Web Soil Survey (WSS) 2.0

How to Use It

Web Soil Survey -- purpose

Web application that provides producers, agencies, Technical Service Providers, and others electronic access to relevant soil and related information needed to make use & management decisions about the land

Web Soil Survey -- purpose

- Provides alternative to traditional hardcopy publication
- Provides means for quicker delivery of information
 - reduce publication backlog
- Provides electronic access to full soil survey report content
- Provides access to most current data

Web Soil Survey -- purpose

- Allows customer to get just information they want/select
 - Map units for their geographic area of interest (AOI)
 - Information relevant to customer's landuse e.g. rangeland concerns

WSS Products

- Soil Map on aerial photo backdrop for the AOI from SSURGO (where available)
 - Topographic maps are available as an alternate background
- Official soil survey data tables by AOI
- Custom Soil Resource Report via Shopping Cart
- Download SSURGO data

WSS Products

- Custom Soil Resource Report (PDF) via Shopping Cart
 - By AOI
 - Soil map, map unit legend, map unit descriptions
 - Content specifically chosen by user
 - Thematic Maps (with tables and text)
 - Tabular data tables
 - Introductory material

Target Audience

- General public
- Engineers, scientists, and other specialists in local governmental agencies
- NRCS (and other governmental agencies) field employees
- Technical service providers and consultants
- Teachers and students

Pathway through WSS

- Define area of interest you <u>must</u> specifically set the AOI before you can view any maps or reports
- View Soil Map if available for AOI
- Browse/Explore soil data and related information
 - Generate thematic maps
 - Access official soil survey data tables
- Build custom soil resource report in Shopping Cart
- Print/download the selected map or report

WSS 2.0 Homepage



You are here: WSS Home

Search

Enter Keywords Go

1......

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
- Soil Geochemistry Spatial Database
- ▶ Soil Quality
- ▶ Soil Geography
- ▶ Geospatial One Stop

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



Define.



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

Announcements/Events

Start Web Soil Survey

 Know the requirements for running Web Soil

Know whether my web

hours of operation

U.S. have soil data

Find what areas of the

browser works with Web

Know the Web Soil Survey

Survey

Soil Survey

 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
 Ouestions
- Citing Web Soil Survey as a source of soils data

Mouseover to enlarge image.





Click the Soil Map tab to view or print a soil map, or click the Soil Data Explorer tab



New Features

View List of New Features

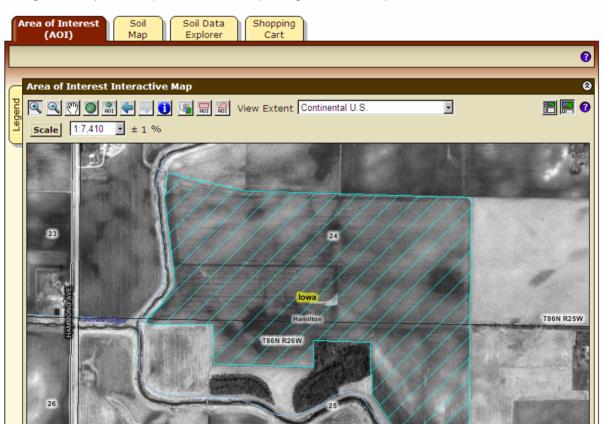
You spoke-we listened.

Results of Fall 2006 Customer Survey of Web Soil Survey

In our survey last fall, you spoke clearly for the enhancements and improvements you want in Web Soil Survey. We are happy to announce the release of Web Soil Survey 2.0 and the following highly requested changes:

• The shifted (tilted) AOI boundary problem has been corrected! You can now draw more precise AOI boundaries. To start over after beginning to draw the AOI, press the Escape (Esc) key on your keyboard without lifting the mouse button. Also, for easier and more precise

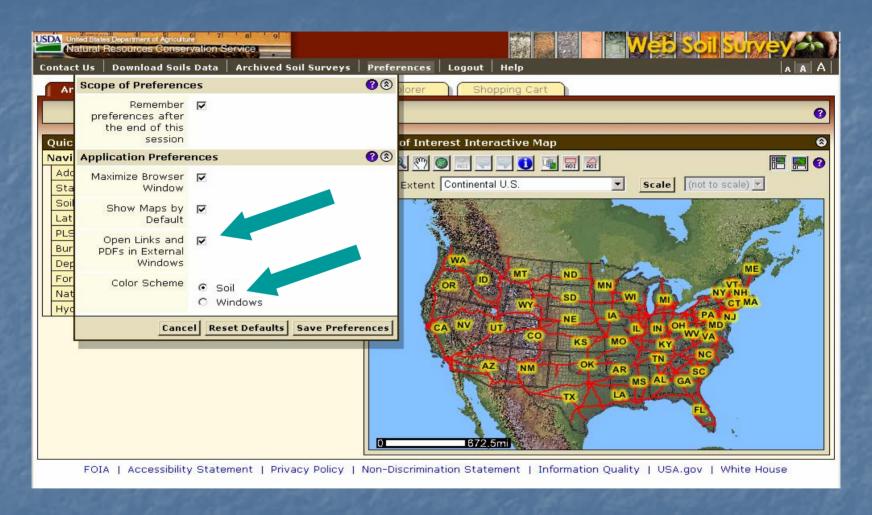
drawing of AOIs, expand the map to full window size by clicking the Full Width Layout 💆 button.



WSS Opening Screen



Look and Feel



- View PDFs and links in the same browser window as WSS.
- Choose "Soils" or "Windows" color schemes.

