

Web Soil Survey and Soil Classification Information

Proper use of the soil surveys in the OSTDS Program



ACT PRESENTATION 5 SEPTEMBER 2013

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Where do you find information on soils?

- **USDA NRCS**
- **WEB SOIL SURVEY**
- **LEGACY SOIL SURVEYS (BOOKS)**

Soil Survey (Legacy Documents)



United States
Department of
Agriculture



Natural
Resources
Conservation
Service

In cooperation with
the University of Florida,
Institute of Food and
Agricultural Sciences,
Agricultural Experiment
Stations, and Soil and
Water Science
Department; the Florida
Department of Agriculture
and Consumer Services;
the Gadsden County Board
of County Commissioners;
and the Gadsden County
Soil and Water
Conservation District

Soil Survey of Gadsden County, Florida



Soil Map from a Published Soil Survey

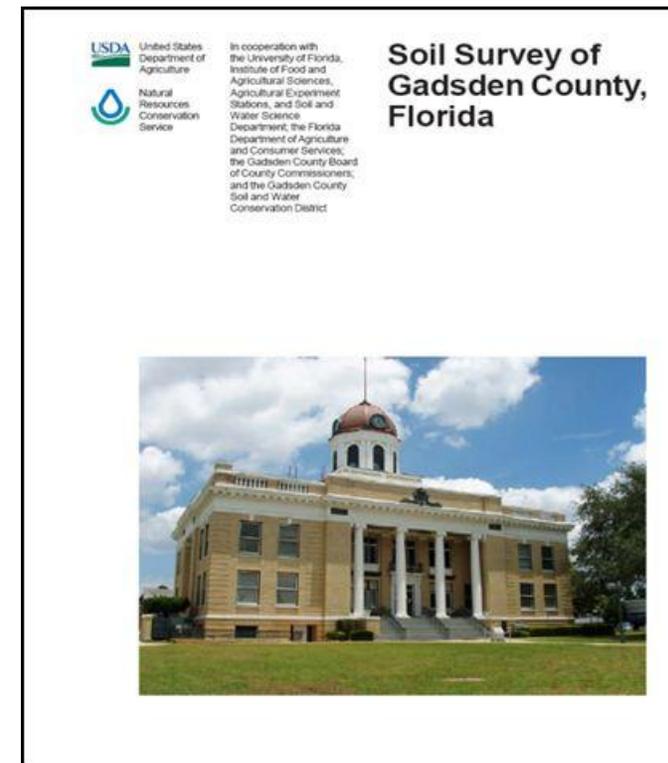


SYMBOL	NAME
2	Duckston sand, frequently flooded
3	Corolla-Duckston sands, gently undulating, flooded
4	Pickney sand
5	Croatan and Pickney soils, depressionial
6	Dirego muck, tidal
7	Kureb sand, 0 to 8 percent slopes
8	Newnan-Corolla complex, rolling, rarely flooded
9	Leon sand
10	Beaches
11	Hurricane sand, 0 to 5 percent slopes
12	Croatan muck, depressionial
13	Lakeland sand, 0 to 5 percent slopes
14	Allenton-Potsdam complex
15	Resota sand, 0 to 5 percent slopes
16	Arents-Urban land complex
17	Kureb sand, 8 to 12 percent slopes
18	Pits
19	Foxworth sand, 0 to 5 percent slopes
20	Lakeland sand, 5 to 8 percent slopes
21	Lakeland sand, 8 to 12 percent slopes
22	Urban land
24	Poarch sandy loam, 0 to 2 percent slopes
25	Poarch sandy loam, 2 to 5 percent slopes
26	Poarch sandy loam, 5 to 8 percent slopes
27	Escambia fine sandy loam, 0 to 2 percent slopes
28	Grady loam
29	Perdido sandy loam, 0 to 2 percent slopes
30	Perdido sandy loam, 2 to 5 percent slopes
31	Perdido sandy loam, 5 to 8 percent slopes
32	Troup sand, 0 to 5 percent slopes
33	Troup sand, 5 to 8 percent slopes
34	Troup sand, 8 to 12 percent slopes
35	Lucy loamy sand, 0 to 2 percent slopes
36	Lucy loamy sand, 2 to 5 percent slopes
38	Bonifay loamy sand, 0 to 5 percent slopes
39	Bonifay loamy sand, 5 to 8 percent slopes
40	Eunola fine sandy loam, 0 to 2 percent slopes, occasionally flooded
41	Malbis sandy loam, 0 to 2 percent slopes
42	Malbis sandy loam, 2 to 5 percent slopes
43	Albany sand, 0 to 5 percent slopes
44	Corolla-Urban land complex, 0 to 5 percent slopes, rarely flooded
45	Troup and Perdido soils, 8 to 35 percent slopes, severely eroded
46	Garcon-Bigbee-Yemassee complex, 0 to 5 percent slopes, occasionally flooded
47	Hurricane and Albany soils, 0 to 5 percent slopes, occasionally flooded
48	Peiham-Yemassee complex, occasionally flooded
49	Dorovan muck and Fluvaquents, frequently flooded
50	Bigbee-Garcon-Fluvaquents complex, flooded
51	Peiham loamy sand, 0 to 2 percent slopes
52	Robertdale sandy loam, 0 to 2 percent slopes
54	Troup-Poarch complex, 8 to 12 percent slopes
55	Troup-Poarch complex, 2 to 5 percent slopes
56	Troup-Poarch complex, 5 to 8 percent slopes
57	Cowarts-Troup complex, 12 to 18 percent slopes
58	Eunola fine sandy loam, 2 to 5 percent slopes, occasionally flooded
59	Notcher fine sandy loam, 0 to 2 percent slopes
60	Notcher fine sandy loam, 2 to 5 percent slopes
61	Notcher fine sandy loam, 5 to 8 percent slopes

Soil Survey



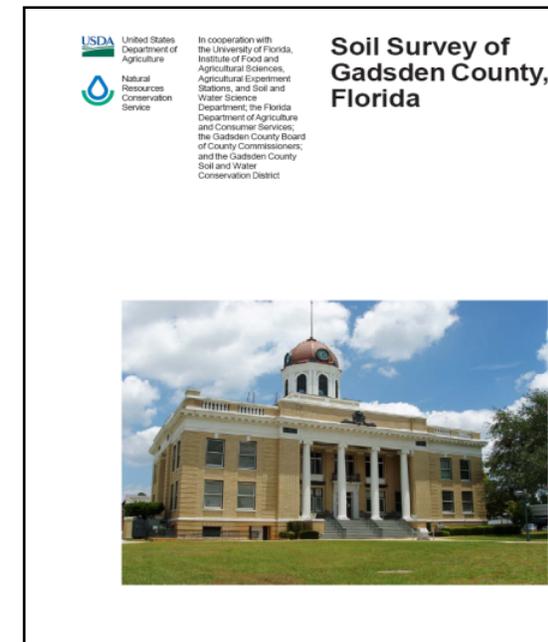
- **One for each county**
- **Format: paper, pdf, GIS, Web**
- **Paper: most are out of print and hard to find (but very useful)**
- **pdf: a digital replica of the paper, but only for a few counties**
- **GIS: geo data layers and attribute tables for use in GIS software**
- **WSS: (web soil survey) a website delivering the GIS data through a web browser so anyone can use it (more later)**



Soil Survey



- Excellent for planning and recon
- Soil survey not meant for field-scale
- Cannot be used for on-site delineation due to issues of scale and accuracy
- Therefore must use soil indicators for on-site delineation
- Excellent for field use, especially when you are learning and find a soil other than what is actually mapped.



