

Web Soil Survey

Fred C. Schoenagel III
Resource Soil Scientist
USDA-NRCS



Web Soil Survey Address:

<http://websoilsurvey.nrcs.usda.gov/app/>




[Home](#) [About Soils](#) [Help](#) [Contact Us](#)

You are here: WSS Home

Search

Enter Keywords



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
- eFOG
- National Soil Characterization Data
- Soil Geochemistry Spatial Database
- Soil Quality
- Soil Geography
- Geospatial One Stop

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

A green circular button with the text "START WSS" in white.

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...



Mouseover to enlarge image.

Use the [Area of Interest tab](#) to define your area of interest.

2 View/Explore...



Click the [Soil Map tab](#) to view or print a soil map, or 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.

I Want To...

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

Announcements/Events

- Web Soil Survey 2.0 has been released! [View description of new features.](#)

I Want Help With...

- How to use Web Soil Survey
- Known problems and workarounds
- Frequently Asked Questions
- Citing Web Soil Survey as a source of soils data



Web Soil Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

USDA United States Department of Agriculture
National Resources Conservation Service

Web Soil Survey

Contact Us | Download Soils Data | Archived Soil Surveys | Preferences | Logout | Help

Area of Interest (AOI) | Soil Map | Soil Data Explorer | Shopping Cart

Area of Interest Properties

[Clear AOI](#)

AOI Information

Name:

Map Unit Symbols

- ☒ Use Soil Survey Area Map Unit Symbols
- ☐ Use National Map Unit Symbols

Area (acres) 6,553.1

Soil Data Available from Web Soil Survey

Warren County, New Jersey (NJ041)

Soil Maps Version 3, Sep 24, 2007

Soil Data Version 3, Sep 24, 2007

[Clear AOI](#)

Quick Navigation

Navigate By...

Address

State and County

[View](#)

State

County (optional)

[View](#)

Soil Survey Area

Latitude and Longitude

PLSS (Section, Township, Range)

Bureau of Land Management

Department of Defense

Area of Interest Interactive Map

[Legend](#) [View Extent](#) [Scale](#)

