However, identifying a natural community can be a difficult task, especially in areas significantly modified by humans (e.g., agriculture, silviculture, urbansites). In these cases, knowledge of the soil type present on a site can help determine the previous natural community. Yet, a catalog correlating soils to natural communities is not currently available to land managers.

In Florida, soils are classified based on the taxonomic system developed by the United States Department of Agriculture (USDA). This system is based on six levels of classification, with orders being the highest and series being the lowest. Generally, there is little correlation between higher soil levels (e.g., orders, sub-orders) and regional vegetational types (Hironaka, Fosberg, and Neiman 1990). However, natural communities can be correlated to more refined lower levels of soil classification (e.g., series) (USDA 1989; Hironaka, Fosberg, and Neiman 1990). In 1989, the Soil Conservation Service (SCS) developed a table linking soil series to the occurrence of 26 natural communities found in Florida (USDA 1989). However, the natural community definitions developed by the SCS differ from the modern and more widely used FNAI community definitions in Florida. The purpose of this publication is to

1. This document is FOR384, one of a series of the School of Forest, Fisheries, and Geomatics Sciences. Original publication date May 2022. Visit the EDIS website at <https://edis.ifas.ufl.edu> for the currently supported version of this publication.

2. G. D. J. LaPierre, PhD candidate; N. D. Medina-Irizarry, research assistant; and M. G. Andreu, associate professor; Forest Systems Lab, School of Forest, Fisheries, and Geomatics Sciences, UF/IFAS Extension Gainesville, Florida, 32611.

provide Florida land managers an up-to-date table (Table 1) that links soil series to potential FNAI natural community types. As can be seen in Table 1, a soil series may support multiple community types.

## Methodology

We correlated soil series and natural communities through the synthesis of land-management plans, FNAI documentation of exemplary sites, and SoilWeb mapping information. A total of 226 soil series were included in this analysis. Soil series not included here had too small a range across Florida or were not found within FNAI reference plots or conservation lands. Additionally, soil subgroups are also included in this publication to help provide supplementary information for users. This compilation provides a framework to include other soil series and community types in future work.

We first located FNAI exemplary sites from the coordinates provided via FNAI documentation and then matched the natural community type(s) to the corresponding soil series present per the SoilWeb. In cases where a soil series was not found on any FNAI exemplary site, an alternative location within a public conservation area was used. Land-management plans were referenced to help verify the soil series and the natural community classification. The GPS coordinates and conservation site names of the selected locations for said soil series were also recorded. Out of 46 terrestrial FNAI community types, 42 were included in this assessment. The four that were excluded are: upland glade, sinkhole, limestone outcrop, and keys cactus barren communities.

In certain instances, soils may not be useful in distinguishing closely related natural communities. For example, various coastal upland communities are located within the landscape based on their proximity to the seashore. Thus, they are not easily distinguished from one another at a broad level using soil mapping alone. This is also true for other sets of communities where elevation and hydrology play a large role in the location of the community. Consequently, certain communities are referred to by their broader FNAI community classifications. These include cypress and tupelo swamps, marshes, and coastal upland communities (see Table 2). Additionally, bottomland forest and alluvial forest communities were combined due to similar issues in distinguishing these communities from one another using soils alone<sup>1</sup>.

This tool, when used in combination with the USDA NRCS soil map provides insight to potential native plant communities that may be found on a given site. Soil mapping data can be readily accessed through apps such as SoilWeb on a mobile device. Individuals seeking to complete rapid assessment of a parcel for acquisition and conservation purposes may want to identify possible locations of threatened and endangered species (T&E) based on potential plant communities. This tool can be used to assist landowners and managers in determining the desired future condition of a parcel despite the site having been degraded due to past land-use practices.

This matrix should be considered to be a first approximation, and we encourage users to contact the authors with updates.

## Literature Cited

- Florida Natural Areas Inventory (FNAI). 2010. Guide to the Natural Communities of Florida: 2010 Edition. 223.
- Hironaka, M., M. A. Fosberg, and K. E. Neiman. 1990. The Relationship between Soils and Vegetation. *Proceedings—Management and Productivity of Western-Montane Forest Soils* 29–31.
- Myers, R. L., and J. J. Ewel. 1990. *Ecosystems of Florida*. University of Central Florida Press, Orlando.
- Noss, R. F. 2018. *Fire Ecology of Florida and the Southeastern Coastal Plain*. University Press of Florida, Gainesville.
- UC Davis California Soil Resource Lab. (n.d.). SoilWeb: An Online Soil Survey Browser. Retrieved February 14, 2022, from <https://casoilresource.lawr.ucdavis.edu/gmap/>
- US Department of Agriculture, Soil and Water Conservation Service (USDA) 1989. *26 Ecological Communities of Florida*. Gainesville, Florida.

Table 1. USDA Soil Series and correlated FNAI natural communities, with example locations of where these soil community relationships occur, as well as the order and subgroup each soil series is classified as based on USDA soil taxonomy.