View Other Geographic Areas

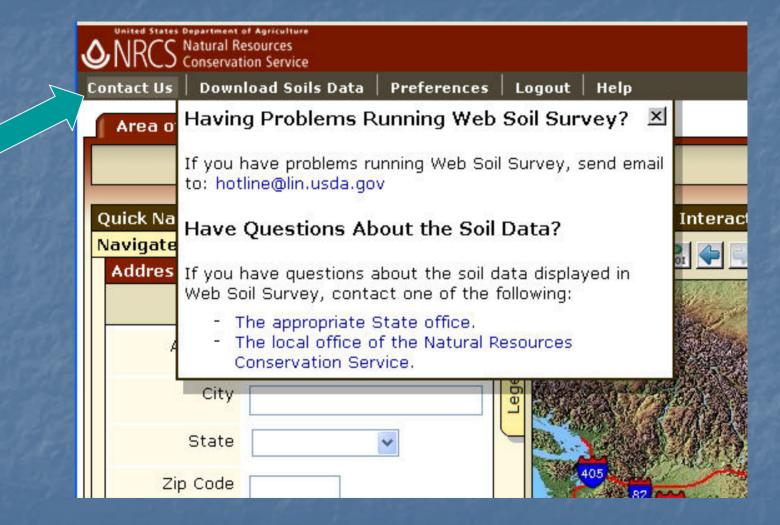


Get Online Help



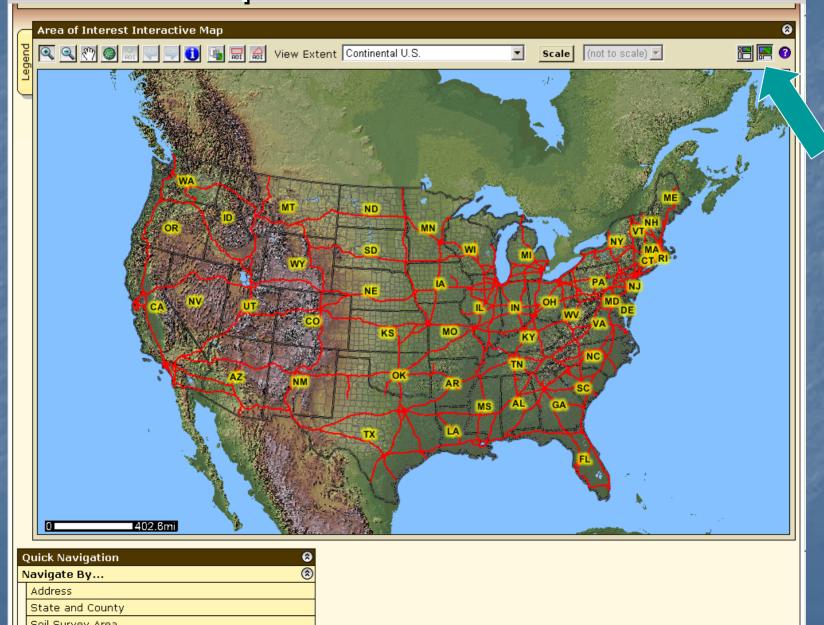
Click on Help or a "?" for online help.

More ways to get Help



Click on "Contact Us".

View Map at Full Screen Width

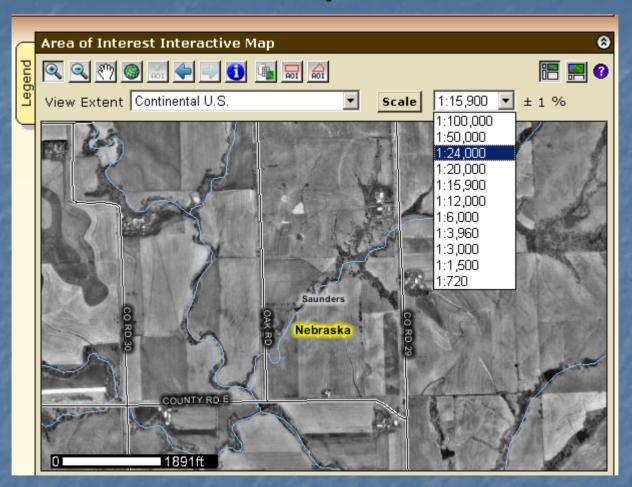


Floating Windows



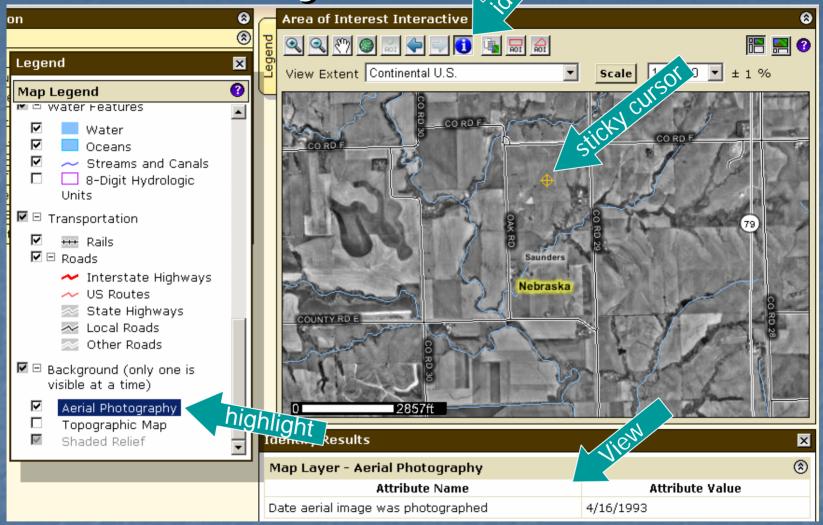
You can move the Legend window around wherever you want.