0 4035ft

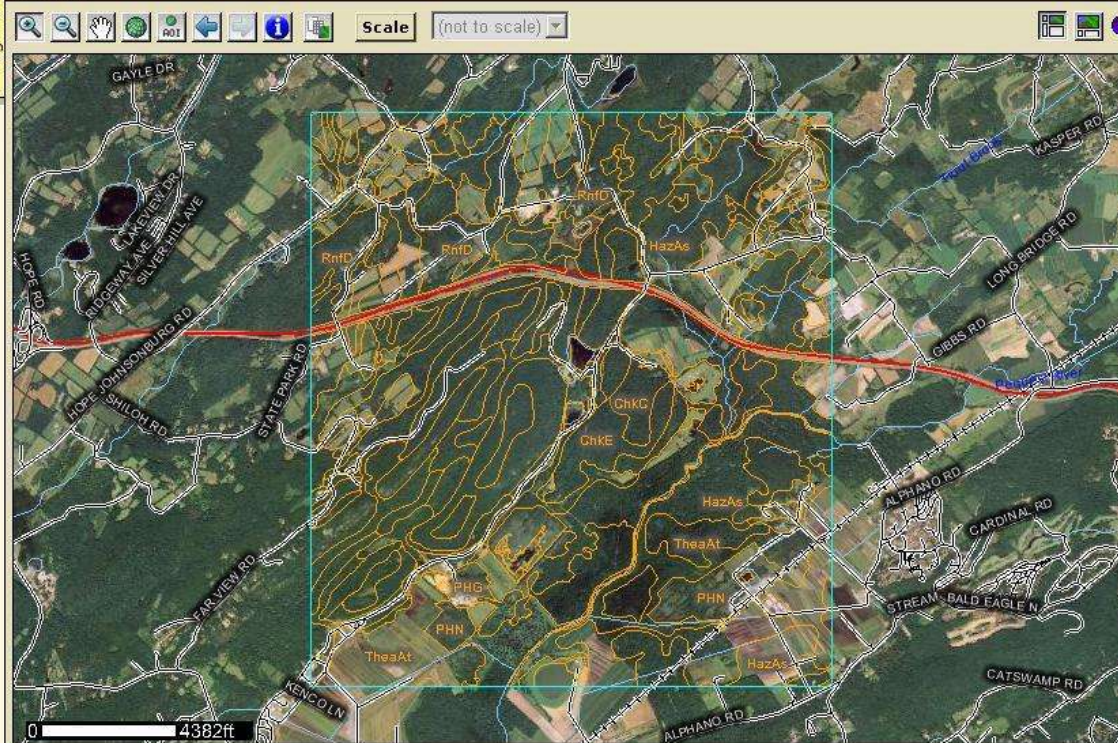
Trusted sites

Shopping Cart

Add to Shopping Cart

Soil Map

Totals for Area of Interest (AOI)	7,107.6	100.0%
-----------------------------------	---------	--------



Soils Map – Printable Version



Types of Soils Interpretation Data

- Suitabilities and Limitations for Use
- Soil Properties and Qualities
- Soil Reports



Suitabilities and Limitations for Use

Web Soil Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

USDA Natural Resources Conservation Service

Contact Us Download Soils Data Archived Soil Surveys Preferences Logout Help

Area of Interest (AOI) Soil Map Soil Data Explorer Shopping Cart

View Soil Information By Use: All Uses Printable Version Add to Shopping Cart

Intro to Soils Suitabilities and Limitations for Use Soil Properties and Qualities Soil Reports

Suitabilities and Limitations Ratings

Open All Close All

Building Site Development

- Corrosion of Concrete
- Corrosion of Steel
- Dwellings With Basements
- Dwellings Without Basements
- Lawns, Landscaping, and Golf Fairways
- Local Roads and Streets
- Shallow Excavations
- Small Commercial Buildings

Construction Materials

- Gravel Source
- Roadfill Source
- Sand Source
- Source of Reclamation Material
- Topsoil Source

Disaster Recovery Planning


- Catastrophic Mortality, Large Animal Disposal, Pit
- Catastrophic Mortality, Large Animal Disposal, Trench
- Clay Liner Material Source
- Composting Facility - Subsurface
- Composting Facility - Surface
- Composting Medium and Final Cover
- Rubble and Debris Disposal, Large-Scale Event

Land Classifications

- Conservation Tree and Shrub Group
- Ecological Site ID
- Ecological Site Name
- Farmland Classification
- Forage Suitability Group ID (Component Table)
- Hydric Rating by Map Unit

Soil Map

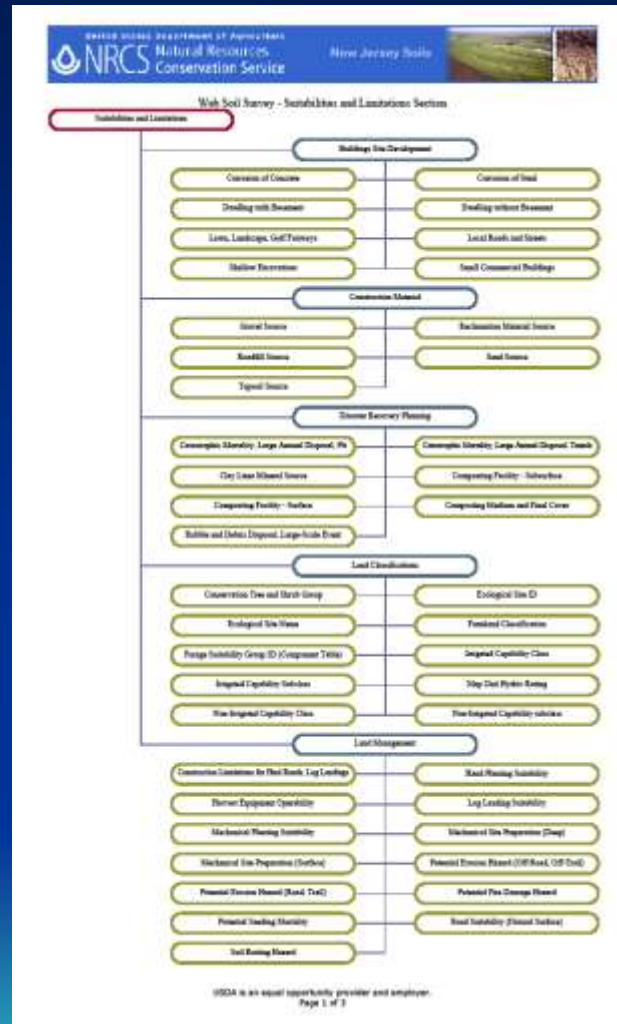
Legend Scale (not to scale)