Using Web Soil Survey (WSS)

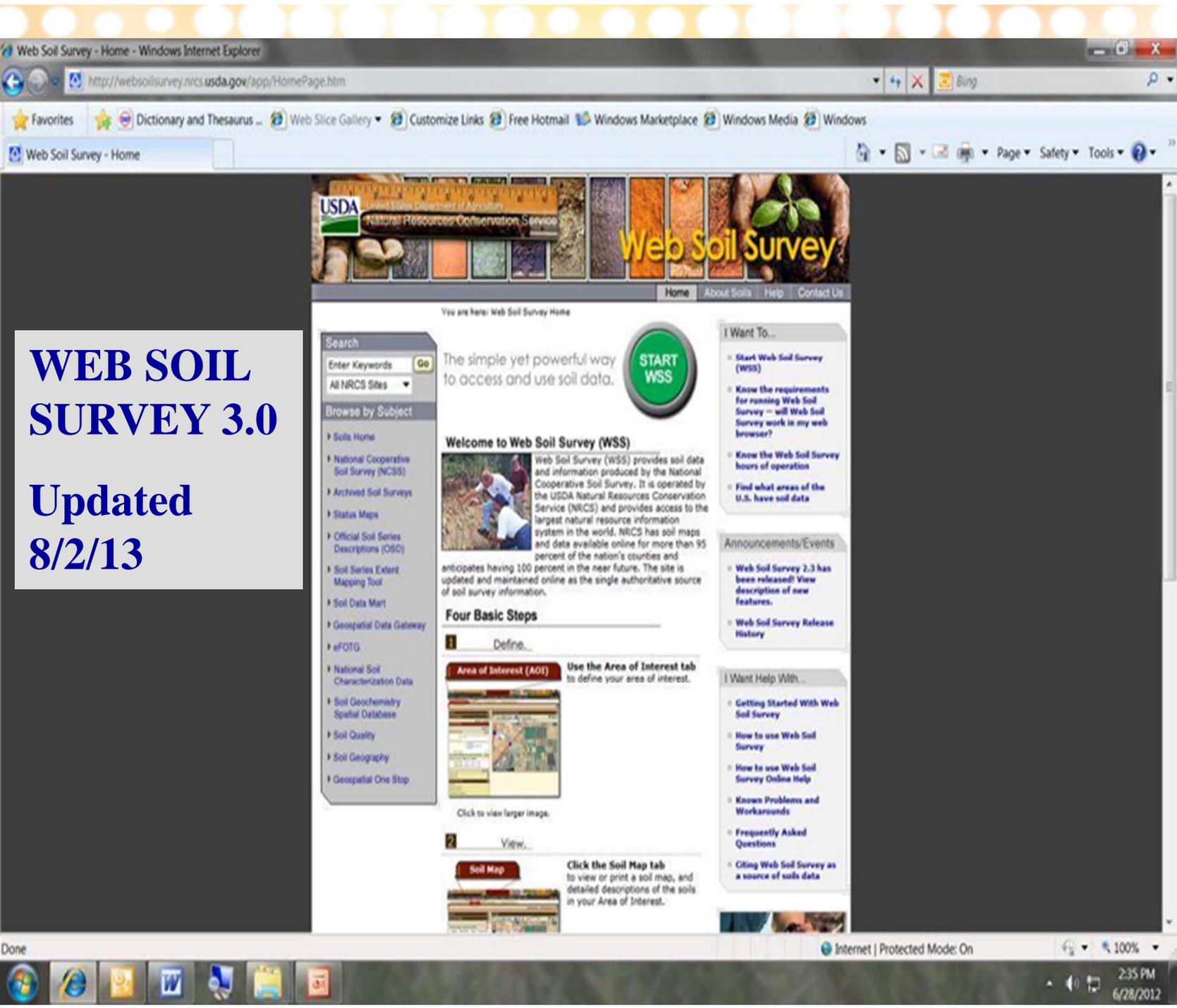


- *Now the official soil survey*
- **Replaces traditional paper copies of soil survey reports**
- **Most soil surveys in US are available**
- **Additional interpretations available**
- **Interpretive tables refined and presented in new format**
- **Designed for parcels or projects – not entire county**

New Web Soil Survey 3.0



- Newest version of WSS with updated features
- How to use the new WSS:
<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- Has improved maps and imagery, uses Bing Maps.
- Editable map properties.
- Improved special line features.
- Review changes at your leisure.



WEB SOIL SURVEY 3.0

Updated
8/2/13



Web Soil Survey - Home - Windows Internet Explorer

http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

2 **View...**

Soil Map

Click the **Soil Map** tab to view or print a soil map, and detailed descriptions of the soils in your Area of Interest.



Click to view larger image.

3 **Explore...**

Soil Data Explorer

Click the **Soil Data Explorer** tab to access soil data for your area and determine the suitability of the soils for a particular use. The items you want saved in a report can be added to your shopping cart.



Click to view larger image.

4 **Check Out...**

Shopping Cart (Free)

Use the **Shopping Cart** tab to get your custom printable report immediately, or download it later.



Click to view larger image.

Soil surveys can be used for general farm, local, and wider area planning. Onsite investigation is needed in some cases, such as [soil quality assessments](#) and certain conservation and engineering applications. For more detailed information, contact your local [USDA Service Center](#) or your [NRC's State Soil Scientist](#).

Last Modified: 2/17/2012

[NRC's Home](#) | [USDA](#) | [My USDA](#) | [FOIA](#) | [Accessibility Statement](#) | [Privacy Policy](#) | [Non-Discrimination Statement](#) | [Information Quality](#) | [USA.gov](#) | [White House](#)

Internet | Protected Mode: On

100%

2:40 PM
6/28/2012



New Features for WSS-self review



The screenshot shows the 'Web Soil Survey 3.0 New Features' page. The browser window title is 'Web Soil Survey 3.0 New Features - Windows Internet Explorer'. The address bar shows the URL: <http://websoilsurvey.sc.egov.usda.gov/App/NewFeatures.3.0.htm>. The page header features the USDA logo and the text 'United States Department of Agriculture Natural Resources Conservation Service'. The main heading is 'Web Soil Survey 3.0 – New Features'. Below this, a section titled 'Area of Interest (AOI) Size Limit Increased' contains the text: 'The AOI size limit has been increased from 10,000 to 100,000 acres. Soil survey areas exceeding this limit can still be set as AOIs using Quick Navigation.' This is followed by an 'AOI Information' table with a yellow background. The table lists 'Larimer County Area, Colorado' with an area of 457.7 acres, 'Weld County, Colorado, Southern Part' with 99,323 acres, and a 'Total' of 99,781 acres. Below the table, a section titled 'Improved Maps and Imagery' states: 'Map background imagery is now provided by Bing Maps. The new imagery is higher quality, color everywhere, and has complete coverage. Imagery is available world-wide and at all map scales - map navigation is only prohibited near the poles (above 75 degrees north latitude or below 75 degrees south latitude).' The browser's taskbar at the bottom shows various application icons and the system clock displaying '9:55 AM 9/24/2013'.

