Get to Know Your Soil: The Information is at your Fingertips for the Resources Beneath your Feet!



Soil Survey Data Access Methods

- 1. Web Soil Survey (PC / laptop only) Official Soil Survey Information (USDA-NRCS)
- 2. Google Maps (PC / laptop and smartphone)
- 3. Soil Web App (smartphone)
- 4. Google Earth (PC / laptop and Smartphone)

Soil Survey Data Access Methods

http://casoilresource.lawr.ucdavis.edu/soilweb-apps http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm



• Web Soil Survey (Official NRCS SS Data):

http://websoilsurvey.sc.egov.usda.gov/App/HomePa ge.htm

Step 1: Green Start Button



You are here: Web Soil Survey Home

Enter Keywords All NRCS Sites

Go



Browse by Subject

Soils Home

Search

- National Cooperative Soil Survey (NCSS)
- Archived Soil Surveys
- Status Maps
- Official Soil Series Descriptions (OSD)
- Soil Series Extent Mapping Tool
- Geospatial Data Gateway
- ▶ eFOTG
- National Soil Characterization Data
- Soil Geochemistry Spatial Database
- Soil Quality
- Soil Geography

Welcome to Web Soil Survey (WSS)



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.

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 NRCS State Soil Scientist.

Four Basic Steps

1 Define. Area of Interest (AOI)

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



Click to view larger image.



I Want To ...

I Want Help With ...

- o Getting Started With Web Soil Survey
- o How to use Web Soil Survey
- How to use Web Soil Survey Online Help

• Step 2: Allow website to load and define "area of interest (AOI)."



Area of Interest (AOI) Soil Map	Soil I
Search	8
Area of Interest	8
Import AOI	
Create AOI from Shapefile	
Create AOI from Zipped Shapefile	
Quick Navigation	8
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	

• Step 3 – Enter an address or lat/long, etc.



Step 4 – Click on "red" AOI button at top to clip your soils information for your area.



• Step 4 – Click on "Soil Map" tab.



• Step 5 – Click on interactive soil mapunit.

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	%	100.0	15.8		or Area of Interest	Totals fo

USDA

ľ	Map Unit Description
	Printable Version
	Report — Map Unit Description
	Salem County, New Jersey
	AhrA—Alloway silt loam, 0 to 2 percent slopes
	Map Unit Setting
	Mean annual precipitation: 28 to 59 inches Mean annual air temperature: 46 to 79 degrees F Frost-free period: 161 to 231 days
	Map Unit Composition
	Alloway and similar soils: 90 percent Minor components: 10 percent
	Description of Alloway
	Setting
	Landform: Ridges Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Silty and clayey eolian deposits and/or silty and clayey fluviomarine deposits
	Properties and qualities
	Slope: 0 to 2 percent Depth to restrictive feature: More than 80 inches Drainage class: Moderately well drained Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr) Depth to water table: About 18 to 42 inches Frequency of flooding: None Frequency of ponding: None Available water capacity: High (about 11.5 inches)
	Interpretive groups
	Farmland classification: All areas are prime farmland Land capability (nonirrigated): 2w Hydrologic Soil Group: B
	Typical profile
	0 to 11 inches: Silt Ioam 11 to 18 inches: Silty clay Ioam 18 to 24 inches: Silty clay Ioam 24 to 32 inches: Clay Ioam 32 to 39 inches: Clay Ioam 39 to 48 inches: Clay Ioam 48 to 65 inches: Clay 65 to 80 inches: Clay

Step 6 – Click "Suitabilities and Limitations for Use" and "Soil Properties and Qualities" tabs.

Area of Interest (AOI) Soil Map	Soil Data Explorer Download Soils Data Shopping Cart (Free)
View Soil Information By Use: All Uses	
Intro to Soils Suitabilities and Lim	nitations for Use Soil Properties and Qualities Ecological Site Assessment Soil Reports
Search	Soil Map
Suitabilities and Limitations Ratings	🔕 😽 🔍 🔍 🕅 🍏 💭 🕕 🚺 🖉 🌆 Scale (not to scale) 🗸
Open All Close	
Building Site Development	
Construction Materials	
Disaster Recovery Planning	
Land Classifications	
Land Management	
Military Operations	
Recreational Development	
Sanitary Facilities	
Vegetative Productivity	⑦ ⊗
Waste Management	
Water Management	

• Step 6 – Click "Suitabilities and Limitations for Use" and "Soil Properties and Qualities" tabs.