0 4578 ft

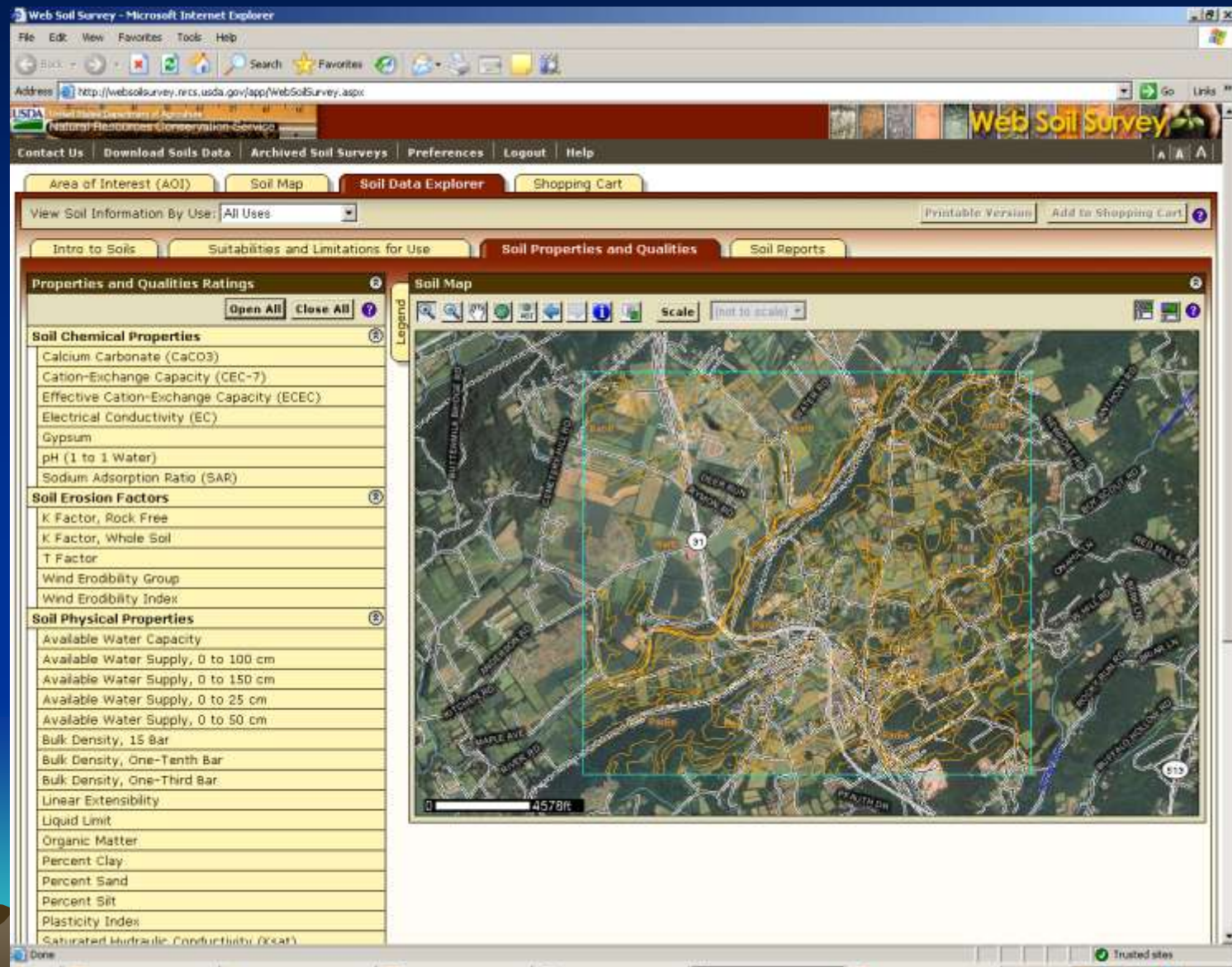
Done Trusted sites

Suitabilities and Limitations for Use

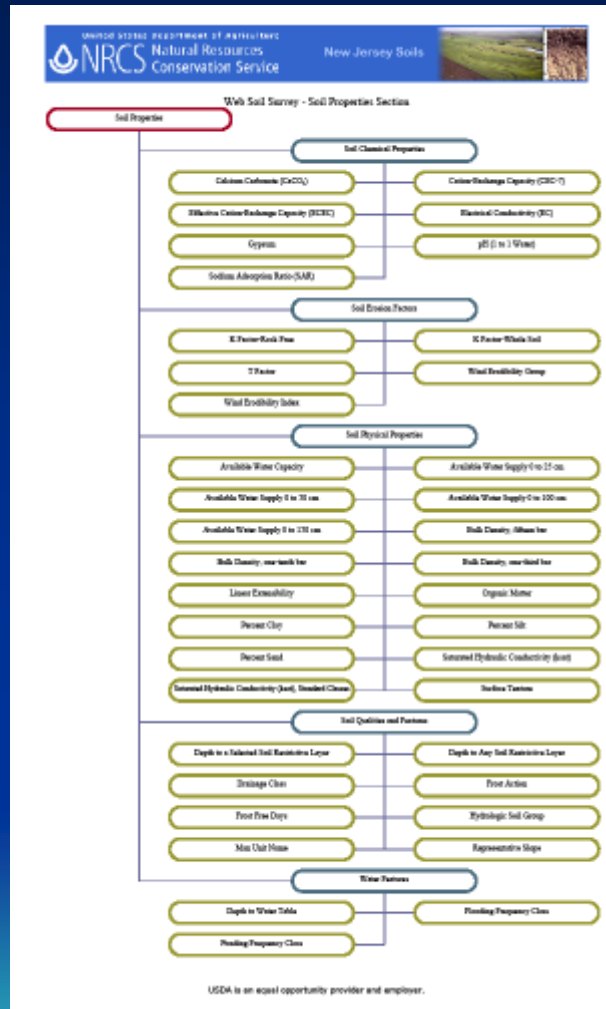


Guidance document prepared by NJ-NRCS Soils Staff, available at:
<http://www.nj.nrcs.usda.gov/technical/soils/>

Soil Properties and Qualities



Soil Properties and Qualities



Guidance document prepared by NJ-NRCS Soils Staff, available at:
<http://www.nj.nrcs.usda.gov/technical/soils/>

Soil Reports

Web Soil Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

USDA United States Department of Agriculture
Natural Resources Conservation Service

Web Soil Survey

Contact Us Download Soils Data Archived Soil Surveys Preferences Logout Help

Area of Interest (AOI) Soil Map **Soil Data Explorer** Shopping Cart

View Soil Information By Use: All Uses Printable Version Add to Shopping Cart

Intro to Soils Suitabilities and Limitations for Use Soil Properties and Qualities **Soil Reports**

Soil Reports Open All Close All

AOI Inventory

- Component Legend
- Map Unit Description
- Map Unit Description (Brief)
- Map Unit Description (Brief, Generated)
- Selected Soil Interpretations
- Selected Survey Area Interpretation Descriptions
- Survey Area Data Summary

Building Site Development

- Dwellings and Small Commercial Buildings
- Roads and Streets, Shallow Excavations, and Lawns and Landscaping

Construction Materials

- Source of Reclamation Material, Roadfill, and Topsoil
- Source of Sand and Gravel

Land Classifications

- Conservation Tree and Shrub Suitability Groups
- Hydric Soils
- Land Capability Classification
- Prime and other Important Farmlands
- Taxonomic Classification of the Soils