Web Soil Survey 3.0 New Features - Windows Internet Explorer

<http://websoilsurvey.sc.egov.usda.gov/App/NewFeatures.3.0.htm>

PDF Architect

Favorites Dictionary and Thesaurus ... Web Slice Gallery Customize Links Free Hotmail Windows Marketplace Windows Media Windows

Web Soil Survey 3.0 New Features

Home About Soils Help Contact Us

You are here: [Web Soil Survey Home](#) / [Web Soil Survey 3.0 New Features](#)

Web Soil Survey 3.0 – New Features

Area of Interest (AOI) Size Limit Increased

The AOI size limit has been increased from 10,000 to 100,000 acres. Soil survey areas exceeding this limit can still be set as AOIs using Quick Navigation.

AOI Information		
Name	<input type="text"/>	
Map Unit Symbols	<input checked="" type="radio"/> Use Soil Survey Area Map Unit Symbols <input type="radio"/> Use National Map Unit Symbols	
Area (acres)	Larimer County Area, Colorado	457.7
	Weld County, Colorado, Southern Part	99,323
	Total	99,781

Improved Maps and Imagery

Map background imagery is now provided by Bing Maps. The new imagery is higher quality, color everywhere, and has complete coverage. Imagery is available world-wide and at all map scales - map navigation is only prohibited near the poles (above 75 degrees north latitude or below 75 degrees south latitude).

Internet | Protected Mode: On 115%

9:55 AM 9/24/2013

WEB SOIL SURVEY HOME



A screenshot of the Web Soil Survey website displayed in a Windows Internet Explorer browser window. The browser's address bar shows the URL "http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx". The website's navigation menu includes "Contact Us", "Subscribe", "Archived Soil Surveys", "Soil Survey Status", "Glossary", "Preferences", "Link", "Logout", and "Help". Below the navigation menu are tabs for "Area of Interest (AOI)", "Soil Map", "Soil Data Explorer", "Download Soils Data", and "Shopping Cart (Free)". The main content area is titled "Area of Interest Interactive Map" and features a satellite map of the United States with state boundaries and abbreviations. To the left of the map is a search and navigation sidebar with sections for "Search", "Area of Interest", "Import AOI", and "Quick Navigation". The "Quick Navigation" section lists various entities such as "Address", "State and County", "Soil Survey Area", "Latitude and Longitude", "PLSS (Section, Township, Range)", "Bureau of Land Management", "Department of Defense", "Forest Service", "National Park Service", and "Hydrologic Unit". The browser's taskbar at the bottom shows the system tray with the date and time "6:45 AM 9/12/2013" and the system status "Internet | Protected Mode: On".

Navigation



The screenshot displays the Web Soil Survey website in a Windows Internet Explorer browser window. The browser's address bar shows the URL <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. The website header includes the USDA logo and navigation links such as "Contact Us", "Subscribe", "Archived Soil Surveys", "Soil Survey Status", "Glossary", "Preferences", "Link", "Logout", and "Help". Below the header, there are tabs for "Area of Interest (AOI)", "Soil Map", "Soil Data Explorer", "Download Soils Data", and "Shopping Cart (Free)".

The main content area features a search bar and a "Quick Navigation" sidebar. The "Quick Navigation" sidebar is highlighted with a green border and contains the following options:

- Address
- State and County
- Soil Survey Area
- Latitude and Longitude
- PLSS (Section, Township, Range)
- Bureau of Land Management
- Department of Defense
- Forest Service
- National Park Service
- Hydrologic Unit

Two red arrows point to the "Address" input field in the sidebar, with a red box around it and the text "Address box". A green arrow points to the "Other ways" section of the sidebar, which is enclosed in a green box with the text "Other ways". The main map area shows a satellite view of the contiguous United States with state boundaries and labels. The map interface includes a toolbar with various navigation tools and a "View Extent" dropdown menu set to "Contiguous U.S.". The browser's status bar at the bottom indicates "Internet | Protected Mode: On" and the system clock shows "6:46 AM 9/12/2013".

Type in address, hit “view” results in this view



The screenshot displays the Web Soil Survey website in a Windows Internet Explorer browser window. The address bar shows the URL: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. The website header includes the USDA logo and navigation links such as "Contact Us", "Subscribe", "Archived Soil Surveys", "Soil Survey Status", "Glossary", "Preferences", "Link", "Logout", and "Help".

The main content area features a navigation bar with tabs: "Area of Interest (AOI)", "Soil Map", "Soil Data Explorer", "Download Soils Data", and "Shopping Cart (Free)". The "Area of Interest (AOI)" tab is active, leading to the "Area of Interest Interactive Map" section.

On the left side, there is a search panel with the following fields and options:

- Search** (collapse icon)
- Area of Interest** (collapse icon)
- Quick Navigation** (collapse icon)
- Address** (collapse icon)
- Address input field: "233 fleming avenue, greenacres, fl" with a "View" button and a help icon.
- Checkbox: "Show location marker" (checked).
- Legend (collapse icon)
- Map controls: "View Extent" (Contiguous U.S.), "Scale" (not to scale).

The map displays an aerial view of a residential area in Palm Beach, Florida. A red box with the text "Address marker" and an orange arrow points to a specific location on the map, corresponding to the address entered in the search panel. The map shows streets such as Biscayne Dr, Greenacres, and various numbered streets (e.g., 9 37th St, 9 38th St, 9 39th St, 9 40th St, 9 41st St, 9 42nd St, 9 43rd St, 9 44th St, 9 45th St, 9 46th St, 9 47th St, 9 48th St, 9 49th St, 9 50th St, 9 51st St, 9 52nd St, 9 53rd St, 9 54th St, 9 55th St, 9 56th St, 9 57th St, 9 58th St, 9 59th St, 9 60th St, 9 61st St, 9 62nd St, 9 63rd St, 9 64th St, 9 65th St, 9 66th St, 9 67th St, 9 68th St, 9 69th St, 9 70th St, 9 71st St, 9 72nd St, 9 73rd St, 9 74th St, 9 75th St, 9 76th St, 9 77th St, 9 78th St, 9 79th St, 9 80th St, 9 81st St, 9 82nd St, 9 83rd St, 9 84th St, 9 85th St, 9 86th St, 9 87th St, 9 88th St, 9 89th St, 9 90th St, 9 91st St, 9 92nd St, 9 93rd St, 9 94th St, 9 95th St, 9 96th St, 9 97th St, 9 98th St, 9 99th St, 100th St).

The Windows taskbar at the bottom shows the system tray with the time 6:50 AM and date 9/12/2013, and the taskbar with icons for Internet Explorer, File Explorer, Word, and PowerPoint.



**Then begin navigation
by Area of Interest (AOI)**

How is this done?