Area of Interest (AOI) Soil Map Soil Data Explorer Download Soils Data Shopping Cart (Free)
View Soil Information By Use: All Uses
Intro to Soils Suitabilities and Limitations for Use Soil Properties and Qualities Ecological Site Assessment Soil Reports
Search Soil Map
Properties and Qualities Ratings 🔗 🙀 🔍 🔍 🕅 🎯 🔝 🍚 🗊 🚺 🖉 🖳 Scale (not to scale) 💌
Open All Close All 🕐 🧮
Soil Chemical Properties 2 3
Soil Erosion Factors
Soil Physical Properties 2 3
Soil Qualities and Features 2 (2) (3)
AASHTO Group Classification (Surface)
Depth to a Selected Soil Restrictive Layer
Depth to Any Soil Restrictive Layer
Drainage Class
Frost Action CheAt
Frost-Free Days
Hydrologic Soil Group
Map Unit Name
Parent Material Name
Representative Slope
Unified Soil Classification (Surface)
Water Features 2 3

California Soil Resource Lab

http://casoilresource.lawr.ucdavis.edu/soilweb/

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Home	Links	Online Soil Survey	People	Projects	Software	Site Map	

SoilWeb: An Online Soil Survey Browser

Our online soil survey can be used to access USDA-NCSS detailed soil survey data (SSURGO) for most of the United States. Please choose an interface to SoilWeb:

SoilWeb

Explore mapped soil survey areas using an interactive Google map and view detailed information about map units and their components. This app runs in your web browser and is compatible with desktop computers, tablets, and smartphones.



SoilWeb Earth

Soil survey data are delivered dynamically in a <u>KML</u> file, allowing you to view mapped areas in a 3-D display. You must have <u>Google Earth</u> or some other means of viewing KML files installed on your desktop computer, tablet, or smartphone.



iPhone and Android apps

These are native smartphone apps that use your device's GPS to give soil information for your current location.

Text Interface

Choose from a list of available survey areas and map units to view the soil information of interest to you.

California Soil Resource Lab

http://casoilresource.lawr.ucdavis.edu/soilweb/

SOFTWARE

SoilWeb Earth

Google Ea

LINKS

BLOG



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SOILWEB APPS

SoilWeb Apps

Our online soil survey can be used to access USDA-NCSS detailed soil survey data (SSURGO) for most of the United States. Please choose an interface to SoilWeb:

PROJECTS

SoilWeb

HOME

Explore soil survey areas using an interactive Google map. View detailed information about Soil survey data are delivered dynamically in a KML file, allowing you to view mapped areas map units and their components. This app runs in your web browser and is compatible with in a 3-D display. You must have Google Earth or some other means of viewing KML files desktop computers, tablets, and smartphones.

PEOPLE

kap Unit Name: Syca oam, drained A Man Unit Com 85% - Sycamore 3% - Maria 3% - Merritt Horsen data pla / View Smilar Data 3% - Tyndall 3% - Yolo Automia | Yow Smith Data 3% - Brentwood A Map Unit Data Map Unit Key: 459205

SEE: Soil Series Extent Explorer



SEE allows users to explore the spatial extent of soil types nationwide.

Soil Properties App



installed on your desktop computer, tablet, or smartphone.

This app allows users to explore a variety of soil properties in map form.



Soils Via Google Maps (PC or Smartphone)

- 1. Provide yourself with Internet access
- 2. Go here:
 - http://casoilresource.lawr.ucdavis.edu/gmap/
- 3. Follow the directions and hit OK

Welcome

This interactive map allows you to explore USDA-NCSS soil survey data for locations throughout most of the U.S. It is compatible with smartphones, tablets, and desktop computers.

Getting Started

1) Go to Menu->Zoom To Location to enter your area of interest or let your browser determine your current location.

2) Click on the map to identify "map units", which are delineated by the yellow lines. Then click on the expandable category headings to view the data of interest to you.