Land Management

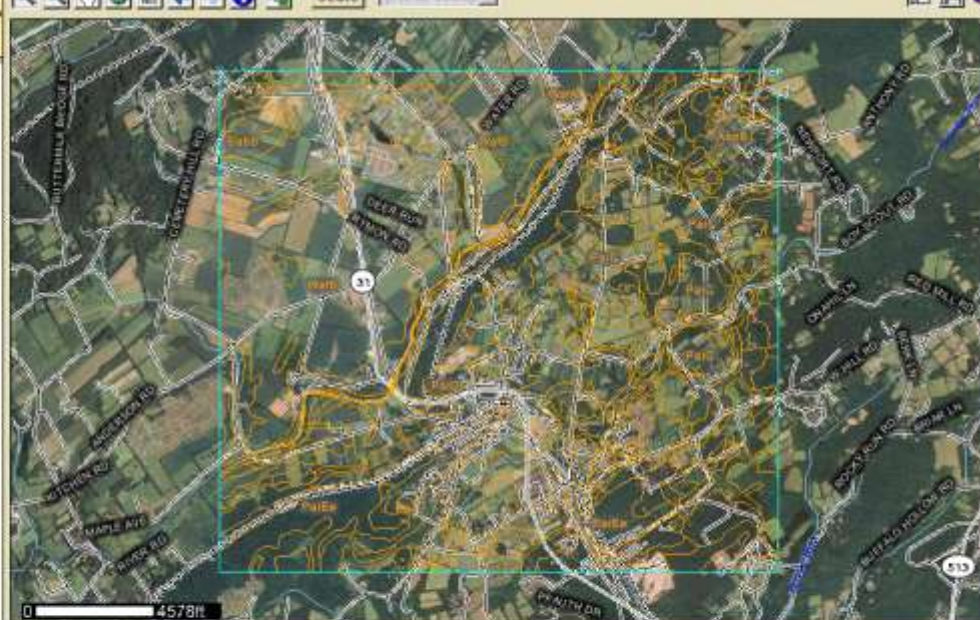
- Damage by Fire and Seeding Mortality on Forestland
- Forestland Planting and Harvesting
- Forestland Site Preparation
- Haul Roads, Log Landings, and Soil Rutting on Forestland
- Hazard of Erosion and Suitability for Roads on Forestland

Recreational Development

- Camp Areas, Picnic Areas, and Playgrounds

Soil Map

Legend Scale (not to scale)



0 4578ft

Done Trusted sites

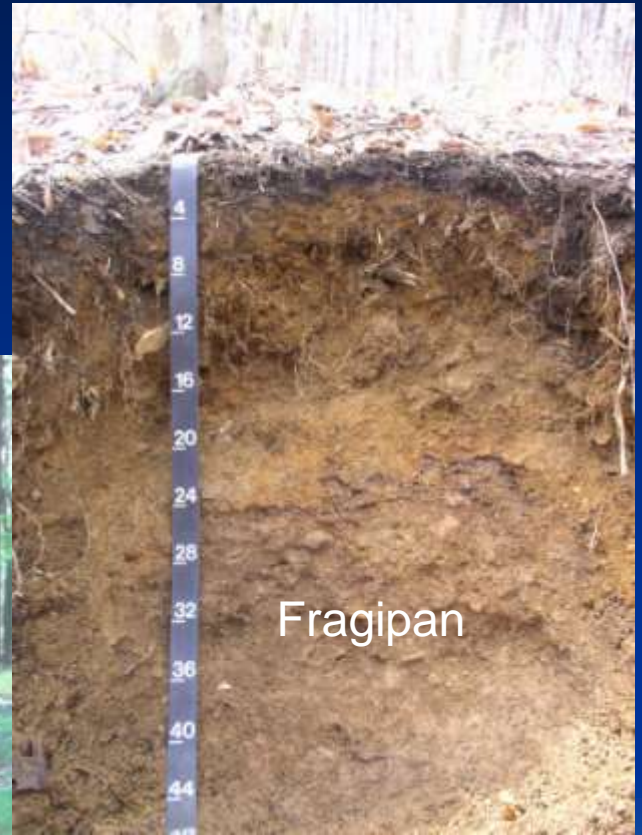
```

graph TD
    SR[Soil Reports] --> SI[Soil Inventory]
    SI --> SI_Comp[Component Legend]
    SI --> SI_HSD[Site Description (Hard)]
    SI --> SI_HSDG[Related Soil Interpretations]
    SI --> SI_HSDG2[Related Survey Area Interpretation Descriptions]
    SI --> SI_SADC[Survey Area Data Summary]
    
    SR --> BSD[Building Site Development]
    BSD --> BSD_CD[Challenges and Social/Commercial Buildings]
    BSD --> BSD_KM[Knowledge, History, Relative Importance, and Limit and Understanding]
    
    SR --> CM[Construction Materials]
    CM --> CM_AIR[Assess of Performance, Material, Quality, and Types]
    CM --> CM_SISD[Source of Soil and Stone]
    
    SR --> LC[Land Characteristics]
    LC --> LC_SF[Soil Factors]
    LC --> LC_PSEF[Prime and other Important Features]
    LC --> LC_TL[Transition Characteristics of the Soil]
    
    SR --> LM[Land Management]
    LM --> LM_FIM[Change in Use and Land Use Intensity on Forestland]
    LM --> LM_FIM_PN[Forestland Planning and Monitoring]
    LM --> LM_FIS[Forestland Site Preparation]
    LM --> LM_FIS_L[Seed Bank, Log Landings, and Soil Banking on Forestland]
    LM --> LM_FIS_C[Forest of Growth and Viability for Forest on Forestland]
    
    SR --> ED[Recreation Development]
    ED --> ED_CAP[Camp Areas, Picnic Areas, and Playgrounds]
    ED --> ED_PTT[Parks, Trails, and Golf Courses]
    
    SR --> SF[Sanitary Facilities]
    SF --> SF_L[Landfill]
    SF --> SF_SG[Storage Disposal]
    SF --> SF_SG2[Storage Disposal (OT)]
    
    SR --> SC[Soil Chemical Properties]
    SC --> SC_CSP[Chemical Soil Properties]
    SC --> SC_B[Soil Biomechanics]
    SC --> SC_EA[EPA/USEPA Related Analyses]
  