Soil Series	FNAI Community	Soil Order	Subgroup	Example Location	Location Name and Management Plan Hyperlinked
Albany	Upland Pine	Ultisols	Grossarenic Paleudults	29.99034, -85.01080	<a href="#">Apalachicola National Forest</a>
Alpin	Sandhill	Entisols	Lamellic Quartzipsamments	29.75018, -82.67834	<a href="#">Bell Ridge Longleaf Wildlife and Environmental Area</a>
Anclote	Cypress/Tupelo Wetland	Mollisols	Typic Endoaquolls	29.31896, -81.89984	<a href="#">Ocklawaha River Wildlife Management Area</a>
Angie	Upland Pine	Ultisols	Aquic Paleudults	30.90064, -86.65578	<a href="#">Blackwater River State Forest</a>
Apopka	Upland Pine	Ultisols	Grossarenic Paleudults	29.63165, -82.37119	<a href="#">Natural Area Teaching Laboratory</a>
Archbold	Sandhill, Scrub	Entisols	Typic Quartzipsamments	27.60196, -81.25211	<a href="#">Avon Park Air Force Range</a>
Aripeka	Hydric Hammock	Alfisols	Aquic Hapludalfs	29.02585, -82.73428	<a href="#">Withlacoochee Gulf Preserve</a>
Astatula	Sandhill, Scrub	Entisols	Typic Quartzipsamments	29.44778, -81.82776	<a href="#">Ocala National Forest - Riverside Island</a>
Basinger	Wet Flatwoods	Entisols	Spodic Psammaquents	27.03754, -81.38566	<a href="#">Platt Branch Wildlife and Environmental Area</a>
Bayvi	Salt Marsh	Mollisols	Cumulic Endoaquolls	29.39896, -83.19474	<a href="#">Lower Suwannee National Wildlife Refuge</a>
Bessie	Mangrove Swamp	Histosols	Terric Haplosaprists	28.64156, -80.62810	<a href="#">Merritt Island National Wildlife Refuge</a>
Bigbee	Bottomland & Alluvial Forest	Entisols	Typic Quartzipsamments	30.39107, -83.16577	<a href="#">Suwannee River State Park</a>
Bivans	Upland Hardwood Forest	Alfisols	Typic Albaqualfs	29.75552, -82.46045	<a href="#">San Felasco Hammock State Park</a>
Bladen	Wet Prairie, Wet Flatwoods	Ultisols	Typic Albaquults	30.11168, -85.03251	<a href="#">Apalachicola National Forest</a>
Blanton	Upland Pine, Upland Mixed Woodland	Ultisols	Grossarenic Paleudults	29.96996, -82.76404	<a href="#">Ichetucknee State Park</a>
Blichton	Upland Hardwood Forest	Ultisols	Arenic Plinthic Paleaquults	29.73541, -82.43931	<a href="#">San Felasco Hammock Preserve State Park</a>
Bluff	Cypress/Tupelo Wetland	Mollisols	Typic Endoaquolls	29.21146, -82.03255	<a href="#">Silver Springs State Park</a>
Boca	Cypress/Tupelo Wetland, Marshes	Alfisols	Arenic Endoaqualfs	29.74925, -84.99581	<a href="#">Babcock Wildlife Management Area</a>
Bohicket	Salt Marsh	Entisols	Typic Sulfaquents	29.75939, -84.98440	<a href="#">Apalachicola National Estuarine Reserve</a>
Bonifay	Upland Pine	Ultisols	Grossarenic Plinthic Paleudults	30.90697, -86.65342	<a href="#">Blackwater River State Forest</a>
Bonneau	Upland Hardwood Forest	Ultisols	Arenic Paleudults	29.95735, -82.77649	<a href="#">Icheutucknee River State Park</a>
Braden	Mesic Flatwoods, Seepage Slope	Ultisols	Aquic Arenic Hapludults	27.48648, -82.20004	<a href="#">Duette Preserve</a>
Bradenton	Mangrove Swamp, Hydric Hammock	Alfisols	Typic Endoaqualfs	27.59120, -82.57361	<a href="#">Terria Ceia preserve State Park</a>
Brantley	Slope Forest, Upland Hardwood Forest	Alfisols	Ultic Hapludalfs	30.57737, -84.94625	<a href="#">Torreya State Park</a>
Brickyard	Cypress/Tupelo Wetland	Inceptisols	Typic Endoaquepts	30.58332, -84.95946	<a href="#">Torreya State Park</a>
Brighton	Marshes	Histosols	Typic Medihemists	28.85012, -81.36470	<a href="#">Black Bear Wilderness Area</a>

