

United States Department of Agriculture

Natural Resources Conservation

Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for St. Lucie County, Florida

**Cow Creek Ranch** 



# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/? cid=nrcs142p2\_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

# Contents

Preface	2
Soil Map	5
Soil Map (Cow Creek Ranch 1200)	
Legend	7
Map Unit Legend (Cow Creek Ranch 1200)	
Map Unit Descriptions (Cow Creek Ranch 1200)	8
St. Lucie County, Florida	11
1—Anclote sand, frequently ponded, 0 to 1 percent slopes	11
8—Basinger sand, 0 to 2 percent slopes	12
11—Chobee loamy sand, frequently ponded, 0 to 1 percent slopes	14
13—Floridana sand, frequently ponded, 0 to 2 percent slopes	16
16—Hilolo loamy sand	
20—Kaliga muck, frequently ponded, 0 to 1 percent slopes	20
21—Lawnwood and Myakka sands	22
23—Malabar fine sand, 0 to 2 percent slopes	
24—Myakka fine sand, 0 to 2 percent slopes	
25—Nettles and Oldsmar sands	
31—Pepper and EauGallie sands	30
32—Pineda sand, 0 to 2 percent slopes	
36—Pople sand	35
38—Riviera fine sand, 0 to 2 percent slopes	37
49—Wabasso fine sand, gravelly substratum	
51—Waveland-Lawnwood complex, depressional	40

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



MAP LEGEND			)	MAP INFORMATION	
Area of In	terest (AOI) Area of Interest (AOI)	8	Spoil Area Stony Spot	The soil surveys that comprise your AOI were mapped at 1:24,000.	
Soils	Soil Map Unit Polygons Soil Map Unit Lines	00 V	Very Stony Spot Wet Spot	Please rely on the bar scale on each map sheet for map measurements.	
Special	Soil Map Unit Points Point Features	۵ ••	Other Special Line Features	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)	
() () () () () () () () () () () () () (	Blowout Borrow Pit Clay Spot	Water Fea	Streams and Canals	Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the	
° X	Closed Depression Gravel Pit	<b>₽</b>	Interstate Highways US Routes	Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as	
.: © Л.	Gravelly Spot Landfill Lava Flow	Normal Security Secur	Major Roads Local Roads nd	of the version date(s) listed below. Soil Survey Area: St. Lucie County, Florida Survey Area Data: Version 11, Sep 17, 2018	
<u>لله</u> ج	Marsh or swamp Mine or Quarry		Aerial Photography	Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.	
0	Miscellaneous Water Perennial Water Rock Outcrop			Date(s) aerial images were photographed: Dec 31, 2009—Dec 15, 2017	
+	Saline Spot Sandy Spot			The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.	
⇔ ♦	Severely Eroded Spot Sinkhole			sinding of map drift boundaries may be evident.	
ja M	Slide or Slip Sodic Spot				

# Map Unit Legend (Cow Creek Ranch 1200)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Anclote sand, frequently ponded, 0 to 1 percent slopes	19.5	1.7%
8	Basinger sand, 0 to 2 percent slopes	135.8	11.8%
11	Chobee loamy sand, frequently ponded, 0 to 1 percent slopes	0.7	0.1%
13	Floridana sand, frequently ponded, 0 to 2 percent slopes	21.8	1.9%
16	Hilolo loamy sand	5.1	0.4%
20	Kaliga muck, frequently ponded, 0 to 1 percent slopes	0.0	0.0%
21	Lawnwood and Myakka sands	105.1	9.1%
23	Malabar fine sand, 0 to 2 percent slopes	7.8	0.7%
24	Myakka fine sand, 0 to 2 percent slopes	0.0	0.0%
25	Nettles and Oldsmar sands	22.5	2.0%
31	Pepper and EauGallie sands	418.5	36.4%
32	Pineda sand, 0 to 2 percent slopes	55.4	4.8%
36	Pople sand	12.5	1.1%
38	Riviera fine sand, 0 to 2 percent slopes	2.7	0.2%
49	Wabasso fine sand, gravelly substratum	6.3	0.6%
51	Waveland-Lawnwood complex, depressional	335.6	29.2%
Totals for Area of Interest		1,149.6	100.0%