```

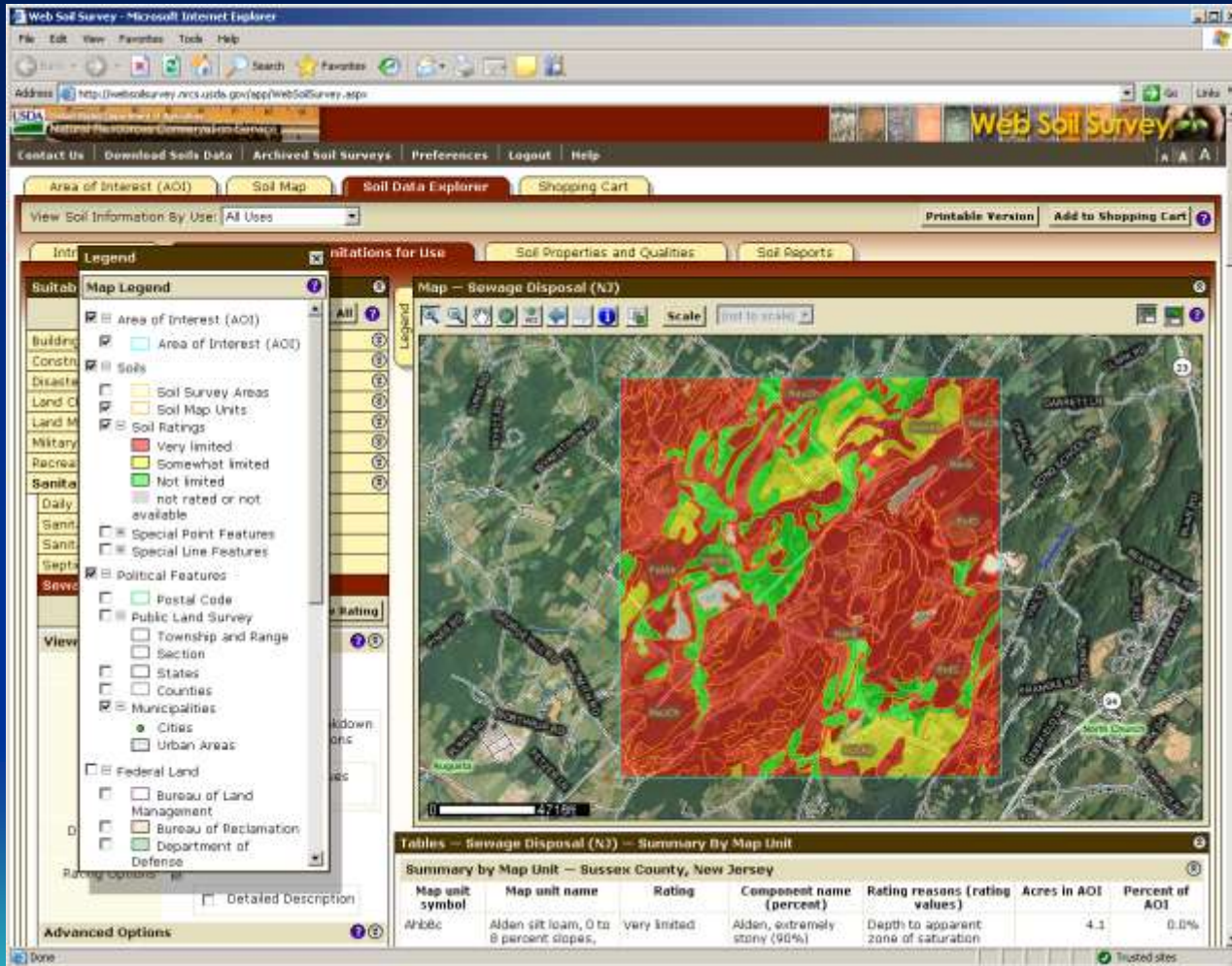
USA is an equal opportunity provider and employer.
Page 1 of 2