This is how-----



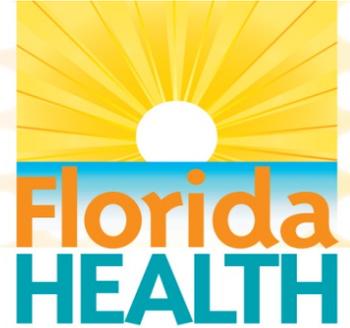
- **Several ways to navigate to AOI**
 - Quick Navigation Options
 - Magnifying Tool
- **Two ways to define AOI**
 - Rectangle
 - Polygon

Soil Map



- Only available if AOI is defined
- Soil Map tab will not activate until AOI is defined
- You will forget to define AOI
- You will think WSS does not work
- You will (finally) realize you did not define your AOI

Don't zoom in on a single small parcel!!



- AOI should cover a few acres with your specific target area in the middle. This allows observation of the surrounding soil relationships and could help determine seasonal high water table. Zooming in to find location is okay, then zoom out.
- Calibrate scale for soil survey.
- **WATCH THE SCALE!** There is a warning that shows up when the scale gets too large (zooming in). Reduce scale to what the warning tells you the area was originally mapped at (or close to it).

Calibrate Scale on WSS

Click on Scale Button and follow directions.



Search

Area of Interest

Quick Navigation

Address

Show location marker

State and County

Soil Survey Area

Latitude and Longitude

PLSS (Section, Township, Range)

Bureau of Land Management

Department of Defense

Forest Service

National Park Service

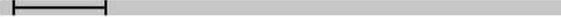
Hydrologic Unit

Area of Interest Interactive Map

Legend | View Extent: Contiguous U.S. | **Scale**: (not to scale)

Calibrate map scale to your monitor's screen resolution

Current value: 70 pixels per inch. (default)



If you calibrate your screen resolution, the application will:

- indicate the current map scale in the scale dropdown, and
- allow you to select a particular map scale using the scale dropdown.

If you don't need these features, just click the **Cancel** button.

To calculate map scale, the application needs to know your screen resolution (pixels per inch).

To set pixels per inch, make the black line segment exactly one inch long:

1. Hold a ruler (in inches) up to your screen so that the zero point is aligned with the left edge of the black line segment (inside the end bar).
2. Click in the gray space where your ruler measures one inch, or drag the line segment to resize it.
3. When the black line segment is exactly one inch long, between the end bars, press **OK**.

When you change your screen resolution, the application resets the calibration to "not to scale", but it remembers the previous value of pixels per inch until you explicitly change it, because it will still be valid if you return to the previous screen resolution.

Scale Indicator

How to calibrate scale

Warning language



Web Soil Survey - Windows Internet Explorer

http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

PDF Architect

Web Soil Survey

22	Myakka-Urban land complex	16.2	23.4%
Totals for Area of Interest		69.2	100.0%

Warning: Soil Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:20,000. The design of map units and the level of detail shown in the resulting soil map are dependent on that map scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House

Done

Internet | Protected Mode: On

100%

7:09 AM
9/12/2013



What you see after you make your Area of Interest and click on the Soil Map Tab (next slide)

Search

Map Unit Legend

Palm Beach County Area, Florida (FL611)

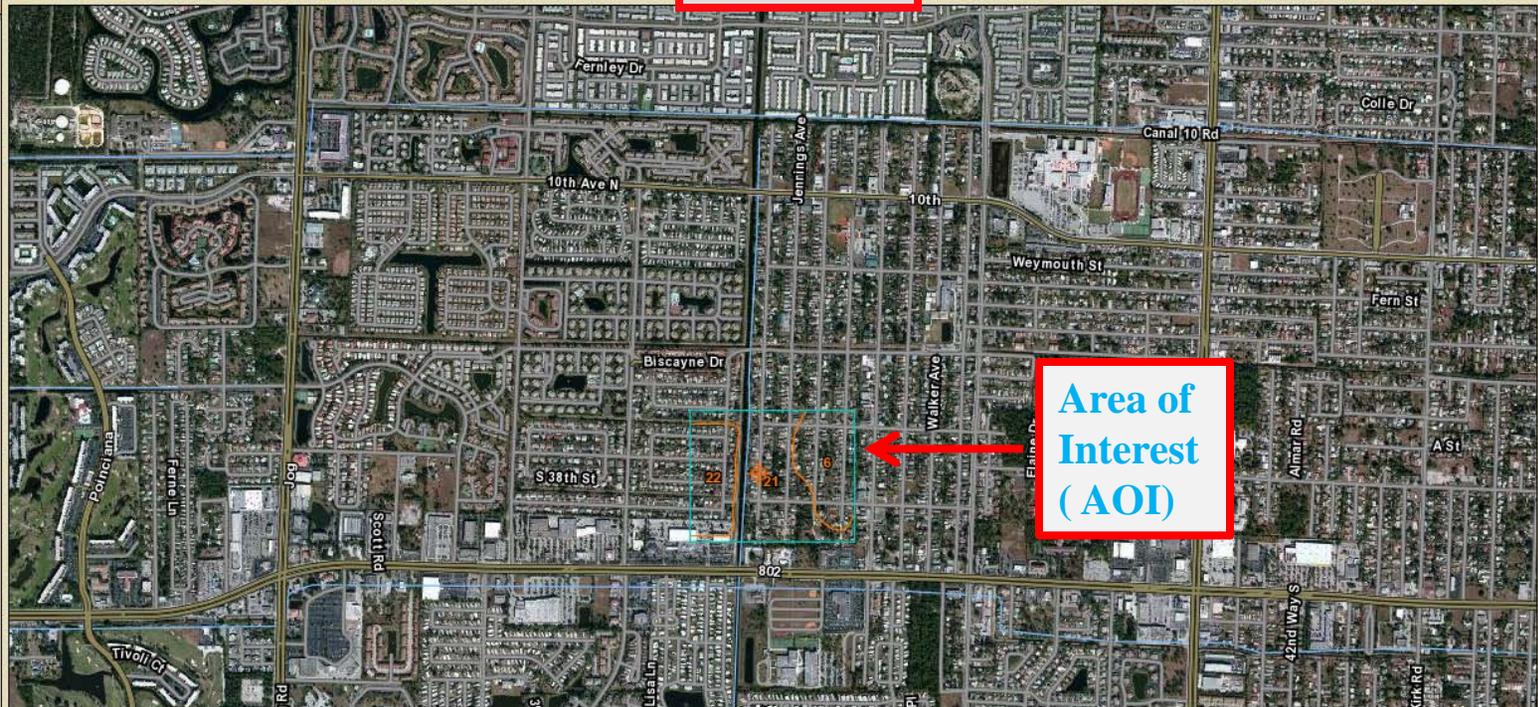
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6	Basinger fine sand	18.9	27.3%
21	Myakka fine sand	34.2	49.3%
22	Myakka-Urban land complex	16.2	23.4%
Totals for Area of Interest		69.2	100.0%

Soil Information

Soil Map

Legend Scale 1:15,800 ± 1 %

SCALE



Area of Interest (AOI)