# Map Unit Descriptions (Cow Creek Ranch 1200)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered

practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# St. Lucie County, Florida

# 1—Anclote sand, frequently ponded, 0 to 1 percent slopes

# **Map Unit Setting**

National map unit symbol: 2svzj Elevation: 0 to 130 feet Mean annual precipitation: 46 to 58 inches Mean annual air temperature: 68 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Not prime farmland

# **Map Unit Composition**

Anclote and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Anclote**

# Setting

Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave, convex Across-slope shape: Concave, linear Parent material: Sandy marine deposits

# **Typical profile**

A1 - 0 to 8 inches: sand A2 - 8 to 22 inches: sand Cg1 - 22 to 40 inches: sand Cg2 - 40 to 80 inches: sand

# **Properties and qualities**

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 2.4 inches)

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7w Hydrologic Soil Group: A/D Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL) Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# **Minor Components**

# Floridana

Percent of map unit: 5 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Linear, concave Across-slope shape: Linear, concave Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Terra ceia

Percent of map unit: 4 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Convex, concave Across-slope shape: Linear, concave Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Tomoka

Percent of map unit: 3 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Dip, talf Down-slope shape: Concave Across-slope shape: Concave Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Riviera

Percent of map unit: 3 percent Landform: Drainageways on marine terraces, flats on marine terraces Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Linear Across-slope shape: Concave, linear Ecological site: Slough (R155XY011FL) Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

# 8—Basinger sand, 0 to 2 percent slopes

# Map Unit Setting

National map unit symbol: 2vbpc Elevation: 0 to 50 feet Mean annual precipitation: 42 to 62 inches Mean annual air temperature: 68 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# **Map Unit Composition**

Basinger and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Basinger**

# Setting

Landform: Flats on marine terraces, drainageways on marine terraces Landform position (three-dimensional): Tread, talf, dip Down-slope shape: Convex, concave Across-slope shape: Linear, concave Parent material: Sandy marine deposits

# **Typical profile**

A - 0 to 6 inches: sand E - 6 to 25 inches: sand Bh - 25 to 50 inches: sand C - 50 to 80 inches: sand

# Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 3.1 inches)

# Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL)
Hydric soil rating: Yes

#### **Minor Components**

#### Holopaw

Percent of map unit: 6 percent Landform: Drainageways on marine terraces, flats on marine terraces Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Concave, linear, convex Across-slope shape: Concave, linear Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

# Malabar

Percent of map unit: 5 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave, linear Across-slope shape: Concave, linear Ecological site: Slough (R155XY011FL) Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: Yes

# Pompano

Percent of map unit: 3 percent Landform: Drainageways on flats on marine terraces Landform position (three-dimensional): Tread, talf, dip Down-slope shape: Linear Across-slope shape: Linear, concave Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

#### Anclote

Percent of map unit: 1 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave, convex Across-slope shape: Concave, linear Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# 11—Chobee loamy sand, frequently ponded, 0 to 1 percent slopes

# Map Unit Setting

National map unit symbol: 2tzwd Elevation: 0 to 70 feet Mean annual precipitation: 48 to 58 inches Mean annual air temperature: 68 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# Map Unit Composition

Chobee and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Chobee**

### Setting

Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Concave Parent material: Loamy alluvium

# **Typical profile**

A - 0 to 11 inches: loamy sand Btg - 11 to 40 inches: sandy clay loam Btkg - 40 to 80 inches: sandy clay loam

# **Properties and qualities**

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 14 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: High (about 9.7 inches)

# Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: C/D
Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G156BC345FL)
Other vegetative classification: Freshwater Marshes and Ponds (R156BY010FL)
Hydric soil rating: Yes