Guidance document prepared by NJ-NRCS Soils Staff, available at:
<http://www.nj.nrcs.usda.gov/technical/soils/>

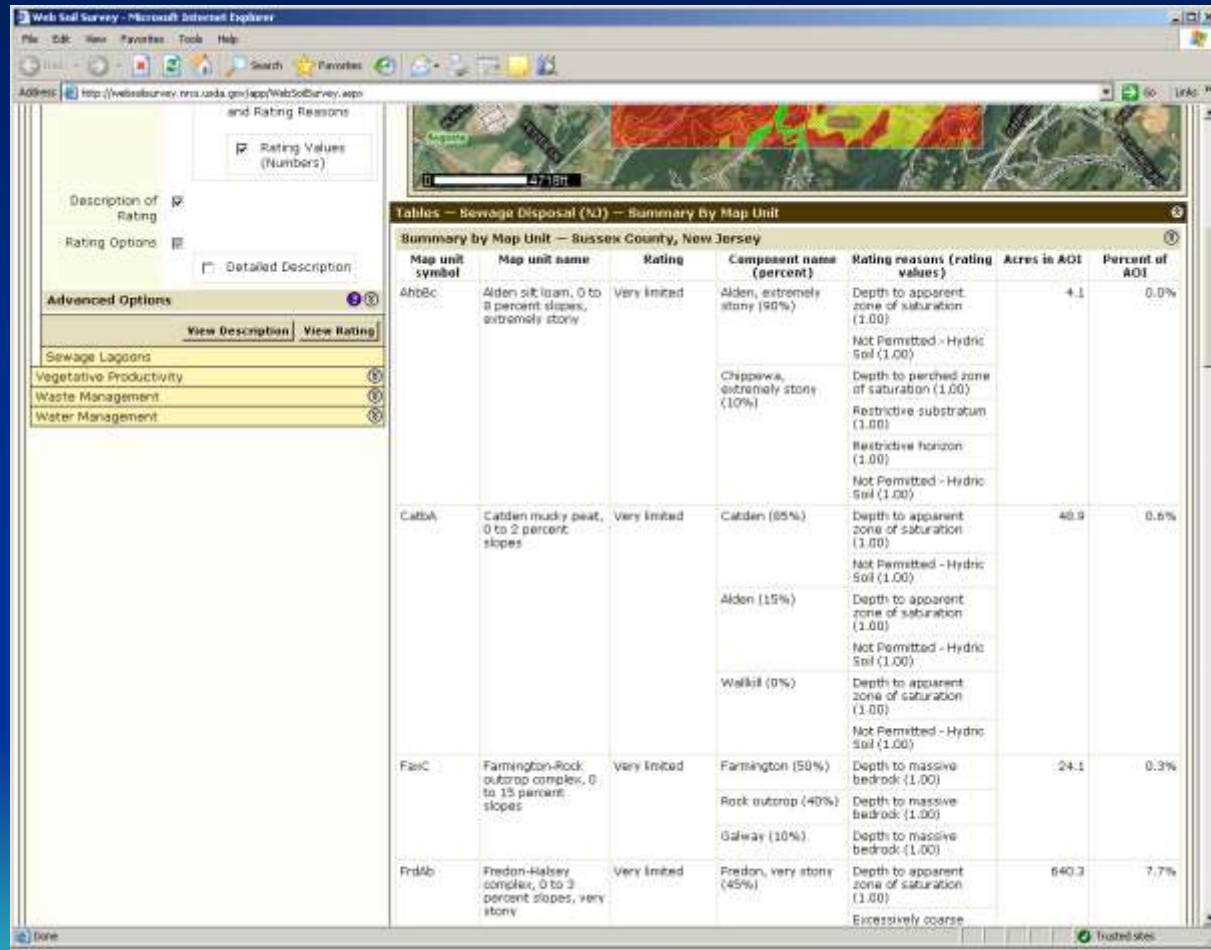
Common Soil Limitations



Example: Suitabilities and Limitations for Use Sanitary Facilities – Sewage Disposal (NJ)



Example: Suitabilities and Limitations for Use Sanitary Facilities – Sewage Disposal (NJ)



Soil Reports

Web Soil Survey - Microsoft Internet Explorer

Address: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

USDA Natural Resources Conservation Service

Contact Us | Download Soils Data | Archived Soil Surveys | Preferences | Logout | Help

Area of Interest (AOI) | Soil Map | **Soil Data Explorer** | Shopping Cart

View Soil Information By Use: **All Uses** [Printable Version](#) [Add to Shopping Cart](#)

Intro to Soils | Suitabilities and Limitations for Use | Soil Properties and Qualities | **Soil Reports**

Soil Reports

[Open All](#) [Close All](#)

- AOI Inventory
- Building Site Development
- Construction Materials
- Land Classifications
- Land Management
- Recreational Development
- Sanitary Facilities
- Soil Chemical Properties
- Soil Erosion
- Soil Physical Properties
- Soil Qualities and Features
- Vegetative Productivity
- Waste Management
- Water Features
- Water Management

Soil Map

Legend

Scale: (not to scale)

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

Done Trusted sites

Example: Soil Reports

Physical Soil Properties

Web Soil Survey - Microsoft Internet Explorer