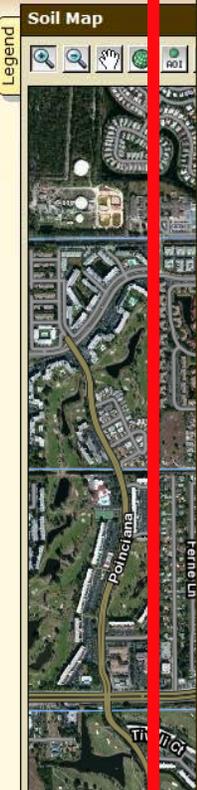


Notice the left side of the previous screen

- **This information includes the types and amounts of soil (and water) that is included in your Area of Interest, including the acreage mapped in the AOI.**
- **If you click on a map unit name, it will give you the following information.**

Palm Beach County Area, Florida (FL611)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6	Basinger fine sand	18.9	27.3%
21	Myakka fine sand	34.2	49.3%
22	Myakka-Urban land complex	16.2	23.4%
Totals for Area of Interest		69.2	100.0%



Map Unit Description

Printable Version

Report - Map Unit Description

Palm Beach County Area, Florida

21-Myakka fine sand

Map Unit Setting

Mean annual precipitation: 48 to 56 inches
 Mean annual air temperature: 70 to 77 degrees F
 Frost-free period: 358 to 365 days

Map Unit Composition

Myakka and similar soils: 80 percent
 Minor components: 20 percent

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

Properties and qualities

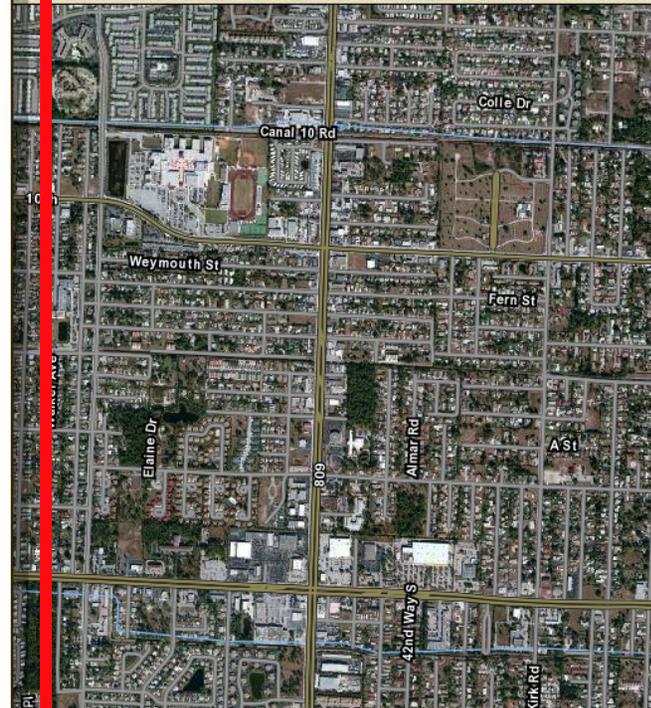
Slope: 0 to 2 percent
 Depth to restrictive feature: More than 80 inches
 Drainage class: Poorly drained
 Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
 Depth to water table: About 6 to 18 inches
 Frequency of flooding: None
 Frequency of ponding: None
 Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
 Sodium adsorption ratio, maximum: 4.0
 Available water capacity: Low (about 4.9 inches)

Interpretive groups

Farmland classification: Farmland of unique importance
 Land capability (nonirrigated): 4w
 Hydrologic Soil Group: A/D

Printable Version

Add to Shopping Cart





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Interpretive groups
Farmland classification: Farmland of unique importance
Land capability (nonirrigated): 4w
Hydrologic Soil Group: A/D

Typical profile
0 to 7 inches: Sand
7 to 26 inches: Sand
26 to 47 inches: Sand
47 to 72 inches: Sand

Minor Components

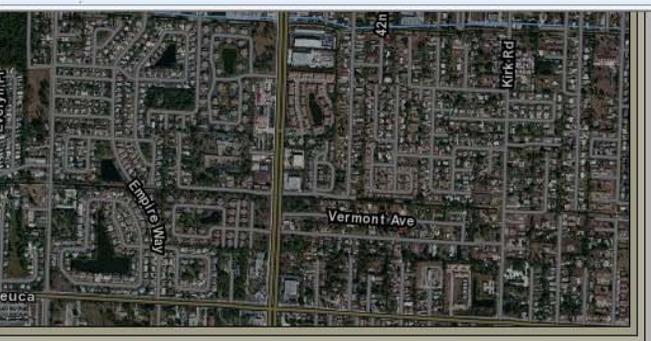
Immokalee
Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear

Basinger
Percent of map unit: 4 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave

Oldsmar
Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear

Pomello
Percent of map unit: 4 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interflue
Down-slope shape: Convex
Across-slope shape: Linear

Wabasso
Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf



ov | White House



This information is not that helpful for what we do, as it is the information from the map unit description. We need to access the current Classification information. Where do you find this?



You are here: Web Soil Survey Home

Search Enter Keywords Go

All NRCS Sites

Browse by Subject

- Soils Home
- National Cooperative Soil Survey (NCSS)
- Archived Soil Surveys
- Status Maps
- Official Soil Series Descriptions (OSD)**
- Soil Series Extent Mapping Tool
- Soil Data Mart
- Geospatial Data Gateway
- eFOTG
- National Soil Characterization Data

Click here



The simple yet powerful way to access and use soil data.



Welcome to Web Soil Survey (WSS)



Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation's counties and

anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information.

Three Basic Steps

1 Define...



Use the Area of Interest tab to define your area of interest.

I Want To...

- Start Web Soil Survey (WSS)
- Know the requirements for running Web Soil Survey
- Know whether Web Soil Survey works in my web browser
- Know the Web Soil Survey hours of operation
- Find what areas of the U.S. have soil data

Announcements/Events

- Web Soil Survey Release History

I Want Help With...

- How to use Web Soil Survey

Search

Soils
Enter Keywords GO

Technical References

Back to Technical References

Soil Classification

- Soil Taxonomy
- Keys to Soil Taxonomy
- Official Soil Series Descriptions (OSD)
- Soil Classification Database (SC)
- Distribution Maps of Dominant Soil Orders
- International Taxonomy Committees
- Soil Taxonomy Forum
- Rationale for Concepts in Soil Taxonomy

Official Soil Series Descriptions (OSD) with series extent mapping capabilities

[Introduction](#)

[OSD Fact Sheet](#)

Database Access

- [View OSD by Series Name \(with best-match feature\)](#)
- [View OSDs by List of Series Names \(with FTP option\)](#)
- [View OSDs by Query \(with FTP option\)](#)
- [Soil Series Name Search](#)

Click here

Recommended Citation

When referencing the online Official Soil Series Description information in publications, the following citation is recommended:

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions [Online WWW]. Available URL:

SAVE THIS TO "FAVORITES"



USDA-NRCS Official Soil Series Description Query Facility - Microsoft Internet Explorer

File Edit View Favorites Tools Help



Address <http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdnamequery.cgi>

Go Links

Soil Series Name Search

USDA-NRCS Soil Survey Division

Query Facility

DIRECTIONS

The following entry field may be used to retrieve a list of soil series names that match a partial string you enter with wildcard characters. This query facility will search the Soil Classification database for those names that match and create a list of the series names found. All names found will be included. Those soils that have an Official Soil Description will be linked.

Enter a series name with [wildcards](#):

Process

Clear Form

Done

Internet

start



Inbox - Micro...

