

Web Soil Survey and Soil Classification Information April 2015

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OBJECTIVES

- Define and describe web soil survey and its use
- Describe USDA NRCS soil classification system

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Where do you find information on soils?

- USDA NRCS web soil survey
- Legacy Soil Surveys (paperback books)

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 In cooperation with the University of Florida, Institute of Food and Agricultural Sciences, National Soil Survey Center, and the Florida Department of Agriculture and Consumer Services, the Gadsden County Board of County Commissioners, and the Gadsden County Health Department.

Soil Survey of Gadsden County, Florida

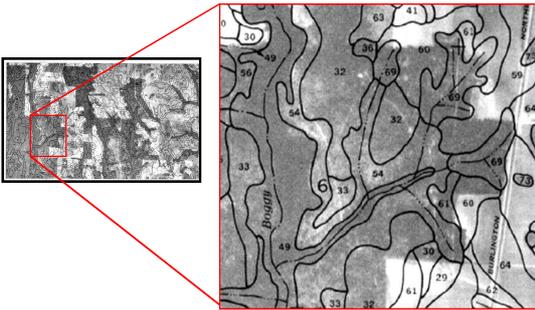


Soil Survey (Legacy Documents)

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Soil Map from a Published Soil Survey



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Soil Surveys

- 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

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Soil Surveys

- 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)

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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

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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

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Using Web Soil Survey (WSS)

- Interpretive tables refined and presented in new format, now has DOH drainfield interpretation
- Designed for parcels or projects – not entire county

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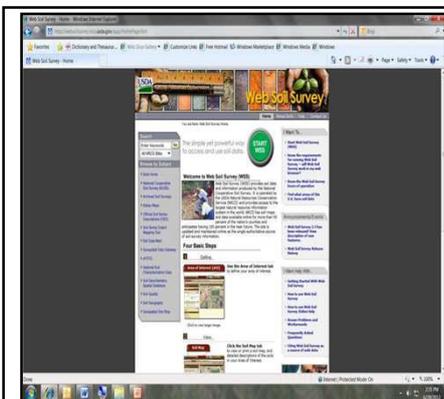


New Web Soil Survey 3.0

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

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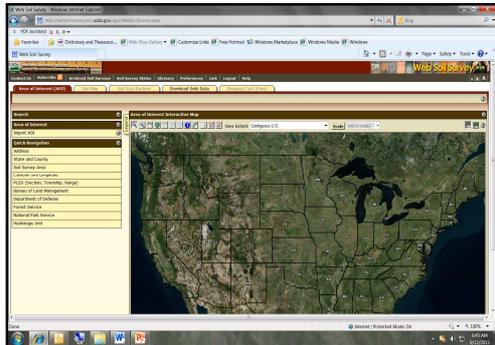


WEB SOIL SURVEY 3.0
 Updated 8/2/13

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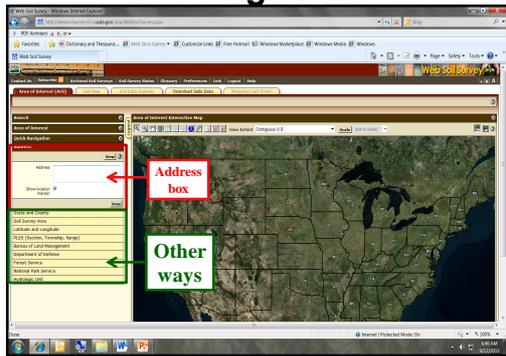
WEB SOIL SURVEY HOME



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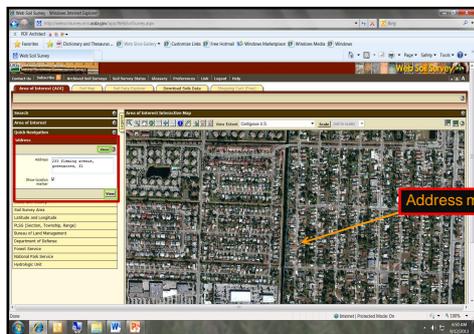
Navigation



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Input address, "view" looks like this:



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Then begin navigation by Area of Interest (AOI)

How is this done?

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This is how-----

Several ways to navigate to AOI

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

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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

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Parcel Observation

- Do not zoom into one small area
- AOI should cover several acres with your site in the middle
- Allows for observation of surrounding soils
- Calibrate the scale on survey
- Warning will show if scale is much smaller than mapped scale

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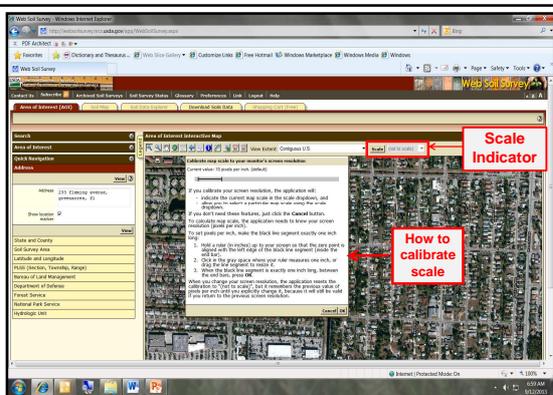