Address: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Report — Physical Soil Properties

Sussex County, New Jersey

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/in	Pct	Pct	Kw	Kf	T		
4hCbc—Alden mucky silt loam, gneiss till substratum, 0 to 8 percent slopes, extremely stony														
Alden, gneiss till substratum, extremely stony	0-1	0-30	0-55	0-22	0.13-0.23	42.00-141.00	0.35-0.45	0.0-0.0	70.0-100.0	.05	.05	3	8	0
	1-9	23-30	50-55	18-22	1.10-1.40	4.00-14.00	0.16-0.22	0.0-0.1	10.0-30.0	.28	.37			
	9-23	5-71	26-59	2-39	1.29-1.62	1.40-4.00	0.14-0.20	0.0-0.1	0.5-1.0	.37	.37			
	23-35	5-71	26-59	2-39	1.29-1.62	1.40-4.00	0.14-0.20	0.0-0.1	0.5-1.0	.37	.37			
	35-60	5-68	17-59	8-39	1.29-1.62	0.42-4.00	0.08-0.15	0.0-0.1	0.0-0.5	.28	.32			
CatBA—Catden mucky peat, 0 to 2 percent slopes														
Catden	0-2	0-30	0-55	0-22	0.13-0.23	14.00-42.00	0.35-0.45	0.0-0.0	70.0-100.0	.05	.05	3	8	0
	2-13	0-30	0-55	0-22	0.13-0.23	1.40-42.00	0.35-0.45	0.0-0.0	70.0-100.0	.05	.05			
	13-20	0-30	0-55	0-22	0.13-0.23	1.40-42.00	0.35-0.45	0.0-0.0	70.0-100.0	.05	.05			
	20-32	0-30	0-55	0-22	0.13-0.23	1.40-42.00	0.35-0.45	0.0-0.0	70.0-100.0	.05	.05			
	32-60	0-30	0-55	0-22	0.13-0.23	1.40-42.00	0.35-0.45	0.0-0.0	70.0-100.0	.05	.05			
ChkC—Chatfield-Hellis-Rock outcrop complex, 0 to 15 percent slopes														
Chatfield	0-1	0-47	0-50	0-18	0.13-0.23	42.00-141.00	0.35-0.45	0.0-0.0	70.0-100.0	.05	.05	2	8	0

Done

Trusted sites

Custom Soils Reports