Revisions in ...

Microsoft Po...

USDA-NRCS ...

Document1 - ...

6:21 AM

Type in the name of the soil, click
“Process”



USDA-NRCS Official Soil Series Description Query Facility - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites

Address <http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdnamequery.cgi> Go Links

Soil Series Name Search

USDA-NRCS Soil Survey Division *Query Facility*

DIRECTIONS
The following entry field may be used to retrieve a list of soil series names that match a partial string you enter with wildcard characters. This query facility will search the Soil Classification database for those names that match and create a list of the series names found. All names found will be included. Those soils that have an Official Soil Description will be linked.

Enter a series name with *wildcards*:

Plummer

Process Clear Form

Done Internet

start | Inbox - Micro... | Revisions in ... | Microsoft Po... | USDA-NRCS ... | Document1 - ... | 6:32 AM

This is what you get. Click on “View Description”



The screenshot shows a web browser window titled "USDA-NRCS Official Soil Series Description Query Facility - Microsoft Internet Explorer". The address bar shows the URL: `http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdnamequery.cgi?P`. The page content includes the following text:

USDA-NRCS [Series Name Query Facility](#) Soil Survey Division

Your query was:

```
select distinct seriesname
from   sc_series
where  ( seriesname like 'PLUMMER' )order by seriesname
```

which selected 1 soil series.

PLUMMER LOAMY, SILICEOUS, SUBACTIVE, THERMIC GROSSARENIC PALEAQUULTS

[View Description](#) [View Extent Map](#)

[Start Over](#)

The "View Description" button is highlighted with a red rectangular border. The Windows taskbar at the bottom shows the Start button, several open applications (Inbox - Micro..., Revisions in ..., Microsoft Po..., USDA-NRCS ..., Document1 - ...), and the system clock showing 6:21 AM on 6/21/08.

Classification Information



Official Series Description - PLUMMER Series - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www2.ftw.nrcs.usda.gov/osd/dat/P/PLUMMER.html>

LOCATION PLUMMER GA+AL FL MS NC SC TX VA

Established Series
KSL/Rev. JAK
03/2009

PLUMMER SERIES

MLRA(s): 133A-Southern Coastal Plain, 133B-Western Coastal Plain, 153A-Atlantic Coast Flatwoods, and 153B-Tidewater Area
Depth Class: Very deep
Drainage Class (Agricultural): Poorly or very poorly drained
Internal Free Water Occurrence: Very shallow, persistent
Flooding Frequency and Duration: None
Ponding Frequency and Duration: None to frequent; long or very long periods
Index Surface Runoff: Negligible to low
Saturated Hydraulic Conductivity: Moderately high
Shrink-swell Potential: Low
Landscape: Upper, middle, and lower coastal plains
Landform: Flats, depressions
Geomorphic Component: Talfs, dips
Hillslope Profile Position: Not assigned
Parent Material: Marine or fluviomarine deposits
Slope: 0 to 5 percent, dominantly less than 1 percent

Done Internet

start Inbox - Micro... Revisions In ... Microsoft Po... 2 Internet ... Document1 - ... 6:22 AM

Official Series Description - PLUMMER Series - Microsoft Internet Explorer

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Address <http://www2.ftw.nrcs.usda.gov/osd/dat/P/PLUMMER.html>

Hillslope Profile Position: Not assigned

Parent Material: Marine or fluviomarine deposits

Slope: 0 to 5 percent, dominantly less than 1 percent

Elevation (type location): Unknown

Frost Free Period (type location): 240 days

Mean Annual Air Temperature (type location): 19.2 degrees C (66.5 degrees F.)

Mean Annual Precipitation (type location): 1240 millimeters (49 inches)

TAXONOMIC CLASS: Loamy, siliceous, subactive, thermic Grossarenic Paleaquults

TYPICAL PEDON: Plummer sand on a 1 percent slope, in woodland. (Colors are for moist soil unless otherwise stated.)

A--0 to 23 centimeters (about 0 to 9 inches); dark gray (N 4/) sand; weak fine granular structure; very friable; many medium and fine roots; many clean sand grains in lower part; very strongly acid; clear wavy boundary. (10 to 30 centimeters thick)

Eg1--23 to 71 centimeters (about 9 to 28 inches); gray (5Y 6/1) sand; single grain; loose; few roots in upper part; common root holes with brown stains; very strongly acid; gradual wavy boundary.

Eg2--71 to 127 centimeters (about 28 to 50 inches); light gray (5Y 7/1) sand; single grain; loose; very strongly acid; gradual irregular boundary. (Combined thickness of the E horizon is 90 to 170 centimeters)

Btg--127 to 200 centimeters (about 50 to 80 inches); light gray (5Y 7/1) sandy loam with bodies of sandy clay loam; common medium and fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; weak medium granular and subangular blocky structure; friable; sand grains bridged with clay; very strongly acid.

Done

Internet

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Microsoft Po...

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6:22 AM

TYPE LOCATION: Wayne County, Georgia; about 2.6 miles east of Gardi along U.S. Highway 341 and south on county road 4.2 miles to crossroads; 0.2 mile east.

RANGE IN CHARACTERISTICS:

- Depth to top of argillic horizon: 100 to 195 centimeters (about 40 to 75 inches), commonly 125 to 180 centimeters (about 50 to 70 inches)
- Depth to base of argillic horizon: 150 to 200 centimeters or more (about 60 to 80 inches), commonly more than 2500 centimeters (about 100 inches)
- Depth to bedrock: Greater than 200 centimeters (about 80 inches)
- Depth to seasonal high water table: 0 to 25 centimeters (about 0 to 10 inches) December to July
- Thickness of the sandy surface and subsurface layers: Greater than 100 centimeters (about 40 inches)
- Content and size of rock fragments: 0 to 10 percent, by volume throughout, mostly fine quartz gravel or ironstone nodules or concretions
- Effective Cation Exchange Capacity: 3 to 10 milliequivalents per 100 grams of soil in the A horizon; 1 to 3 in E horizons; and 3 to 5 in the B horizon
- Soil Reaction: Extremely acid to strongly acid, except where limed

RANGE OF INDIVIDUAL HORIZONS:

- Oa horizon (where present):
 - Color--hue of 10YR, 2.5Y or 5Y; value of 2 to 4, chroma of 1 or 2; or is neutral with value of 2 to 4
 - Texture--muck, 2 to 20 centimeters thick
- A horizon:
 - Color--hue of 10YR to 5Y; value of 2 to 4, chroma of 1 or 2; or is neutral with value of 2 to 4. Where moist value and chroma are 3 or less, thickness of the A horizon is less than 25 centimeters (about 10 inches).
 - Texture--sand, fine sand, loamy fine sand or, loamy sand, or their mucky analogues
 - Clay content: 1 to 10 percent
- Eg horizon:
 - Color--hue of 10YR to 5Y; value of 5 to 8, chroma of 1 or 2; or is neutral with value of 5 to 8

Official Series Description - PLUMMER Series - Microsoft Internet Explorer

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Address <http://www2.ftw.nrcs.usda.gov/osd/dat/P/PLUMMER.html>

Clay content: 1 to 10 percent

Eg horizon:

Color--hue of 10YR to 5Y, value of 5 to 8, chroma of 1 or 2; or is neutral with value of 5 to 8

Texture--sand, fine sand, loamy fine sand, or loamy sand

Clay content: 1 to 10 percent

Redoximorphic features--iron depletions in shades of brown, yellow, or gray and masses of oxidized iron in shades of red, yellow, or brown. Iron depletions may be zones of uncoated sand grains.