Soil Series	FNAI Community	Soil Order	Subgroup	Example Location	Location Name and Management Plan Hyperlinked
Broward	Sandhill, Scrub	Entisols	Aquic Quartzipsamments	29.02405, -82.70386	<a href="#">Marjorie Harris Carr Cross Conservation Area</a>
Buffalo Tiger	Marl Prairie, Glades Marsh	Histosols	Typic Haplosaprists	26.41893, -80.44140	<a href="#">Everglades and Francis S. Taylor Wildlife Management Area</a>
Cadillac	Upland Hardwood Forest	Alfisols	Grossarenic Paleudalfs	29.55903, -82.32721	<a href="#">Paynes Prairie Preserve State Park</a>
Caloosa	Coastal Upland	Entisols	Typic Udifluvents	26.69737, -81.82255	<a href="#">Caloosahatchee Creeks Preserve</a>
Canaveral	Coastal Upland	Entisols	Aquic Quartzipsamments	28.45477, -80.53785	<a href="#">Cape Canaveral Space Force Station</a>
Candler	Sandhill	Entisols	Lamellic Quartzipsamments	29.69502, -82.00715	<a href="#">Ordway-Swisher Biological Station</a>
Canova	Marshes	Alfisols	Histic Glossaqualfs	27.63235, -80.72951	<a href="#">Fort Drum Marsh Conservation Area</a>
Captiva	Salt Marsh	Entisols	Mollic Psammaquents	26.45774, -82.13757	<a href="#">J.N. "Ding" Darling National Wildlife Refuge</a>
Cardsound	Pine Rockland	Entisols	Lithic Udorthents	25.43507, -80.50622	<a href="#">Navy Wells Pineland Preserve</a>
Cassia	Scrubby Flatwoods	Spodosols	Oxyaquic Alorthods	27.29045, -82.29167	<a href="#">Myakka River State Park</a>
Centenary	Mesic Flatwoods, Scrubby Flatwoods	Spodosols	Entic Grossarenic Alorthods	29.88809, -81.94968	<a href="#">Camp Blanding Wildlife Management Area</a>
Chipley	Sandhill	Entisols	Aquic Quartzipsamments	30.34744, -84.65656	<a href="#">Apalachicola National Forest</a>
Chipola	Upland Mixed Woodland	Ultisols	Arenic Kanhapludults	30.77322, -84.96820	<a href="#">Apalachee Wildlife Management Area</a>
Chobee	Cypress/Tupelo Wetland	Mollisols	Typic Argiaquolls	28.53441, -80.95978	<a href="#">Tosohatchee Wildlife Management Area</a>
Cocoa	Coastal Upland, Scrub	Alfisols	Psammentic Hapludalfs	28.78442, -80.80336	<a href="#">Merritt Island National Wildlife Refuge</a>
Copeland	Marshes	Mollisols	Typic Argiaquolls	26.85137, -81.81777	<a href="#">Babcock Wildlife Management Area</a>
Cornelia	Coastal Upland	Spodosols	Arenic Alorthods	30.50177, -81.44871	<a href="#">Big Talbot Island State Park</a>
Corolla	Coastal Upland	Entisols	Aquic Quartzipsamments	30.70387, -81.43704	<a href="#">Fort Clinch State Park</a>
Dania	Glades Marsh, Marl Prairie	Histosols	Lithic Haplosaprists	25.70173, -80.58154	<a href="#">Everglades National Park</a>
Daytona	Scrubby Flatwoods, Scrub	Spodosols	Arenic Alorthods	28.83469, -80.82134	<a href="#">Canaveral National Seashore</a>
Deland	Scrubby Flatwoods	Spodosols	Entic Grossarenic Alorthods	29.18059, -81.16005	<a href="#">Tiger Bay State Forest</a>
Delks	Mesic Flatwoods	Spodosols	Ultic Alaquods	29.253911, -81.9344	<a href="#">Ocala National Forest</a>
Delray	Marshes	Mollisols	Grossarenic Argiaquolls	27.62923, -80.73194	<a href="#">Fort Drum Marsh Conservation Area</a>
Demory	Hydric Hammock	Mollisols	Lithic Endoaquolls	29.19028, -82.82646	<a href="#">Waccasassa Bay Preserve State Park</a>
Denaud	Marshes	Inceptisols	Histic Humaquepts	26.49326, -81.24313	<a href="#">Okaloacoochee Slough State Forest</a>
Dirego	Salt Marsh	Histosols	Terric Sulphisaprists	29.71252, -84.75839	<a href="#">Dr. Julian G. Bruce St. George Island State Park</a>
Dorovan	Shrub Bog, Marshes	Histosols	Typic Haplosaprists	30.53916, -82.47853	<a href="#">Osceola National Forest</a>
Dothan	Upland Pine	Ultisols	Plinthic Kandiodults	30.90552, -86.73480	<a href="#">Blackwater River State Forest</a>
Duckston	Coastal Upland, Salt Marsh	Entisols	Typic Psammaquents	29.70068, -84.79693	<a href="#">Dr. Julian G. Bruce St. George Island State Park</a>
Duette	Scrubby Flatwoods	Spodosols	Entic Grossarenic Alorthods	27.71765, -81.33119	<a href="#">Avon Park Air Force Range</a>

Soil Series	FNAI Community	Soil Order	Subgroup	Example Location	Location Name and Management Plan Hyperlinked
Durbin	Salt Marsh	Histosols	Typic Sulfishemists	<a href="#">25.94107, -81.56748</a>	<a href="#">Ten Thousand Islands National Wildlife Refuge</a>
Eaton	Cypress/Tupelo Wetland	Alfisols	Arenic Albaqualfs	<a href="#">28.33987, -81.94108</a>	<a href="#">Green Swamp Wilderness Preserve</a>
EauGallie	Dry Prairie, Mesic Flatwoods, Wet Prairie	Spodosols	Alfic Alaquods	<a href="#">27.25461, -82.25189</a>	<a href="#">Myakka River State Park</a>
Ebro	Cypress/Tupelo Wetland	Histosols	Typic Haplosaprists	<a href="#">30.40086, -85.96896</a>	<a href="#">Choctawhatchee River Wildlife Management Area</a>
Electra	Scrubby Flatwoods	Spodosols	Oxyaquic Alorthods	<a href="#">29.46577, -82.28272</a>	<a href="#">Price's Scrub State Park</a>
Emeralda	Hydric Hammock, Marshes	Alfisols	Mollic Albaqualfs	<a href="#">28.74051, -81.42875</a>	<a href="#">Rock Springs Run State Park</a>
Escambia	Upland Pine	Ultisols	Plinthaquic Paleudults	<a href="#">30.90487, -86.69482</a>	<a href="#">Blackwater River State Forest</a>
Estero	Mangrove Swamp, Salt Marsh	Spodosols	Typic Alaquods	<a href="#">27.51560, -82.67545</a>	<a href="#">Robison Preserve</a>
Esto	Upland Pine	Ultisols	Typic Kandiudults	<a href="#">30.92338, -86.93570</a>	<a href="#">Blackwater River State Forest</a>
Eureka	Cypress/Tupelo Wetland	Alfisols	Typic Albaqualfs	<a href="#">29.21237, -82.01594</a>	<a href="#">Silver Springs State Park</a>
Everglades	Marshes	Histosols	Typic Haplohemists	<a href="#">29.21391, -81.88851</a>	<a href="#">Ocala National Forest</a>
Faceville	Upland Mixed Woodland	Ultisols	Typic Kandiudults	<a href="#">30.67395, -84.23677</a>	<a href="#">Tall Timbers Research Station</a>
Farmton	Mesic Flatwoods	Spodosols	Arenic Ultic Alaquods	<a href="#">29.10268, -81.44500</a>	<a href="#">Lake Woodruff National Wildlife Refuge</a>
Felda	Cypress/Tupelo Wetland	Alfisols	Arenic Endoaqualfs	<a href="#">27.74468, -81.35689</a>	<a href="#">Avon Park Air Force Range</a>
Floridana	Marshes	Mollisols	Arenic Argiaquolls	<a href="#">28.50618, -80.89487</a>	<a href="#">Tosohatchee Wildlife Management Area</a>
Foxworth	Sandhill	Entisols	Typic Quartzipsamments	<a href="#">30.29392, -84.80619</a>	<a href="#">Apalachicola National Forest</a>
Fripp	Coastal Upland	Entisols	Typic Quartzipsamments	<a href="#">30.46684, -81.41418</a>	<a href="#">Little Talbot Island State Park</a>
Ft. Green	Hydric Hammock	Alfisols	Arenic Ochraqualfs	<a href="#">27.27328, -82.27028</a>	<a href="#">Myakka River State Park</a>
Fuquay	Upland Pine	Ultisols	Arenic Plinthic Kandiudults	<a href="#">30.05057, -85.00131</a>	<a href="#">Apalachicola National Forest</a>
Gator	Cypress/Tupelo Wetland, Marshes	Histosols	Terric Haplosaprists	<a href="#">29.34102, -83.06695</a>	<a href="#">Lower Suwannee National Wildlife Refuge</a>
Gentry	Marshes	Mollisols	Arenic Argiaquolls	<a href="#">26.50722, -81.22926</a>	<a href="#">Dinner Island Ranch Wildlife Management Area</a>
Goldhead	Wet Flatwoods	Alfisols	Arenic Endoaqualfs	<a href="#">29.95610, -81.64288</a>	<a href="#">Bayard Conservation Area</a>
Goldsboro	Upland Pine	Ultisols	Aquic Paleudults	<a href="#">30.13170, -85.03930</a>	<a href="#">Apalachicola National Forest</a>
Hague	Upland Mixed Forest	Alfisols	Arenic Hapludalfs	<a href="#">29.10210, -82.43557</a>	<a href="#">Rainbow Springs State Park</a>
Heights	Mesic Flatwoods	Alfisols	Arenic Endoaqualfs	<a href="#">26.87409, -81.85940</a>	<a href="#">Babcock Wildlife Management Area</a>
Hilolo	Hydric Hammock	Mollisols	Mollic Endoaqualfs	<a href="#">28.50075, -80.69437</a>	<a href="#">Merritt Island National Wildlife Refuge</a>
Hobe	Mesic Flatwoods, Scrubby Flatwoods	Spodosols	Entic Grossarenic Alorthods	<a href="#">26.99326, -80.15940</a>	<a href="#">Jonathan Dickinson State Park</a>
Holopaw	Marshes	Alfisols	Grossarenic Endoaqualfs	<a href="#">27.24082, -82.27157</a>	<a href="#">Myakka River State Park</a>
Homosassa	Salt Marsh	Entisols	Typic Sulfaquents	<a href="#">28.84165, -82.61901</a>	<a href="#">Crystal River Preserve State Park</a>
Hontoon	Marshes	Histosols	Typic Haplosaprists	<a href="#">27.60219, -81.33567</a>	<a href="#">Avon Park Air Force Range</a>
Hornsville	Upland Pine	Ultisols	Aquic Hapludults	<a href="#">30.80833, -84.95189</a>	<a href="#">Apalachee Wildlife Management Area</a>