Set Map Scale



- First calibrate your monitor by clicking Scale button
- Use the map scale feature to see the scale you've zoomed to and to change to a different map scale.

Identify Tool



- Highlight the layer, then click the identify tool. See the Attribute
 Value for information on the layer e.g. date of photography.
- Sticky cursor identifies the point you clicked with the Identify and Data Available map tool.

Area of Interest (AOI) Features

- Navigate to an AOI using basic map navigation themes
 - Transportation
 - Aerial photograph
 - Water features
 - Political features
 - Topographic map
- Use available zoom in/out tools

Area of Interest Features, cont.

- Navigate to an AOI using selection criteria:
 - Street address
 - State and County
 - Soil Survey Area
 - Latitude and Longitude
 - PLSS (Township, Range and Section)
 - Federal Land Boundaries
 - Hydrologic Unit

Area of Interest Features, cont.

- Define an AOI by
 - drawing a polygon on a map
 - expanding rectangle, or
 - digitize multi-sided polygon
 - selecting a soil survey area
- Clear AOI

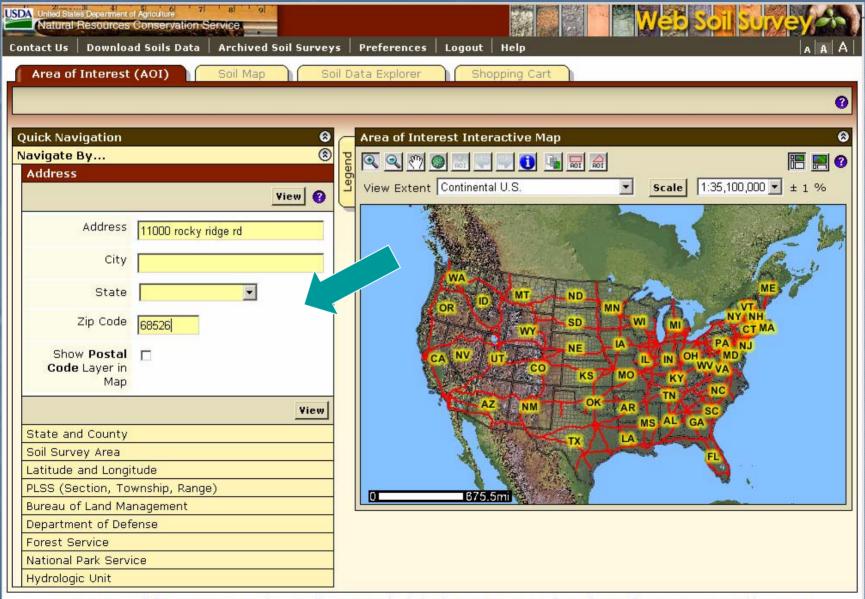
Area of Interest Features, cont.

- Display data available for defined AOI
 - Soil data from Soil Data Mart (official soil data repository)
 - Soil maps from Soil Data Mart
- Name your AOI (optional)
- Choose either standard or national map unit symbols

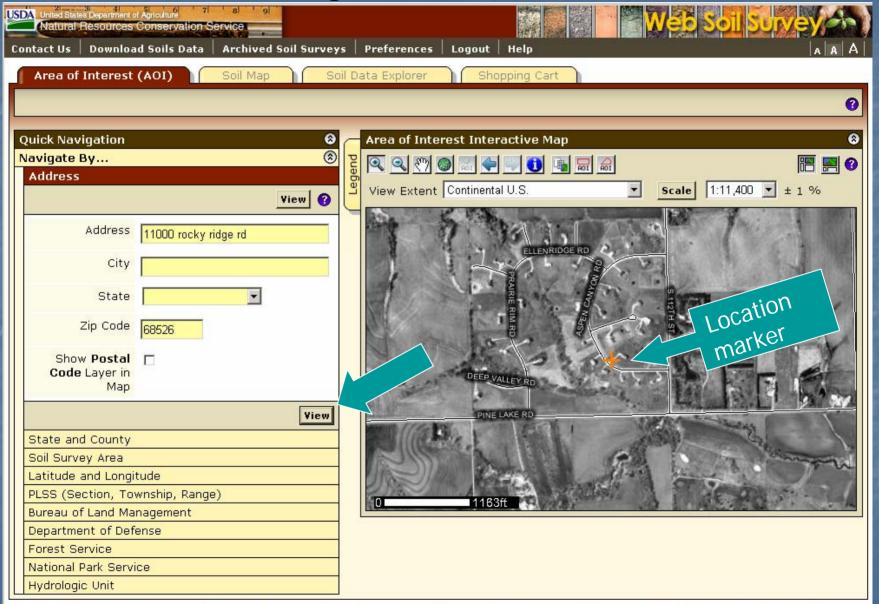
Locate Area of Interest (AOI)