# **Minor Components**

# Floridana

Percent of map unit: 4 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave, convex Across-slope shape: Concave, linear Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Kaliga

Percent of map unit: 4 percent Landform: Depressions on flatwoods on marine terraces Landform position (three-dimensional): Tread, talf, dip Down-slope shape: Linear, concave Across-slope shape: Linear, concave Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Hallandale

Percent of map unit: 4 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Tread, talf Down-slope shape: Linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: Yes

# Winder

Percent of map unit: 3 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Convex, linear Across-slope shape: Concave, linear Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# 13—Floridana sand, frequently ponded, 0 to 2 percent slopes

# Map Unit Setting

National map unit symbol: 2sm56 Elevation: 0 to 140 feet Mean annual precipitation: 46 to 58 inches Mean annual air temperature: 68 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# Map Unit Composition

*Floridana and similar soils:* 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

# **Description of Floridana**

# Setting

Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Concave, linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 21 inches: sand Eg - 21 to 25 inches: sand Btg - 25 to 60 inches: sandy clay loam BCg - 60 to 80 inches: sandy clay loam

# **Properties and qualities**

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches

Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 10 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Moderate (about 8.3 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7w Hydrologic Soil Group: C/D Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL) Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# **Minor Components**

# Winder

Percent of map unit: 7 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Linear, concave Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Felda

Percent of map unit: 4 percent Landform: Flats on marine terraces, depressions on marine terraces Landform position (three-dimensional): Tread, talf, dip Down-slope shape: Linear Across-slope shape: Linear, concave Ecological site: Slough (R155XY011FL) Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Anclote

Percent of map unit: 2 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Concave, linear Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Tomoka

Percent of map unit: 2 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave, linear Across-slope shape: Concave, linear Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# 16—Hilolo loamy sand

# Map Unit Setting

National map unit symbol: 1jpv9 Elevation: 20 to 100 feet Mean annual precipitation: 49 to 58 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

#### Map Unit Composition

*Hilolo and similar soils:* 80 percent *Minor components:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Hilolo**

# Setting

Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 7 inches: loamy sand Btkg1 - 7 to 12 inches: fine sandy loam Btkg2 - 12 to 28 inches: sandy clay loam Btkg3 - 28 to 53 inches: fine sandy loam Cg1 - 53 to 74 inches: loamy fine sand Cg2 - 74 to 80 inches: fine sandy loam

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Moderate (about 7.2 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

## **Custom Soil Resource Report**

Land capability classification (nonirrigated): 3w Hydrologic Soil Group: B/D Forage suitability group: Loamy and clayey soils on flats of hydric or mesic lowlands (G156BC341FL) Hydric soil rating: Yes

## **Minor Components**

# Riviera

Percent of map unit: 4 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

#### Pople

Percent of map unit: 4 percent Landform: Flats on marine terraces, drainageways on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: Yes

# Pineda

Percent of map unit: 4 percent Landform: Drainageways on marine terraces, flats on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: Yes

# Winder, shell substratum, hydric

Percent of map unit: 4 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Concave, linear Across-slope shape: Linear Hydric soil rating: Yes

# Hallandale

Percent of map unit: 4 percent Landform: Flats on marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# 20—Kaliga muck, frequently ponded, 0 to 1 percent slopes

# Map Unit Setting

National map unit symbol: 2tzw6 Elevation: 0 to 130 feet Mean annual precipitation: 44 to 55 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Not prime farmland

# Map Unit Composition

*Kaliga and similar soils:* 80 percent *Minor components:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

# **Description of Kaliga**

# Setting

Landform: Depressions on flatwoods on marine terraces Landform position (three-dimensional): Tread, talf, dip Down-slope shape: Linear, concave Across-slope shape: Concave, linear Parent material: Herbaceous organic material over loamy marine deposits