Soil Series	FNAI Community	Soil Order	Subgroup	Example Location	Location Name and Management Plan Hyperlinked
Hurricane	Scrubby Flatwoods	Spodosols	Oxyaquic Alorthods	29.95296, -81.95157	<a href="#">Camp Blanding Wildlife Management Area</a>
Iberia	Bottomland & Alluvial Forest	Vertisols	Typic Epiaquerts	29.26499, -81.93837	<a href="#">Ocklawaha River Ocala National Forest</a>
Ichetucknee	Upland Hardwood Forest	Alfisols	Albaquultic Hapludalfs	29.98305, -82.75665	<a href="#">Ichetucknee Springs State Park</a>
Immokalee	Dry Prairie, Mesic Flatwoods	Spodosols	Aquods	27.93326, -81.15824	<a href="#">Three Lakes Wildlife Management Area</a>
Immokalee	Dry Prairie	Spodosols	Aquods	27.58131, -81.09109	<a href="#">Kissimmee Prairie Preserve State Park</a>
Islamorada	Mangrove Swamp	Histosols	Typic Sulfosaprists	25.28335, -80.30137	<a href="#">Dagny Johnson Key Largo Hammock Botanical State Park</a>
Isles	Mangrove Swamp	Alfisols	Arenic Endoaqualfs	26.93676, -82.16083	<a href="#">Charlotte Harbor Preserve State Park</a>
Johnston	Cypress/Tupelo Wetland	Inceptisols	Cumulic Humaquepts	30.92108, -86.71087	<a href="#">Blackwater River State Forest</a>
Jonathan	Scrubby Flatwoods	Spodosols	Grossarenic Alorthods	27.01157, -80.13878	<a href="#">Jonathan Dickinson State Park</a>
Jumper	Mesic Hammock	Ultisols	Arenic Plinthaquic Paleudults	29.01469, -82.28852	<a href="#">Ross Prairie State Forest</a>
Jupiter	Hydric Hammock/ Baygall	Mollisols	Lithic Endoaquolls	26.50376, -81.25793	<a href="#">Okaloacoochee Slough State Forest</a>
Kaliga	Cypress/Tupelo Wetland	Histosols	Terric Haplosaprists	27.95675, -81.07880	<a href="#">Three Lakes Wildlife Management Area</a>
Kanapaha	Upland Hardwood Forest, Upland Mixed Woodland	Ultisols	Grossarenic Paleaquults	29.73574, -82.43651	<a href="#">San Felasco Hammock Preserve State Park</a>
Kendrick	Upland Pine	Ultisols	Arenic Paleudults	28.74503, -82.41102	<a href="#">Citrus Wildlife Management Area of Withlacoochee State Forest</a>
Kershaw	Sandhill	Entisols	Typic Quartzipsamments	29.84697, -81.95601	<a href="#">Mike Roess Gold Head Branch State Park</a>
Kesson	Coastal Upland	Entisols	Typic Psammaquents	26.44656, -82.10684	<a href="#">J.N. "Ding" Darling National Wildlife Refuge</a>
Keyvaca	Pine Rockland	Mollisols	Lithic Haprendolls	24.70332, -81.37560	<a href="#">Big Pine Key</a>
Kinston	Cypress/Tupelo Wetland	Inceptisols	Fluvaquentic Endoaquepts	30.55339, -85.88777	<a href="#">Choctawhatchee River Water Management Area</a>
Kureb	Scrub, Coastal Upland	Entisols	Spodic Quartzipsamments	29.79522, -85.40945	<a href="#">T.H. Stone Memorial St. Joseph Peninsula State Park</a>
Lacoochee	Salt Marsh	Entisols	Spodic Psammaquents	28.83505, -82.71199	<a href="#">Crystal River Preserve State Park</a>
Lake	Sandhill	Entisols	Typic Quartzipsamments	29.62558, -82.31122	<a href="#">Sweetwater Preserve</a>
Lakeland	Sandhill	Entisols	Typic Quartzipsamments	30.36640, -87.42883	<a href="#">Tarkiln Bayou Preserve State Park</a>
Lauderhill	Glades Marsh, Hydric Hammock	Histosols	Lithic Haplosaprists	25.70691, -80.61088	<a href="#">Everglades National Park</a>
Lawnwood	Wet Flatwoods	Spodosols	Aeric Alaquods	27.09965, -80.22836	<a href="#">Atlantic Ridge Preserve State Park</a>
Ledwith	Marshes	Alfisols	Typic Albaqualfs	29.56868, -82.29395	<a href="#">Paynes Prairie Preserve State Park</a>
Leefield	Upland Pine, Upland Mixed Woodland	Ultisols	Arenic Plinthaquic Paleudults	30.19442, -85.02466	<a href="#">Apalachicola National Forest</a>
Leon	Mesic Flatwoods	Spodosols	Aeric Alaquods	30.21044, -84.59683	<a href="#">Apalachicola National Forest</a>
Lignumvitae	Mangrove Swamp	Entisols	Typic Fluvaquents	24.70989, -81.39186	<a href="#">Big Pine Key</a>