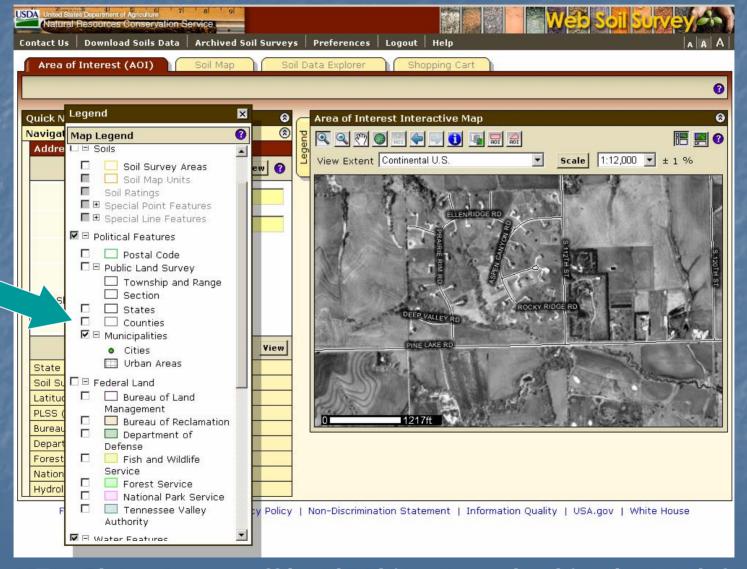
Navigate to AOI by Street Address



View by Street Address

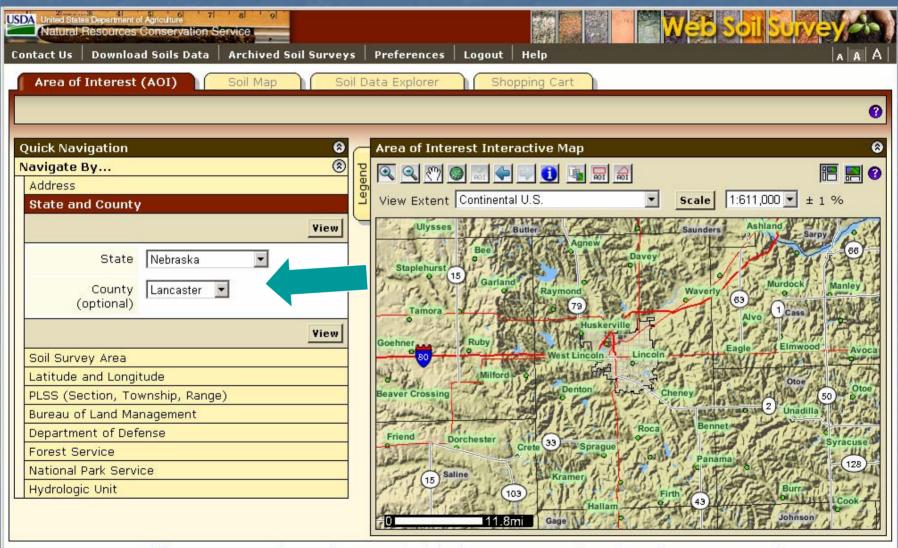


Manage Displayed Data Layers



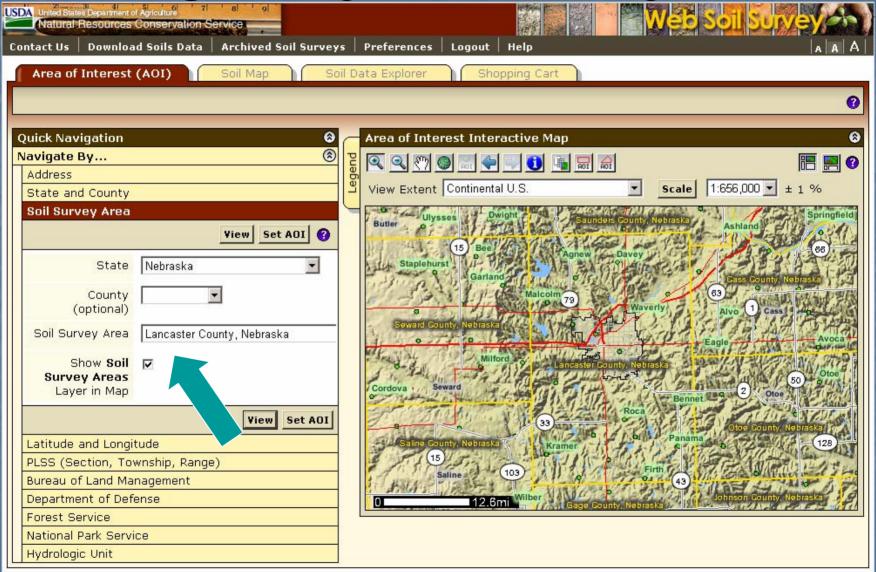
Turn layers on or off by checking or unchecking box at left

Navigate to AOI by County



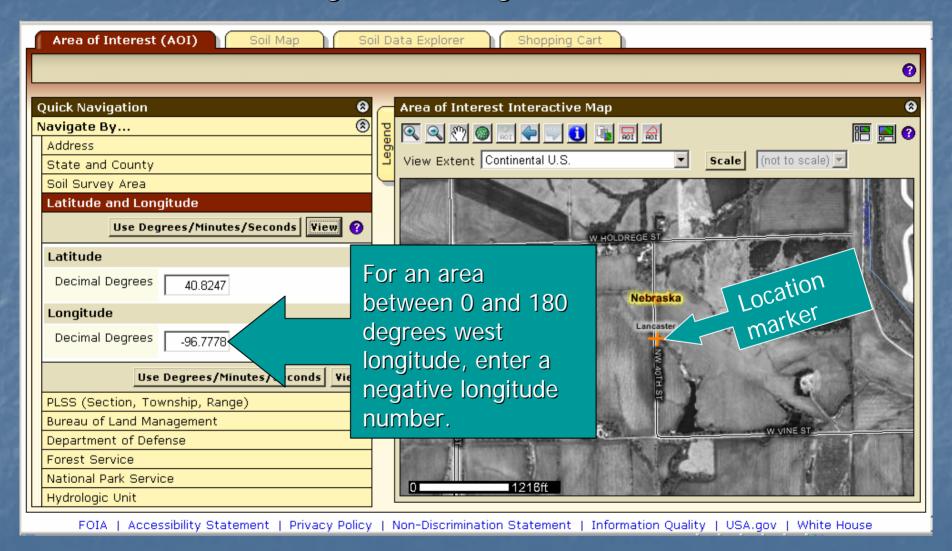
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House