BEG horizon (where present):

Color--hue of 10YR to 5Y, value of 5 to 7, chroma of 1 or 2; or is neutral with value of 5 to 7

Texture--loamy sand or loamy fine sand

Clay content: 1 to 12 percent

Redoximorphic features--iron depletions in shades of brown, yellow, or gray and masses of oxidized iron in shades of red, yellow, or brown. Iron depletions may be zones of uncoated sand grains.

Btg horizon:

Color--hue of 10YR to 5Y, value of 5 to 7, chroma of 1 or 2; or is neutral with value of 5 to 7

Texture--sandy loam, fine sandy loam or sandy clay loam and may have pockets of loamy sand or sandy clay

Clay content: 12 to 35 percent

Redoximorphic features--iron depletions in shades of brown, yellow, or gray and masses of oxidized iron in shades of red, yellow, or brown

COMPETING SERIES:

[Starke](#) soils--have an umbric epipedon

GEOGRAPHIC SETTING:

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GEOGRAPHIC SETTING:

Landscape: Upper, middle, and lower coastal plains
Landform: Flats, depressions
Geomorphic Component: Talfs, dips
Hillslope Profile Position: Not assigned
Parent Material: Marine or fluviomarine deposits
Slope: 0 to 5 percent, dominantly less than 1 percent
Elevation: 5 to 135 meters (about 15 to 450 feet)
Mean Annual Air Temperature: 14 to 21 degrees C. (about 59 to 70 degrees F.)
Mean Annual Precipitation: 965 to 1320 millimeters (about 38 to 52 inches)
Frost Free Period: 190 to 275 days

GEOGRAPHICALLY ASSOCIATED SOILS:

[Alapaha](#) soils--have an arenic epipedon and have plinthite in the Bt horizons
[Atmore](#) soils--have 6 to 18 percent clay in upper 50 centimeters of the Bt horizon and plinthite in the lower Bt horizon
[Ellabelle](#) soils--have an umbric epipedon
[Johnston](#) soils--have a thick umbric epipedon
[Leefield](#) soils--have combined A and E horizons of less than 100 centimeters thick
[Leon](#) soils--have a spodic horizon
[Lynn Haven](#) soils--have a spodic horizon
[Mascotte](#) soils--have a spodic horizon
[Ocilla](#) soils--have combined A and E horizons of less than 100 centimeters thick
[Olustee](#) soils--have a spodic horizon
[Osier](#) soils--do not have an argillic horizon
[Pelham](#) soils--have an arenic epipedon
[Pine](#) soils--have combined A and E horizons of less than 100 centimeters thick

- [Pelham](#) soils--have an arenic epipedon
- [Rains](#) soils--have combined A and E horizons of less than 100 centimeters thick
- [Rutlege](#) soils--have an umbric epipedon
- [Surrency](#) soils--have an umbric epipedon
- [Torhunta](#) soils--have a thick umbric epipedon

DRAINAGE AND PERMEABILITY:

Drainage Class (Agricultural): Poorly or very poorly drained
Internal Free Water Occurrence: Very shallow, persistent
Flooding Frequency and Duration: None
Ponding Frequency and Duration: Depressional areas are occasionally or frequently ponded for long or very long periods
Index Surface Runoff: Negligible to low
Saturated Hydraulic Conductivity: Moderately high (4.2 to 14.1 micrometers per second)
Shrink-swell Potential: Low

USE AND VEGETATION:

Major Uses: Woodland
Dominant Vegetation: Where wooded--mixed stands of slash, loblolly, and longleaf pine with swamp tupelo and bald cypress and an understory of gallberry, waxmyrtle, southern bayberry, wiregrass, pitcher plants, and bracken fern. Where cleared--pasture.

DISTRIBUTION AND EXTENT:

Distribution: Georgia, Alabama, Delaware, Florida, Maryland, Mississippi, North Carolina, South Carolina, and Virginia
Extent: Large

MLRA OFFICE RESPONSIBLE: Raleigh, North Carolina

Official Series Description - PLUMMER Series - Microsoft Internet Explorer

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Address <http://www2.ftw.nrcs.usda.gov/osd/dat/P/PLUMMER.html>

Go Links

Distribution: Georgia, Alabama, Delaware, Florida, Maryland, Mississippi, North Carolina, South Carolina, and Virginia
Extent: Large

MLRA OFFICE RESPONSIBLE: Raleigh, North Carolina

SERIES ESTABLISHED: Duval County, Florida; 1910.

REMARKS: Diagnostic horizons and soil characteristics recognized in this pedon are:

Ochric epipedon--the zone from the surface of the soil to a depth of about 127 centimeters (A, Eg1, and Eg2 horizons)

Grossarenic feature--sandy materials from the surface of the soil to a depth of approximately 127 centimeters (A, Eg1, and Eg2 horizons)

Argillic horizon--the zone from approximately 127 to 200 centimeters (Btg horizon)

Aquic conditions--periodic saturation and reduction in a zone from the soil surface to 200 centimeters at some time during the year (endosaturation).

Redox concentrations--the zone from 127 to 200 centimeters (Btg horizon)

Redox depletions with chroma of 2 or less--the zone from the soil surface to 200 centimeters (A, Eg, and Btg horizons)

Series control section--the zone from 0 to 200 centimeters

ADDITIONAL DATA:

Laboratory Data: Characterization data are not available from NRCS-Soil Survey Laboratory, Lincoln, NE.

Database Information:

Data Mapunit ID--To be developed

Typical Pedon User Pedon ID--To be developed

National Cooperative Soil Survey
U.S.A.

Done

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Soils Mapped by Counties

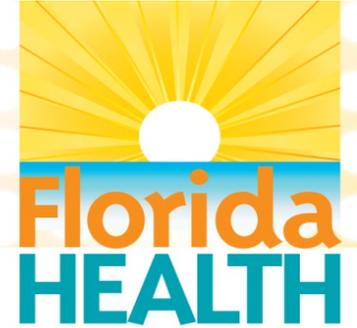


- Soils are mapped for each county in Florida
- A minimum amount of soil must be found in the county for it to be mapped in the county.
- Just because a soil is not actually mapped in the county DOES NOT mean that the soil cannot be found there (assuming same temperature region).
- Therefore you may find a soil (or be given a soil name) that you do not recognize as mapped in the county.
- Look name up using the Official Soils Series Description to find out more about the soil.

NOTE



- Soils vary across the landscape.
- At the mapping scales used by USDA NRCS, only ACREAGE can be mapped.
- While one major soil type is mapped, there are INCLUSIONS within each map unit.
- Have SIMILAR and DISSIMILAR inclusions.