<b>Soil Series</b>	<b>FNAI Community</b>	<b>Soil Order</b>	<b>Subgroup</b>	<b>Example Location</b>	<b>Location Name and Management Plan Hyperlinked</b>
Lochloosa	Mesic Hammock	Ultisols	Aquic Arenic Paleudults	29.56013, -82.32875	<a href="#">Paynes Prairie Preserve State Park</a>
Loxahatchee	Glades Marsh	Histosols	Typic Haplosaprists	26.45866, -80.35124	<a href="#">Arthur R. Marshall Loxahatchee National Wildlife Refuge</a>
Lucy	Slope Forest	Ultisols	Arenic Kandiuudults	30.57276, -84.94799	<a href="#">Torreya State Park</a>
Lutterloh	Mesic Flatwoods, Wet Flatwoods	Alfisols	Grossarenic Paleudalfs	30.23998, -84.58065	<a href="#">Apalachicola National Forest</a>
Lynchburg	Mesic Flatwoods	Ultisols	Aeric Paleaquults	30.10309, -85.05579	<a href="#">Apalachicola National Forest</a>
Malabar	Wet Prairie	Alfisols	Grossarenic Endoaqualfs	27.94509, -81.12291	<a href="#">Three Lakes Wildlife Management Area</a>
Mandarin	Scrubby Flatwoods	Spodosols	Oxyaquic Alorthods	29.92938, -84.35173	<a href="#">Bald Point State Park</a>
Mascotte	Mesic Flatwoods	Spodosols	Ultic Alaquods	30.33544, -82.70637	<a href="#">Big Shoals State Park</a>
Matecumbe	Rockland Hammock	Histosols	Typic Sulfosaprists	25.28717, -80.29714	<a href="#">Dagny Johnson Key Largo Hammock Botanical State Park</a>
Maurepas	Salt Marsh	Histosols	Typic Haplosaprists	30.01669, -84.45134	<a href="#">St. Marks National Wildlife Refuge</a>
Mckee	Mangrove Swamp	Entisols	Typic Hydraquents	27.81037, -80.42945	<a href="#">Pelican Island National Wildlife Refuge</a>
Micanopy	Mesic Hammock	Alfisols	Aquic Paleudalfs	28.73365, -82.42151	<a href="#">Citrus Wildlife Management Area of Withlacoochee State Forest</a>
Micco	Marshes	Histosols	Terric Haplohemists	28.17930, -80.78498	<a href="#">River Lakes Conservation Area</a>
Millhopper	Upland Mixed Woodland, Upland Pine	Ultisols	Grossarenic Paleudults	29.71489, -82.45334	<a href="#">San Felasco Hammock Preserve State Park</a>
Monteocha	Cypress Dome Swamp	Spodosols	Ultic Alaquods	29.56281, -82.19720	<a href="#">Longleaf Flatwoods Reserve</a>
Moultrie	Salt Marsh	Entisols	Spodic Psammaquents	29.88491, -81.28007	<a href="#">Anastasia State Park</a>
Myakka	Mesic Flatwoods, Dry Prairie	Spodosols	Aeric Alaquods	27.92374, -81.10603	<a href="#">Three Lakes Wildlife Management Area</a>
Myakka	Mesic Flatwoods	Spodosols	Aeric Alaquods	28.12648, -81.03598	<a href="#">Triple N Ranch Wildlife Management Area</a>
Narcoosee	Mesic Flatwoods, Scrubby Flatwoods	Spodosols	Oxyaquic Alorthods	28.00386, -80.94273	<a href="#">Herky Huffman/Bull Creek Wildlife Management Area</a>
Nettles	Wet Flatwoods	Spodosols	Alfic Arenic Alaquods	27.00209, -80.16627	<a href="#">Jonathan Dickinson State Park</a>
Newhan	Coastal Upland	Entisols	Typic Quartzipsammments	29.71521, -84.75137	<a href="#">Dr. Julian G. Bruce St. George Island State Park</a>
Newnan	Mesic Flatwoods	Spodosols	Oxyaquic Alorthods	29.56427, -82.19248	<a href="#">Longleaf Flatwoods Reserve</a>
Nittaw	Cypress/Tupelo Wetland	Mollisols	Typic Argiaquolls	28.39238, -82.00470	<a href="#">Green Swamp Wilderness Preserve</a>
Nuttall	Cypress/Tupelo Wetland	Alfisols	Mollic Albaqualfs	30.14119, -83.98502	<a href="#">St. Marks National Wildlife Refuge</a>
Ochopee	Marl Prairie, Cypress/Tupelo Wetland	Inceptisols	Lithic Endoaquepts	26.12887, -81.36649	<a href="#">Fakahatchee Strand Preserve State Park</a>
Ocilla	Upland Mixed Woodland, Upland Pine	Ultisols	Aquic Arenic Paleudults	30.38665, -82.31743	<a href="#">Osceola National Forest</a>
Ocoee	Cypress/Tupelo Wetland	Histosols	Terric Haplohemists	28.98145, -81.48458	<a href="#">Seminole State Forest</a>
Okalwaha	Cypress/Tupelo Wetland, Marshes	Histosols	Terric Haplohemists	28.86304, -81.89556	<a href="#">Lake Griffin State Park</a>
Okeechobee	Marshes	Histosols	Hemic Haplosaprists	29.59872, -82.04337	<a href="#">Little Orange Creek Preserve</a>