Navigate by Soil Survey Area

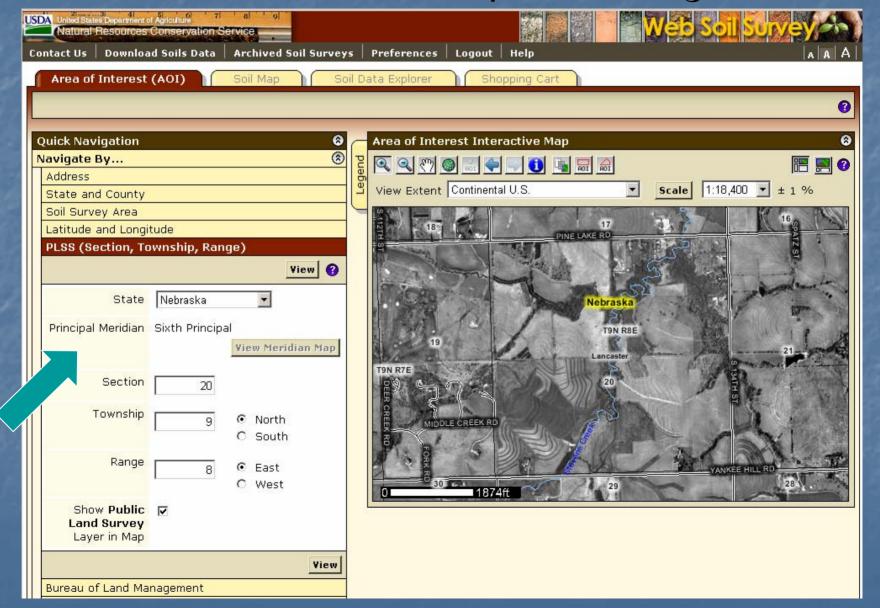


Navigate by Latitude and Longitude

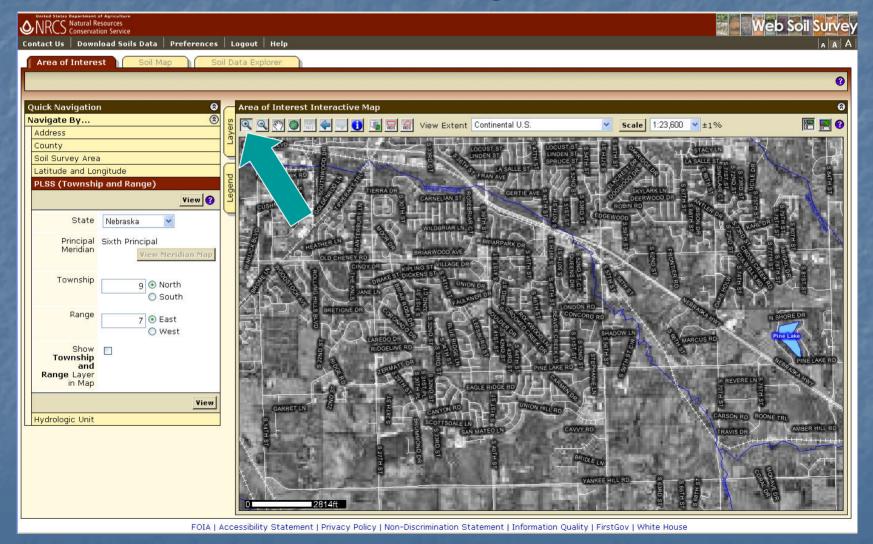
choose decimal degrees, or degrees, minutes and seconds



Navigate by Public Land Survey System (PLSS) (Section, Township and Range)