# **Typical profile**

*Oa - 0 to 25 inches:* muck *C1 - 25 to 35 inches:* fine sandy loam *C2 - 35 to 60 inches:* sandy clay loam *C3 - 60 to 80 inches:* sandy clay loam

# **Properties and qualities**

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very high (about 15.3 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7w Hydrologic Soil Group: C/D  Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
 Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL)
 Hydric soil rating: Yes

# **Minor Components**

# Samsula

Percent of map unit: 5 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Concave Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Chobee

Percent of map unit: 4 percent Landform: Depressions on flatwoods on marine terraces Landform position (three-dimensional): Tread, talf, dip Down-slope shape: Linear, concave Across-slope shape: Linear, concave Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Tequesta

Percent of map unit: 4 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Concave Other vegetative classification: Freshwater Marshes and Ponds (R156BY010FL) Hydric soil rating: Yes

# Felda

Percent of map unit: 4 percent Landform: Depressions on marine terraces, flatwoods on marine terraces Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Linear Across-slope shape: Concave, linear Ecological site: Slough (R155XY011FL) Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

# Placid

Percent of map unit: 3 percent Landform: Drainageways on marine terraces, depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave Across-slope shape: Concave Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# 21—Lawnwood and Myakka sands

# Map Unit Setting

National map unit symbol: 1jpvg Elevation: 20 to 200 feet Mean annual precipitation: 49 to 58 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

#### **Map Unit Composition**

Lawnwood and similar soils: 40 percent Myakka and similar soils: 40 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Lawnwood**

# Setting

Landform: Marine terraces on flatwoods Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Sandy marine deposits

# **Typical profile**

A - 0 to 8 inches: sand E - 8 to 28 inches: sand Bh1 - 28 to 52 inches: sand Bh2 - 52 to 58 inches: sand C - 58 to 80 inches: sand

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: 10 to 31 inches to ortstein
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 0.9 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G156BC141FL)
Hydric soil rating: No

# **Description of Myakka**

#### Setting

Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy marine deposits

# **Typical profile**

A - 0 to 7 inches: sand E - 7 to 27 inches: sand Bh - 27 to 38 inches: sand C - 38 to 80 inches: sand

# Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 4.5 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: A/D Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G156BC141FL) Hydric soil rating: No

# **Minor Components**

# Ankona

Percent of map unit: 7 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Electra

*Percent of map unit:* 7 percent *Landform:* Knolls on marine terraces, rises on marine terraces *Landform position (three-dimensional):* Interfluve *Down-slope shape:* Convex *Across-slope shape:* Linear *Hydric soil rating:* No

# Waveland

Percent of map unit: 6 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# 23—Malabar fine sand, 0 to 2 percent slopes

# Map Unit Setting

National map unit symbol: 2svz3 Elevation: 10 to 140 feet Mean annual precipitation: 42 to 63 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# Map Unit Composition

Malabar and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Malabar**

# Setting

Landform: Drainageways on marine terraces, flats on marine terraces Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Linear Across-slope shape: Concave, linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 5 inches: fine sand E - 5 to 17 inches: fine sand Bw - 17 to 42 inches: fine sand Btg - 42 to 59 inches: fine sandy loam Cg - 59 to 80 inches: loamy fine sand

# Properties and qualities

Slope: 0 to 2 percent Depth to restrictive feature: More than 80 inches Natural drainage class: Poorly drained Runoff class: Very high Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr) Depth to water table: About 3 to 18 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum in profile: 1 percent Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Sodium adsorption ratio, maximum in profile: 4.0 Available water storage in profile: Low (about 5.6 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: A/D Ecological site: Slough (R155XY011FL) Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL) Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

# **Minor Components**

#### Valkaria

Percent of map unit: 5 percent Landform: Drainageways on marine terraces, flatwoods on marine terraces Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Linear Across-slope shape: Concave, linear Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

#### Oldsmar

Percent of map unit: 4 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex, linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: No