<b>Soil Series</b>	<b>FNAI Community</b>	<b>Soil Order</b>	<b>Subgroup</b>	<b>Example Location</b>	<b>Location Name and Management Plan Hyperlinked</b>
Okeelala	Slope Forest, Upland Hardwood Forest	Alfisols	Ultic Hapludalfs	30.57379, -84.95067	<a href="#">Torreya State Park</a>
Okeelanta	Marshes	Histosols	Terric Haplosaprists	27.00069, -81.17382	<a href="#">Sixmile Marsh in Fisheating Creek</a>
Oldsmar	Mesic Flatwoods	Spodosols	Alfic Arenic Alaquods	26.58653, -81.33387	<a href="#">Okaloacoochee Slough State Forest</a>
Oleno	Cypress/Tupelo Wetland	Inceptisols	Vertic Endoaquepts	29.87637, -82.58590	<a href="#">River Rise Preserve State Park</a>
Olustee	Mesic Flatwoods	Spodosols	Ultic Alaquods	30.22760, -82.47967	<a href="#">Osceola National Forest</a>
Ona	Wet Flatwoods	Spodosols	Arenic Alaquods	27.66593, -81.42723	<a href="#">Lake Wales Ridge State Forest, Arbuckle Tract</a>
Orangeburg	Upland Pine, Upland Mixed Woodland	Ultisols	Typic Kandiodults	30.79411, -86.86510	<a href="#">Blackwater River State Forest</a>
Orlando	Xeric Hammock	Inceptisols	Humic Psammentic Dystrudepts	29.42261, -81.78948	<a href="#">Ocala National Forest</a>
Orsino	Scrub	Entisols	Spodic Quartzipsamments	29.20910, -82.98754	<a href="#">Cedar Key Scrub State Reserve</a>
Ortega	Scrub	Entisols	Typic Quartzipsamments	29.84610, -81.94847	<a href="#">Mike Roess Gold Head Branch State Park</a>
Pahokee	Glades Marsh, Slough	Histosols	Lithic Haplosaprists	25.71892, -80.64570	<a href="#">Everglades National Park</a>
Paisley	Bottomland & Alluvial Forest	Alfisols	Typic Albaqualfs	29.19960, -82.01753	<a href="#">Silver Springs State Park</a>
Palm Beach	Coastal Upland	Entisols	Typic Quartzipsamments	28.92414, -80.82144	<a href="#">Canaveral National Seashore</a>
Pamlico	Cypress/Tupelo Wetland	Histosols	Terric Haplosaprists	30.33860, -82.43963	<a href="#">Big Gum Swamp Wilderness</a>
Pantego	Shrub Bog, Cypress/Tupelo Wetland	Ultisols	Umbric Paleaquults	30.51351, -82.35976	<a href="#">Osceola National Forest</a>
Paola	Scrub	Entisols	Spodic Quartzipsamments	29.22365, -81.69469	<a href="#">Juniper Prairie Wilderness Area Ocala National Forest</a>
Parkwood	Mesic Hammock	Alfisols	Mollic Endoaqualfs	27.84539, -81.13444	<a href="#">Three Lakes Wildlife Management Area</a>
Peckish	Mangrove Swamp	Entisols	Typic Sulfaquents	26.81593, -82.18675	<a href="#">Charlotte Harbor Preserve State Park</a>
Pedro	Upland Hardwood Forest	Alfisols	Typic Hapludalfs	29.87193, -82.58191	<a href="#">O'Leno State Park &amp; River Rise Preserve State Park</a>
Pelham	Wet Flatwoods	Ultisols	Arenic Paleaquults	30.07457, -85.07084	<a href="#">Apalachicola National Forest</a>
Pellicer	Salt Marsh	Entisols	Typic Sulfaquents	29.72997, -81.25634	<a href="#">Matanzas State Forest</a>
Pennekamp	Rockland Hammock	Mollisols	Lithic Haprendolls	25.28481, -80.29422	<a href="#">Dagny Johnson Key Largo Hammock Botanical State Park</a>
Penney	Sandhill	Entisols	Lamellic Quartzipsamments	29.75048, -82.68783	<a href="#">Bell Ridge Longleaf Wildlife and Environmental Area</a>
Pennsuco	Cypress/Tupelo Wetland, Mangrove Swamp	Entisols	Typic Fluvaquents	25.62117, -80.30167	<a href="#">Deering Estate at Cutler</a>
Perrine	Mangrove Swamp	Entisols	Typic Fluvaquents	25.57584, -80.31349	<a href="#">Biscayne National Park</a>
Pickney	Baygall	Inceptisols	Cumulic Humaquepts	30.34164, -84.60430	<a href="#">Apalachicola National Forest</a>
Pineda	Wet Flatwoods	Alfisols	Arenic Glossaqualfs	27.18807, -82.32260	<a href="#">Myakka River State Park</a>
Pinellas	Wet Flatwoods	Alfisols	Arenic Endoaqualfs	26.94235, -80.51290	<a href="#">DuPuis Management Area</a>
Placid	Cypress/Tupelo Wetland	Inceptisols	Typic Humaquepts	27.96747, -81.08874	<a href="#">Three Lakes Wildlife Management Area</a>
Plantation	Baygall	Inceptisols	Histic Humaquepts	26.37134, -80.40983	<a href="#">Everglades and Francis S. Taylor Wildlife Management Area</a>