For more help with the use of this app, or for help with soil survey terms and definitions, see the topics under Menu->Help.

About This App This app was developed by the <u>California Soil Resource Lab</u> at UC Davis and UC-ANR in collaboration with the <u>USDA Natural</u>

Resources Conservation Service.

UCDAVIS ONRCS

University of California Agriculture and Natural Resources

Don't show this message again
 OK

Soils Via Google Maps



Soils Via Google Maps



Soils Via Google Maps



Soils Via Soil Web App (smartphone)

• Step 1 - Search for the app and install. It's free!



Soils Via Soil Web App (smartphone) Step 2 – Open the app and "get my location."



Soils Via Soil Web App (smartphone)

• Step 2a – Open Settings on your phone, go to privacy, go to location services, enable SoilWeb to locate

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Soils Via Soil Web App (smartphone)

Will not give you a soils map and only provides you with the major and minor soil mapping components.

 Step 3 – You are presented w/ "Components." Click on the major component or the largest %

	• 26% ■
Get My Locati	on Help!
4 components »»»	
Lakewood (85%) Spodic Quartzipsamments E SEM 25cm Bh BC	Quakerbridge (5%) Spodic Quartzipsamments
91cm	C1 107 cm C2 117 cm
152cm knolls flats Accuracy: 65 m	request complete

Soils Via Soil Web App (smartphone)
Step 4 – Navigate to the information you need. All the hyperlinks are live!

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Land Capability	Class [irrigated]		-
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Accuracy: 65 m	re	quest com	plete	

Soils Via Google Earth (PC or Phone)

1. Go here

http://casoilresource.lawr.ucdavis.edu/soilweb/

- 2. Download and save the KML
- 3. Launch Google Earth
- 4. Navigate to an area of interest
- 5. File Open and navigate to KML file location

Step 1 – Open Google Earth.





• Step 2 – Enter a desired location of interest.



• Step 3 – File open and navigate to where you stored the KMZ.

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	M070.kmz	2/5/2013 1:41 PM	KMZ File	619 KB	
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• Step 4 – Click on the soils polygon of interest.



 Step 4 – Click on the soils polygon of interest. Click on the interactive links (blue and red).



Berryland Soils

- Soil Series Name = Berryland
- Texture = Sand
- Slope = 0 to 2 % slopes
- Organic Matter Content = < 3% and falls w/ depth
- pH = Extremely acid to very strongly acid unless limed
- Drainage Class = Very Poorly Drained
- Depth to Water = 0 to 10 inches
- Depth to impervious layer None

2015 International Year of Soils (IYOS) April Video

<u>https://www.youtube.com/watch?v=rCRubwl</u>
 <u>Akbc&list=PL4J8PxoprpGZ3gPDXRfa_DNBYXoF</u>
 -ruG2&index=5

Soils Planner – April 2015

Soils Clean & Capture Water - Asia (Cambodia / Bangladesh)

Yearly flooding in Cambodia's Mekong River loads sediment onto floodplains, helping to regulate the quality of soil and water in the region.

Matthew Matthew Polizzotto, an assistant professor of Soil Science at North Carolina State University, studies and teaches about soil chemical processes that control contaminants in soils, sediments, and groundwater. His work in Cambodia and Bangladesh investigates arsenic contamination of water used for drinking and irrigation.

Healthy Soil=Healthy Water

Soil normally filters and cleans water. However, rainwater that drains across and through contaminated soil before arriving in lakes and streams could contaminate drinking water. The effect of soil on water quality is one reason why healthy soil is so important.

Did you know?

Soil helps clean the water we drink and the air we breathe. Pollutants such as toxins, viruses, manufacturing oils, and bacteria enter the water system every day. The soil in forests, in wetlands, and along rivers prevents many of these potentially harmful substances from entering the drinkable water supply. In the United States, soils treat wastewater for about 25% of the population in rural, suburban and urban areas. Soil is the largest single wastewater treatment plant!

"Out of the long list of nature's gifts to man, none is perhaps so utterly essential to human life as soil," – Hugh Hammond Bennett, 1881 - 1960, first SCS/NRCS Chief.

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