## Pineda

Percent of map unit: 4 percent Landform: Flats on marine terraces, drainageways on marine terraces Landform position (three-dimensional): Tread, talf, dip Down-slope shape: Linear Across-slope shape: Linear, concave Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

# Basinger

Percent of map unit: 2 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Linear, concave Across-slope shape: Linear, concave Hydric soil rating: Yes

# 24—Myakka fine sand, 0 to 2 percent slopes

# Map Unit Setting

National map unit symbol: 2s3lg Elevation: 0 to 130 feet Mean annual precipitation: 42 to 56 inches Mean annual air temperature: 68 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Not prime farmland

# Map Unit Composition

Myakka and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Myakka**

# Setting

Landform: Drainageways on flatwoods on marine terraces Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Linear Across-slope shape: Concave, linear Parent material: Sandy marine deposits

# **Typical profile**

A - 0 to 6 inches: fine sand E - 6 to 20 inches: fine sand Bh - 20 to 36 inches: fine sand C - 36 to 80 inches: fine sand

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 5.7 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: A/D Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)Other vegetative classification: South Florida Flatwoods (R155XY003FL)

Minor Components

Hydric soil rating: No

# \_ .

Basinger

Percent of map unit: 5 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave, linear Across-slope shape: Concave, linear Hydric soil rating: Yes

#### Wabasso

Percent of map unit: 4 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Tread, talf Down-slope shape: Convex, linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: No

# Cassia

Percent of map unit: 3 percent Landform: Flatwoods on marine terraces, rises on marine terraces Landform position (three-dimensional): Tread, talf Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sand Pine Scrub (R155XY001FL) Hydric soil rating: No

# Immokalee

Percent of map unit: 2 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Riser, talf Down-slope shape: Linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: No

# Satellite

Percent of map unit: 1 percent Landform: Flatwoods on marine terraces, rises on marine terraces Landform position (three-dimensional): Tread, talf, rise Down-slope shape: Linear, convex Across-slope shape: Linear Other vegetative classification: Sand Pine Scrub (R155XY001FL) Hydric soil rating: No

# 25—Nettles and Oldsmar sands

# Map Unit Setting

National map unit symbol: 1jpvl Mean annual precipitation: 49 to 58 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# **Map Unit Composition**

Nettles and similar soils: 40 percent Oldsmar and similar soils: 40 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Nettles**

# Setting

Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

*A - 0 to 8 inches:* sand *E - 8 to 33 inches:* sand *Bh1 - 33 to 39 inches:* sand *Bh2 - 39 to 55 inches:* sand *Btg - 55 to 80 inches:* fine sandy loam

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: 31 to 50 inches to ortstein
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 1.6 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: C/D *Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G156BC141FL) *Hydric soil rating:* No

# **Description of Oldsmar**

# Setting

Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 5 inches: sand E - 5 to 32 inches: sand Bh - 32 to 42 inches: sand Btg - 42 to 80 inches: fine sandy loam

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 4.9 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: A/D Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G156BC141FL) Hydric soil rating: No

# **Minor Components**

# Ankona

Percent of map unit: 4 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Pineda

Percent of map unit: 4 percent Landform: Drainageways on marine terraces, flats on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: Yes

#### Wabasso

Percent of map unit: 4 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Pepper

Percent of map unit: 4 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Oldsmar

Percent of map unit: 4 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

# 31—Pepper and EauGallie sands

# **Map Unit Setting**

National map unit symbol: 1jpvs Mean annual precipitation: 49 to 58 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# **Map Unit Composition**

*Eaugallie and similar soils:* 45 percent *Pepper and similar soils:* 45 percent *Minor components:* 10 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

# **Description of Eaugallie**

#### Setting

Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 5 inches: sand E - 5 to 26 inches: sand Bh - 26 to 47 inches: sand Btg - 47 to 62 inches: sandy loam Cg - 62 to 80 inches: sand

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Moderate (about 7.2 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: A/D Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G156BC141FL) Hydric soil rating: No