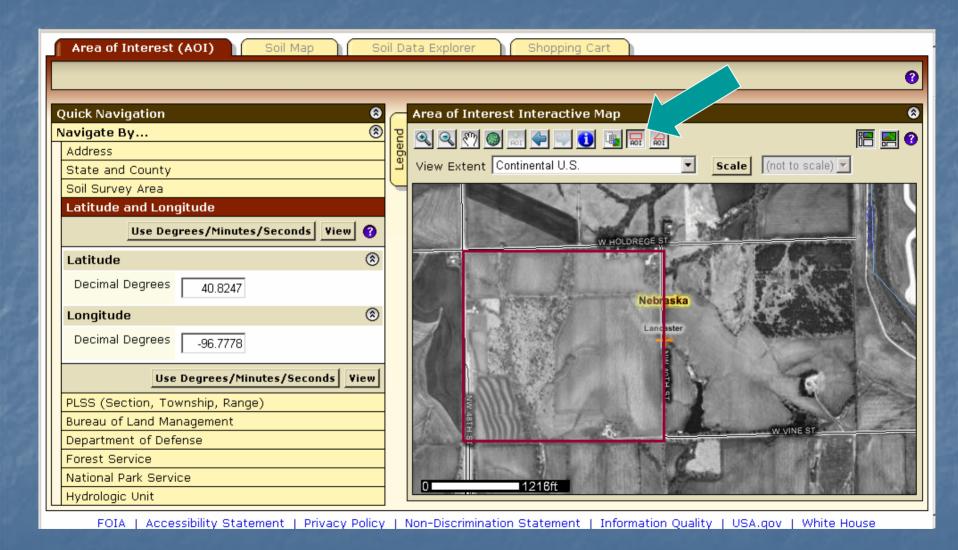
Zoom In Tool – expanding rectangle



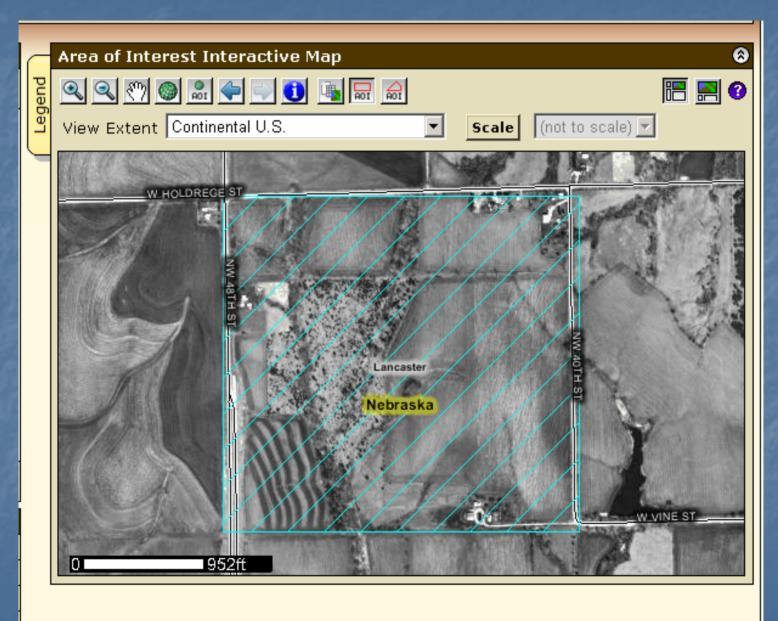
Define AOI

- Remember you must specifically set the AOI before you can view any maps or data.
 - Use one of the AOI buttons on toolbar
 - Expanding rectangle
 - Multi-sided polygon
 - Select the area by choosing a Soil Survey Area, then clicking the Set AOI button.