Calibration of Scale on WSS

Click on Scale Button and follow directions

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Map Unit Descriptions

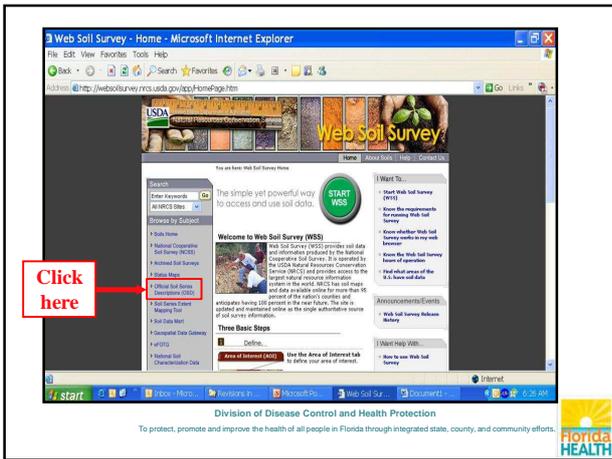
- This information is not that helpful for what we do, does not supply necessary detail for our purposes
- We need to access the current soil classification information
- This is found at a USDA NRCS website, *Soil Series Name Search*

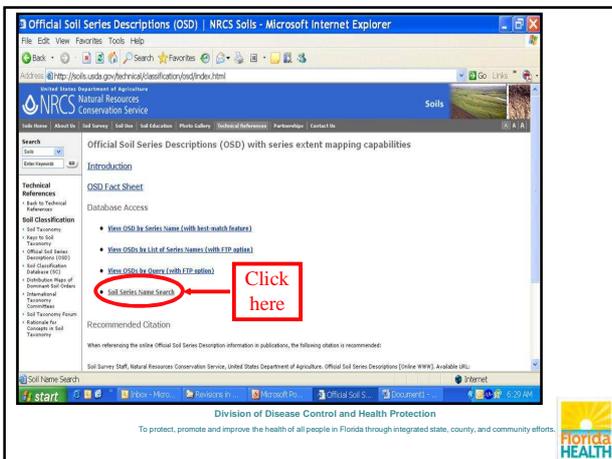
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SAVE THIS TO "FAVORITES"



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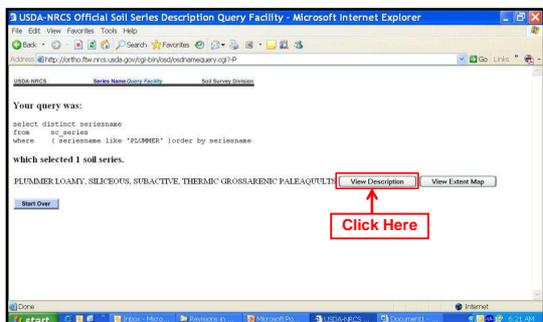
Input soil name then "Process"



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Soil displayed/View description of soil



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Official Series Description - PLUMMER Series - Microsoft Internet Explorer

Address: <http://www2.nrcs.usda.gov/soils/PLUMMER.html>

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

Extent: Large

MIRA OFFICE RESPONSIBLE: Raleigh, North Carolina

SERIES ESTABLISHED: Duval County, Florida, 1910.

REMARKS: Diagnostic horizons and soil characteristics recognized in this pedon are:
Epipedon—the zone from the surface of the soil to a depth of about 127 centimeters (A, E1, and E2 horizons)
Crusts—hard, stony materials from the surface of the soil to a depth of approximately 127 centimeters (A, E1, and E2 horizons)
Argillic horizon—the zone from approximately 127 to 200 centimeters (Bq horizon)
Alpine condition—periodic saturation and reduction in a zone from the soil surface to 200 centimeters at some time during the year (endocutaneous)
Redox concentrations—the zone from 127 to 200 centimeters (Bq horizon)
Redox depletions with chroma of 2 or less—the zone from the soil surface to 200 centimeters (A, E, and Bq 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 Mipmat 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

- Minimum acreage of soil must be present in county to be mapped
- May actually find a soil not mapped or recognized in your county (presuming same temperature region)
- Look up the named soil using the Official Soil Series Description to determine information

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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

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- Major soil map unit may not be found in your drainfield area
- Depends on soil forming factors, including landscape position
- Soils on knolls may be better drained, deeper SHWT
- Soils in depressions more poorly drained, higher SHWT
- Drainfields: 250 to >14,000 square feet

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QUESTIONS?

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VEGETATION AND SOILS



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VEGETATION AND SOILS

- Intimate relationship between soil types and natural vegetation
- Plants have varying nutrient water and nutrient requirements
- Recognizing vegetative clues can help predict certain soil characteristics such as seasonal high water table

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Ecological Plant Communities

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

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Ecological Plant Communities

- Upland Hardwood Hammocks
- Wetland Hardwood Hammock
- Swamps
- Bottomland Hardwoods
- Pitcher Plant Bogs

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Ecological Plant Communities

- Sawgrass Marsh
- Freshwater Marsh
- Salt Marsh
- Sloughs
- Cutthroat Seeps

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See DOH Sharepoint Training

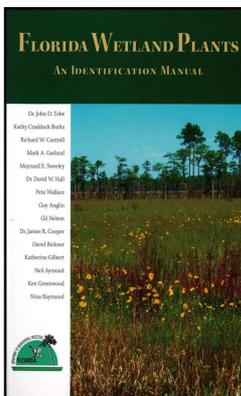
See training from May 13, 2013
Vegetation and Soil Relationships

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DEP Plant Identification Manual (for wetter areas)

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FLORIDA WETLAND PLANTS

- Available from UF
- UF/IFAS Publications, PO Box 110011
Gainesville, FL 32611
- \$35 plus S/H
- Sales tax if Florida citizen
- Purchase orders, checks, credit card

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METHODS OF SOIL INVESTIGATION



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METHODS OF SOIL INVESTIGATION

Obtaining Soil Survey Data

Evaluation of Surroundings

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PROBLEM SOILS

Filled Areas

Local Knowledge of Area Soils

Consult OSTDS Program Office

Consult Soil Scientist



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End of Presentation

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