<b>Soil Series</b>	<b>FNAI Community</b>	<b>Soil Order</b>	<b>Subgroup</b>	<b>Example Location</b>	<b>Location Name and Management Plan Hyperlinked</b>
Plummer	Wet Flatwoods, Wet Prairie	Ultisols	Grossarenic Paleaquults	30.02953, -84.96105	<a href="#">Apalachicola National Forest</a>
Pomello	Scrubby Flatwoods	Spodosols	Oxyaquic Alorthods	28.33622, -81.20102	<a href="#">Split Oak Forest Wildlife and Environmental Area</a>
Pomona	Mesic Flatwoods, Wet Flatwoods	Spodosols	Ultic Alaquods	29.56816, -82.19218	<a href="#">Longleaf Flatwoods Reserve</a>
Pompano	Wet Flatwoods	Entisols	Typic Psammaquents	27.67524, -81.41423	<a href="#">Lake Wales Ridge State Forest, Arbuckle Tract</a>
Popash	Cypress/Tupelo Wetland	Alfisols	Grossarenic Endoaqualfs	29.35239, -83.05110	<a href="#">Lower Suwannee National Wildlife Refuge</a>
Pople	Mesic Flatwoods	Alfisols	Arenic Endoaqualfs	27.19718, -82.25590	<a href="#">Myakka River State Park</a>
Pottsburg	Wet Flatwoods, Seepage Slopes	Spodosols	Grossarenic Alaquods	30.23347, -84.87305	<a href="#">Apalachicola National Forest</a>
Punta	Mesic Flatwoods, Wet Flatwoods	Spodosols	Grossarenic Alaquods	26.84611, -82.19916	<a href="#">Charlotte Harbor Preserve State Park</a>
Rains	Wet Flatwoods, Seepage Slopes	Ultisols	Typic Paleaquults	30.14849, -85.05025	<a href="#">Apalachicola National Forest</a>
Resota	Coastal Upland	Entisols	Spodic Quartzipsamments	29.66557, -85.17552	<a href="#">St. Vincent National Wildlife Refuge</a>
Riviera	Cypress/Tupelo Wetland	Alfisols	Arenic Glossaqualfs	27.92297, -81.08863	<a href="#">Three Lakes Wildlife Management Area</a>
Rutlege	Wet Flatwoods	Inceptisols	Typic Humaquepts	29.70637, -84.77405	<a href="#">Dr. Julian G. Bruce St. George Island State Park</a>
Salerno	Wet Flatwoods	Spodosols	Grossarenic Alaquods	27.00335, -80.13930	<a href="#">Jonathan Dickinson State Park</a>
Samsula	Cypress/Tupelo Wetland, Shrub Bog	Histosols	Terric Haplosaprists	27.02469, -80.13750	<a href="#">Jonathan Dickinson State Park</a>
Sanibel	Cypress/Tupelo Wetland, Marshes	Inceptisols	Histic Humaquepts	27.58319, -81.32411	<a href="#">Avon Park Air Force Range</a>
Sapelo	Mesic Flatwoods	Spodosols	Ultic Alaquods	30.16669, -84.96030	<a href="#">Apalachicola National Forest</a>
Satellite	Scrub, Scrubby Flatwoods	Entisols	Aquic Quartzipsamments	27.59960, -81.26089	<a href="#">Avon Park Air Force Range</a>
Scranton	Wet Flatwoods, Mesic Flatwoods	Entisols	Humaqueptic Psammaquents	29.94504, -84.34702	<a href="#">Bald Point State Park</a>
Sellers	Marshes	Inceptisols	Cumulic Humaquepts	29.22725, -81.68699	<a href="#">Juniper Prairie Wilderness Area Ocala National Forest</a>
Shenks	Cypress/Tupelo Wetland, Marshes	Histosols	Terric Haplosaprists	29.48812, -81.72972	<a href="#">Caravelle Ranch Wildlife Management Area</a>
Smyrna	Dry Prairie, Mesic Flatwoods	Spodosols	Aeric Alaquods	28.13448, -81.03498	<a href="#">Triple N Ranch Wildlife Management Area</a>
Sparr	Upland Hardwood Forest	Ultisols	Grossarenic Paleudults	29.52756, -82.29363	<a href="#">Paynes Prairie Preserve State Park</a>
St. Johns	Wet Flatwoods, Mesic Flatwoods	Spodosols	Typic Alaquods	27.68473, -81.26368	<a href="#">Avon Park Air Force Range</a>
St. Lucie	Scrub	Entisols	Typic Quartzipsamments	27.19811, -81.35880	<a href="#">Archbold Biological Station</a>
Stilson	Mesic Flatwoods, Upland Pine	Ultisols	Arenic Plinthic Paleudults	30.16010, -85.01422	<a href="#">Apalachicola National Forest</a>
Surrency	Baygall, Cypress/Tupelo Wetland	Ultisols	Arenic Umbric Paleaquults	30.24314, -84.58039	<a href="#">Apalachicola National Forest</a>
Talquin	Mesic Flatwoods	Spodosols	Aeric Alaquods	30.34194, -84.62318	<a href="#">Apalachicola National Forest</a>