# **Description of Pepper**

# Setting

Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 6 inches: sand E - 6 to 23 inches: sand Bh1 - 23 to 33 inches: sand Bh2 - 33 to 57 inches: sand Btg - 57 to 80 inches: sandy loam

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: 16 to 31 inches to ortstein
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 1.1 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: D Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G156BC141FL) Hydric soil rating: No

# **Minor Components**

# Wabasso

Percent of map unit: 2 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Pineda

Percent of map unit: 2 percent Landform: Drainageways on marine terraces, flats on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: Yes

# Nettles

Percent of map unit: 2 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

# Tantile

Percent of map unit: 2 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

#### Lawnwood

Percent of map unit: 2 percent Landform: Marine terraces on flatwoods Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

# 32—Pineda sand, 0 to 2 percent slopes

# Map Unit Setting

National map unit symbol: 2x1nb Elevation: 0 to 100 feet Mean annual precipitation: 47 to 58 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 355 to 365 days Farmland classification: Farmland of unique importance

# Map Unit Composition

Pineda and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Pineda**

# Setting

Landform: Drainageways on marine terraces, flats on marine terraces Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Linear Across-slope shape: Concave, linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 5 inches: sand E - 5 to 19 inches: sand Bw - 19 to 35 inches: sand Btg/E - 35 to 38 inches: sandy loam Btg - 38 to 60 inches: sandy loam Cg - 60 to 80 inches: loamy sand

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 4 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 4.6 inches)

# Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: Slough (R155XY011FL)
Hydric soil rating: Yes

# **Minor Components**

# Malabar

Percent of map unit: 6 percent Landform: — error in exists on — Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Linear, concave Across-slope shape: Linear, concave Ecological site: Slough (R155XY011FL) Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

# Wabasso

Percent of map unit: 5 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Tread, talf Down-slope shape: Linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: No

# Valkaria

Percent of map unit: 2 percent Landform: Drainageways on flatwoods on marine terraces Landform position (three-dimensional): Tread, dip, talf Down-slope shape: Linear Across-slope shape: Concave, linear Other vegetative classification: Slough (R155XY011FL) Hydric soil rating: Yes

# Hallandale

Percent of map unit: 2 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Tread, talf Down-slope shape: Linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: Yes

# 36—Pople sand

# Map Unit Setting

National map unit symbol: 1jpvy Elevation: 20 to 100 feet Mean annual precipitation: 49 to 58 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# **Map Unit Composition**

Pople and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Pople**

# Setting

Landform: Flats on marine terraces, drainageways on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Concave Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 3 inches: sand E - 3 to 29 inches: sand Btkg - 29 to 56 inches: sandy clay loam Cg - 56 to 80 inches: sandy loam

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 20 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 5.7 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3w Hydrologic Soil Group: C/D Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G156BC241FL)Hydric soil rating: Yes

# **Minor Components**

#### Hilolo

Percent of map unit: 3 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: Yes

# Pineda

Percent of map unit: 3 percent Landform: Flats on marine terraces, drainageways on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: Yes

# Hallandale

Percent of map unit: 3 percent Landform: Flats on marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Winder, shell substratum, hydric

Percent of map unit: 2 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Concave, linear Across-slope shape: Linear Hydric soil rating: Yes

# Riviera

Percent of map unit: 2 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

# Winder, hydric

Percent of map unit: 2 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Concave, linear Across-slope shape: Linear Hydric soil rating: Yes

# 38—Riviera fine sand, 0 to 2 percent slopes

# Map Unit Setting

National map unit symbol: 2tzw2 Elevation: 0 to 80 feet Mean annual precipitation: 44 to 59 inches Mean annual air temperature: 68 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# Map Unit Composition