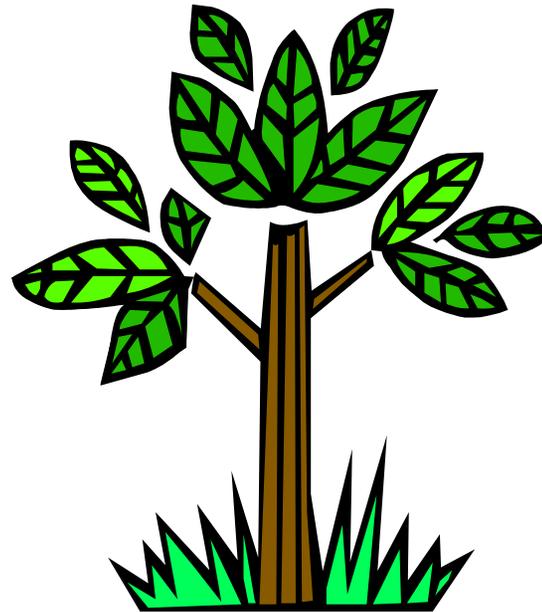


- Just because a soil is mapped in a certain area doesn't mean you will always find that soil.
- Dependent on soil forming factors (including landscape position).
- If on a knoll, could have a better drained soil, lower SHWT.
- If in a depression, could be more poorly drained soil, higher SHWT.
- Drainfields can range between 250 square feet to over 14,000 square feet.



QUESTIONS???

VEGETATION AND SOILS



VEGETATION AND SOILS



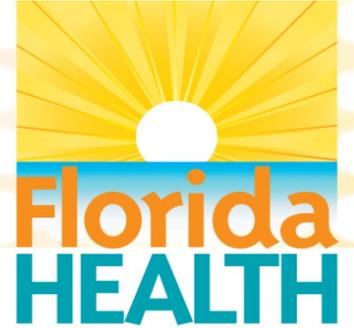
*There is an intimate relationship between soil type and natural vegetation type. **Plants have varying nutrient and water requirements, just as different soils have varying nutrient and water contents. Therefore, recognizing certain vegetative clues can help us predict certain soil characteristics. For example, the cypress tree almost always grows in soils that have a SHWT at or above the surface.***

Ecological Plant Communities



- Coastal Strand
- Sand Pine Scrub
- Longleaf Pine-Turkey Oak Hills
- Mixed Hardwood and Pine
- Flatwoods (*contains Pine and Saw Palmettos*)
- Upland Hardwood Hammocks
- Wetland Hardwood Hammock
- Swamps

Ecological Plant Communities



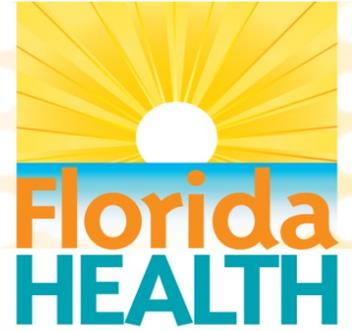
- Bottomland Hardwoods
- Pitcher Plant Bogs
- Sawgrass Marsh
- Freshwater Marsh
- Salt Marsh
- Sloughs
- Cutthroat Seeps



Sand Pine



Camphor Tree (Citrus County)



**Cattail
(without
seeds)**



Sand Oak and Saw Palmetto

Everglades



Turkey Oak



Pine Flatwoods



02/13/2012

Saw Palmetto, *Serenoa repens*







Cabbage Palm
Sabal Palmetto



**Cypress
and
Cabbage
Palm in
floodplain**



Red Maple

Acer rubrum

**Red
Maple
Samara
(fruit)**



02/13/2012



**Black Titi
(*Cliftonia
monophylla*)
in bloom**



**Black Titi
close-up**



Salt Marsh



Sawgrass

FLORIDA WETLAND PLANTS

AN IDENTIFICATION MANUAL

Dr. John D. Tobe

Kathy Craddock Burks

Richard W. Cantrell

Mark A. Garland

Maynard E. Sweeley

Dr. David W. Hall

Pete Wallace

Guy Anglin

Gil Nelson

Dr. James R. Cooper

David Bickner

Katherine Gilbert

Neil Aymond

Ken Greenwood

Nina Raymond



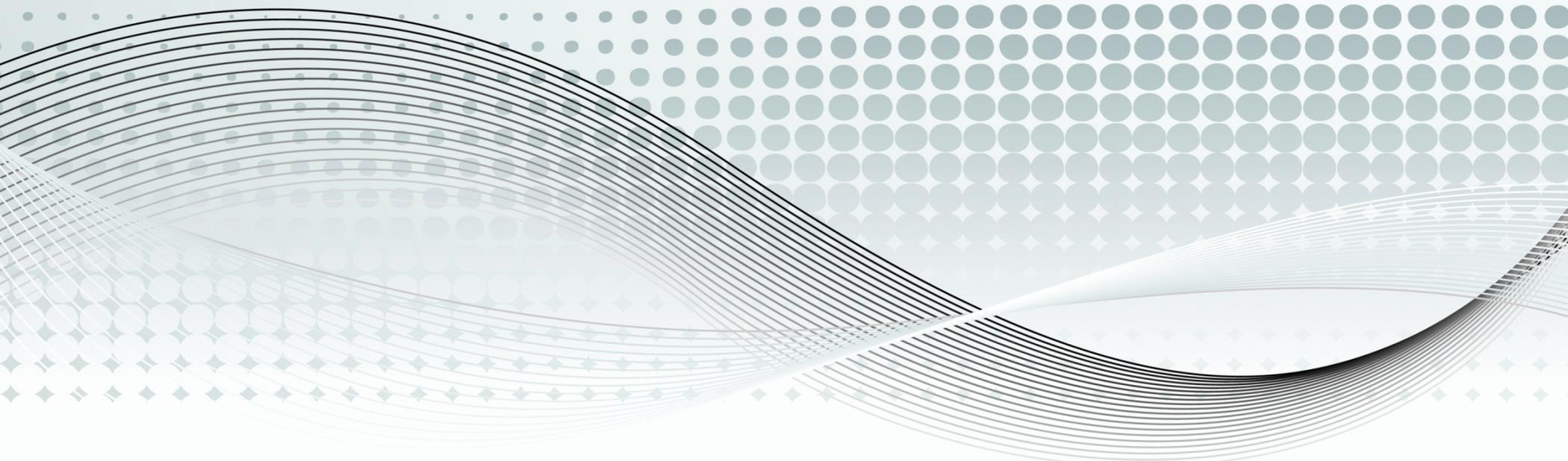
DEP Plant Identification Manual for wetter areas

FLORIDA WETLAND PLANTS



- The manual is available from the University of Florida/The Institute of Food and Agricultural Sciences (UF/IFAS) Publications, P.O. Box 110011, Gainesville, Florida, 32611. The cost is \$35.00 plus \$4.00 shipping and handling. Florida addresses must add the appropriate sales tax. Purchase orders, check, or charges (MasterCard, or VISA by calling 1-800-226-1764) are accepted. (as of 2/15/12)

QUESTIONS???



METHODS OF SOIL INVESTIGATION



METHODS OF SOIL INVESTIGATION



- **Obtaining Soil Survey Data**
- **Evaluation of Surroundings**

PROBLEM SOILS



- Filled Areas
- Local Knowledge of Area Soils
- Consult OSTDS Program Office
- Consult Soil Scientist
- **QUESTIONS????**