Soil Series	FNAI Community	Soil Order	Subgroup	Example Location	Location Name and Management Plan Hyperlinked
Tavares	Scrub	Entisols	Typic Quartzipsamments	29.52464, -82.28631	<a href="#">Paynes Prairie Preserve State Park</a>
Tequesta	Marshes	Alfisols	Histic Glossaqualfs	26.78615, -80.15797	<a href="#">Grassy Waters Preserve</a>
Terra Ceia	Cypress/Tupelo Wetland, Marshes	Histosols	Typic Haplosapristis	29.27854, -81.93363	<a href="#">Ocklawaha River Ocala National Forest</a>
Tisonia	Salt Marsh	Histosols	Terric Sulfishemists	29.68296, -85.09784	<a href="#">St. Vincent National Wildlife Refuge</a>
Tomoka	Cypress/Tupelo Wetland, Marshes	Histosols	Terric Haplosapristis	28.65180, -80.95237	<a href="#">Seminole Ranch Conservation Area</a>
Tooles	Hydric Hammock	Alfisols	Arenic Albaqualfs	29.42036, -83.18692	<a href="#">Lower Suwannee National Wildlife Refuge</a>
Troup	Upland Pine	Ultisols	Grossarenic Kandiodults	30.24129, -84.96579	<a href="#">Apalachicola National Forest</a>
Turnbull	Salt Marsh	Entisols	Typic Hydraquents	29.64860, -81.22403	<a href="#">Matanzas National Estuarine Research Reserve</a>
Tusawilla	Hydric Hammock	Alfisols	Typic Endoaqualfs	29.38135, -81.12609	<a href="#">Bulow Creek State Park</a>
Valkaria	Wet Prairie	Entisols	Spodic Psammaquents	27.54648, -81.05297	<a href="#">Kissimmee Prairie Preserve State Park</a>
Wabasso	Mesic Flatwoods	Spodosols	Alfic Alaquods	26.75845, -81.97801	<a href="#">Yucca Pens Unit State at Babcock Wildlife Management Area</a>
Wadley	Sandhill	Ultisols	Grossarenic Paleodults	29.75283, -82.69589	<a href="#">Bell Ridge Longleaf Wildlife and Environmental Area</a>
Wahee	Cypress/Tupelo Wetland	Ultisols	Aeric Endoaquults	29.98878, -85.02187	<a href="#">Apalachicola National Forest</a>
Wauberg	Marshes	Alfisols	Arenic Albaqualfs	29.56330, -82.31163	<a href="#">Paynes Prairie Preserve State Park</a>
Wauchula	Mesic Flatwoods	Spodosols	Ultic Alaquods	28.86056, -81.40784	<a href="#">Lower Wekiva State Preserve State Park</a>
Waveland	Mesic Flatwoods	Spodosols	Arenic Alaquods	26.98215, -80.15290	<a href="#">Jonathan Dickinson State Park</a>
Weekiwachee	Salt Marsh	Histosols	Terric Sulphisapristis	28.81791, -82.64319	<a href="#">Crystal River Preserve State Park</a>
Welaka	Coastal Upland	Entisols	Spodic Quartzipsamments	28.51330, -80.57991	<a href="#">Cape Canaveral Space Force Station</a>
Winder	Marshes	Alfisols	Typic Glossaqualfs	27.67701, -81.21783	<a href="#">Avon Park Air Force Range</a>
Woodington	Wet Flatwoods, Wet Prairie, Seepage Slopes	Ultisols	Typic Paleaquults	30.06089, -84.99131	<a href="#">Post Office Unit Apalachicola National Forest</a>
Wulfert	Mangrove Swamp	Histosols	Terric Sulphisapristis	25.90888, -81.62919	<a href="#">Ten Thousand Islands National Wildlife Refuge</a>
Zephyr	Cypress/Tupelo Wetland, Marshes	Ultisols	Typic Albaquults	28.34784, -82.07733	<a href="#">Green Swamp Wilderness Preserve</a>
Zolfo	Mesic Flatwoods	Spodosols	Oxyaquic Alorthods	29.15978, -82.60131	<a href="#">Goethe State Forest</a>

Table 2. Florida natural communities (per FNAI definitions) included in this project. Higher level categories are highlighted in bold. (\*) indicates where communities were combined in this project.

<b>FNAI Communities</b>				
<b>Estuarine Vegetated Wetlands</b>	<b>High Pine &amp; Scrub</b>	<b>Hardwood Wetland</b>	<b>Cypress/ Tupelo Wetland</b>	<b>Freshwater Non-Forested Wetlands</b>
Salt Marsh	Upland Mixed Woodland	Baygall	Dome Swamp	Seepage Slope
Mangrove Swamp	Upland Pine	Hydric Hammock	Basin Swamp	Wet Prairie
Keys Tidal Rock Barren	Sandhill	Bottomland & Alluvial Forest*	Strand Swamp	Marl Prairie
	Scrub		Floodplain Swamp	Shrub Bog
<b>Hardwood Forested Uplands</b>	<b>Pine Flatwoods &amp; Dry Prairie</b>	<b>Coastal Uplands</b>	<b>Marshes</b>	<b>Sinkholes &amp; Outcrops</b>
Slope Forest	Wet Flatwoods	Beach Dune	Depression Marsh	<i>Upland Glade</i>
Upland Hardwood Forest	Mesic Flatwoods	Coastal Berm	Basin Marsh	<i>Sinkhole</i>
Mesic Hammock	Scrubby Flatwoods	Coastal Grassland	Coastal Interdunal Swale	<i>Limestone Outcrop</i>
Rockland Hammock	Pine Rockland	Coastal Strand	Floodplain Marsh	<i>Keys Cactus Barren</i>
Xeric Hammock	Dry Prairie	Maritime Hammock	Slough Marsh	
		Shell Mound	Glades Marsh	
			Slough	<i>Excluded from Project</i>