Riviera and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Riviera**

# Setting

Landform: Flats on marine terraces, drainageways on marine terraces Landform position (three-dimensional): Tread, talf, dip Down-slope shape: Linear Across-slope shape: Linear, concave Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 6 inches: fine sand E - 6 to 28 inches: fine sand Bt/E - 28 to 32 inches: fine sandy loam Btg - 32 to 42 inches: sandy clay loam C - 42 to 80 inches: fine sand

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Moderate (about 6.0 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3w Hydrologic Soil Group: A/D Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: Slough (R155XY011FL)
Hydric soil rating: Yes

# **Minor Components**

# Wabasso

Percent of map unit: 8 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Tread, talf Down-slope shape: Convex, linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: No

# Hallandale

Percent of map unit: 4 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Tread, talf Down-slope shape: Linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: Yes

# Pinellas

Percent of map unit: 4 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Tread, talf Down-slope shape: Convex, linear Across-slope shape: Linear Other vegetative classification: Cabbage Palm Flatwoods (R155XY005FL) Hydric soil rating: No

# Floridana

Percent of map unit: 2 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Tread, dip Down-slope shape: Concave, linear Across-slope shape: Concave, linear Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL) Hydric soil rating: Yes

# Oldsmar

Percent of map unit: 2 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex, linear Across-slope shape: Linear Other vegetative classification: South Florida Flatwoods (R155XY003FL) Hydric soil rating: No

# 49—Wabasso fine sand, gravelly substratum

# Map Unit Setting

National map unit symbol: 1jpwc Elevation: 20 to 100 feet Mean annual precipitation: 49 to 58 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Farmland of unique importance

# Map Unit Composition

Wabasso, gravelly substratum, and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# Description of Wabasso, Gravelly Substratum

# Setting

Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

# **Typical profile**

A - 0 to 5 inches: fine sand E - 5 to 20 inches: fine sand Bh1 - 20 to 23 inches: sand Bh2 - 23 to 25 inches: sand Btg - 25 to 32 inches: sandy loam 2C1 - 32 to 36 inches: very gravelly sandy loam 3C2 - 36 to 80 inches: sandy loam

# Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 4.8 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3w Hydrologic Soil Group: C/D Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G156BC141FL) Hydric soil rating: No

# Minor Components

# Hilolo

Percent of map unit: 4 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: Yes

# Pople

Percent of map unit: 4 percent Landform: Drainageways on marine terraces, flats on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Linear Across-slope shape: Concave Hydric soil rating: Yes

# Hallandale

Percent of map unit: 4 percent Landform: Flats on marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Wabasso

Percent of map unit: 3 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# 51—Waveland-Lawnwood complex, depressional

# Map Unit Setting

National map unit symbol: 1jpwf Mean annual precipitation: 49 to 58 inches Mean annual air temperature: 70 to 77 degrees F Frost-free period: 350 to 365 days Farmland classification: Not prime farmland

# Map Unit Composition

Waveland and similar soils: 55 percent Lawnwood and similar soils: 40 percent Minor components: 5 percent Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Waveland**

# Setting

Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Parent material: Sandy marine deposits

# **Typical profile**

A - 0 to 4 inches: fine sand Eg - 4 to 32 inches: sand Bh1 - 32 to 40 inches: loamy sand Bh2 - 40 to 53 inches: sand Cg1 - 53 to 66 inches: sand Cg2 - 66 to 80 inches: sand

# **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: 31 to 50 inches to ortstein
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 0.8 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7w Hydrologic Soil Group: C/D Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G156BC145FL) Hydric soil rating: Yes

# **Description of Lawnwood**

# Setting

Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Parent material: Sandy marine deposits

# **Typical profile**

A - 0 to 3 inches: sand E - 3 to 28 inches: sand Bh1 - 28 to 52 inches: sand Bh2 - 52 to 58 inches: sand C - 58 to 80 inches: sand

# Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 10 to 31 inches to ortstein
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 0.7 inches)

# Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7w Hydrologic Soil Group: A/D Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G156BC145FL) Hydric soil rating: Yes

# Minor Components

# Wabasso

Percent of map unit: 5 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No