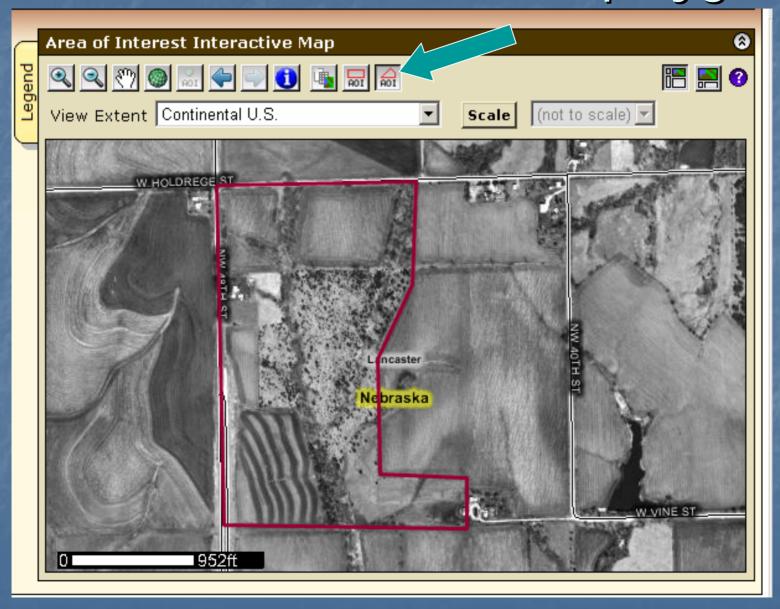
Define AOI – draw rectangle



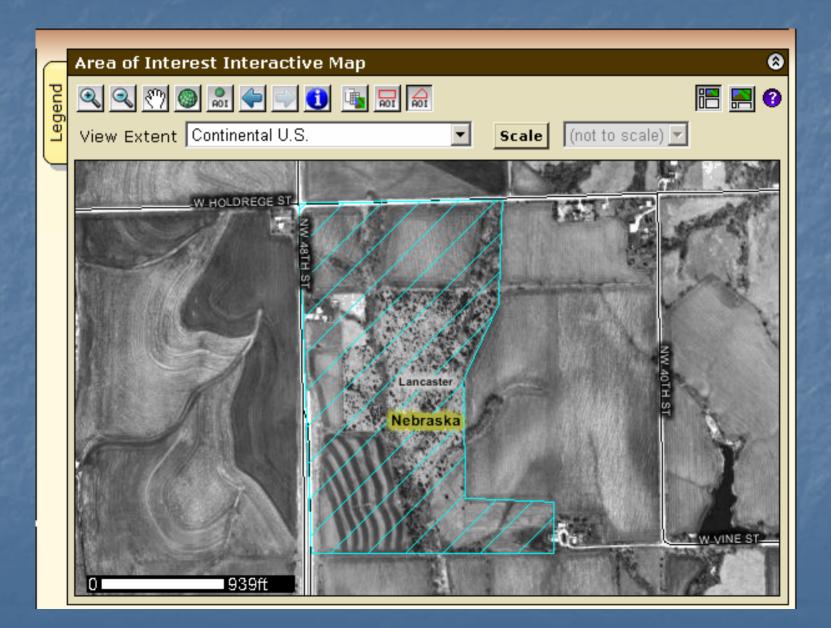
Selected AOI



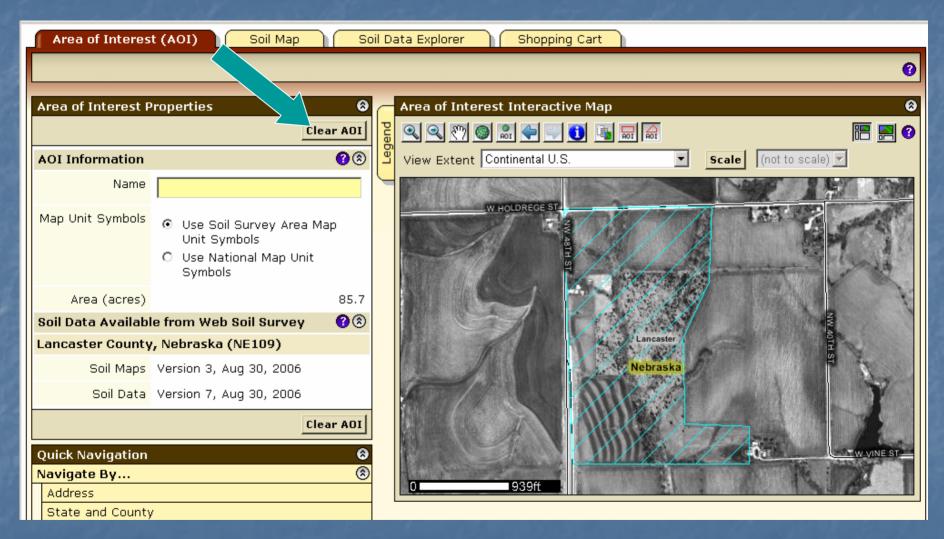
Define AOI – multi-sided polygon



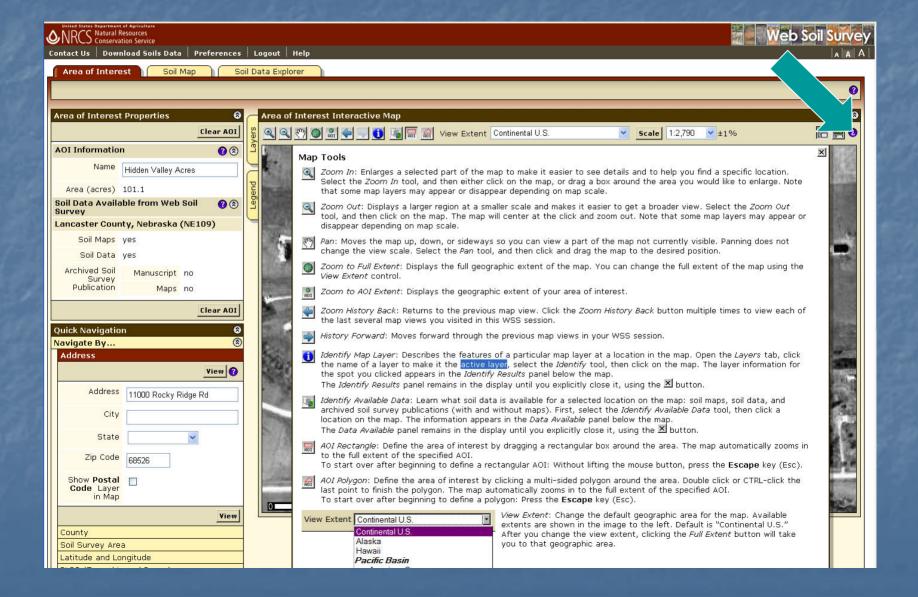
Selected AOI



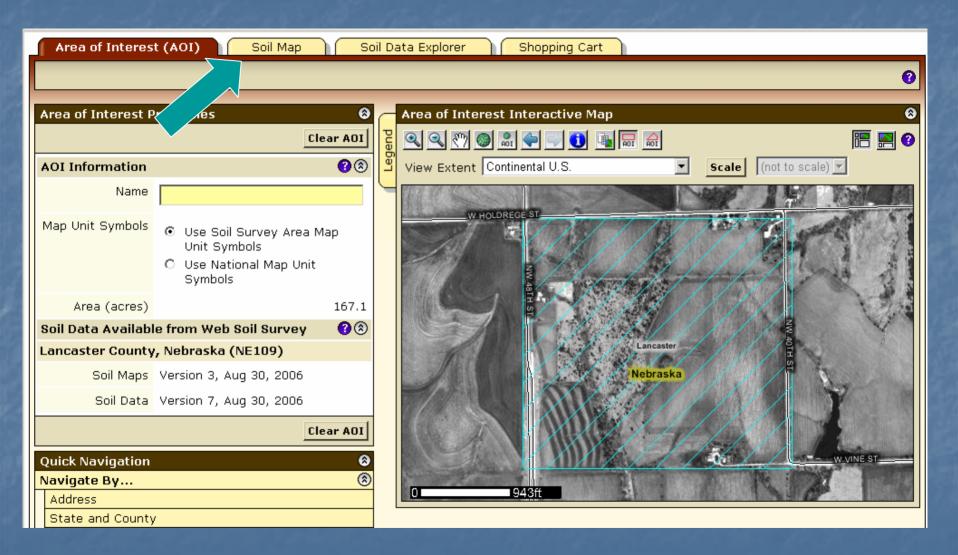
Explicitly clear the AOI



AOI Interactive Map - Help

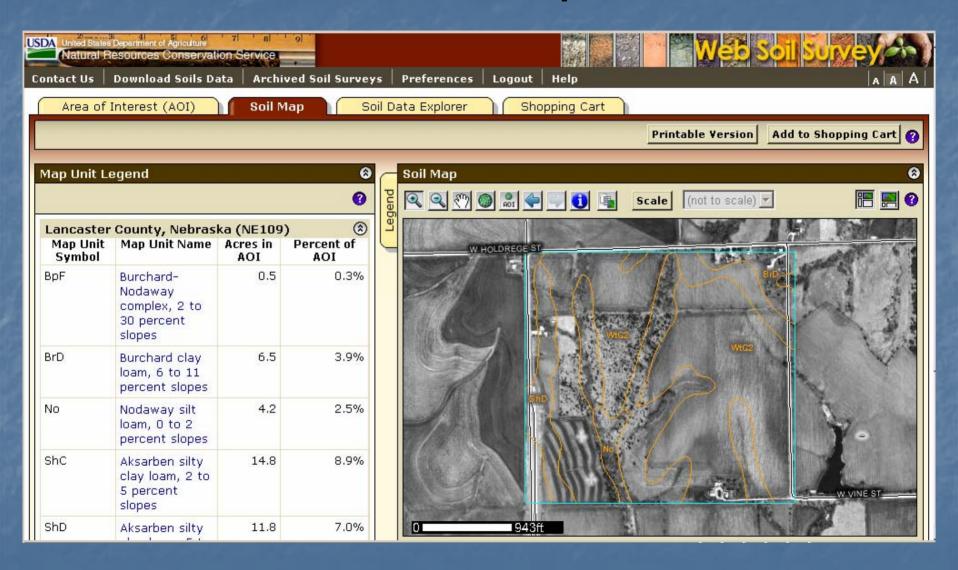


View Soil Map

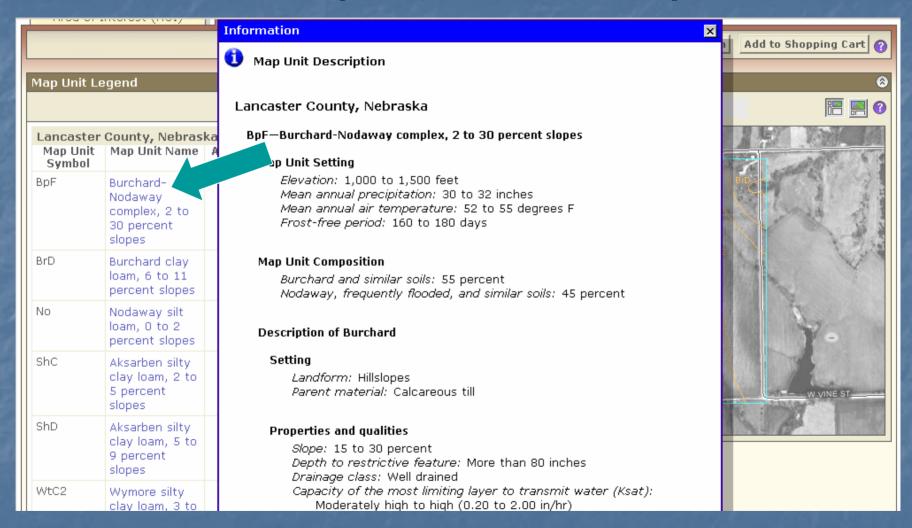


Click Soil Map tab

Soil Map



View Map Unit Description



Click on map unit name at left to view map unit description report

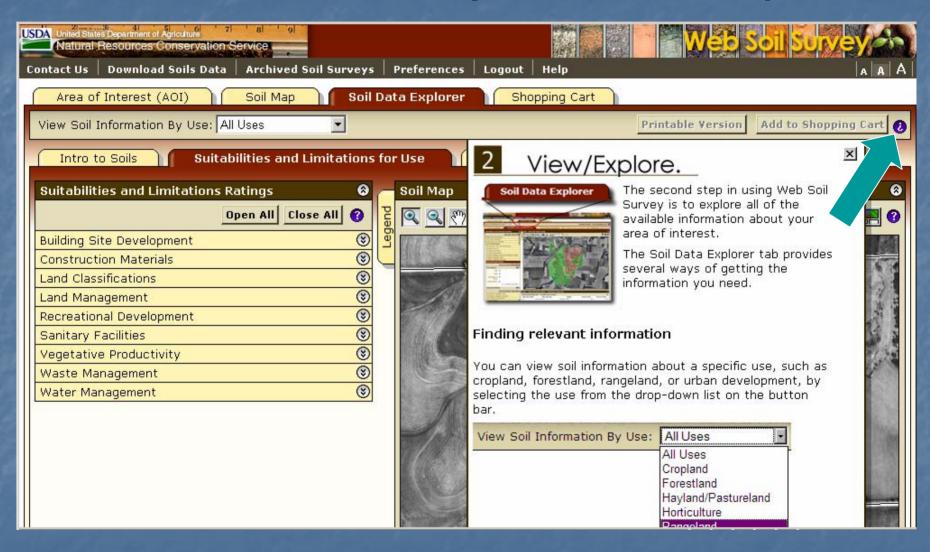
Explore Soil Information



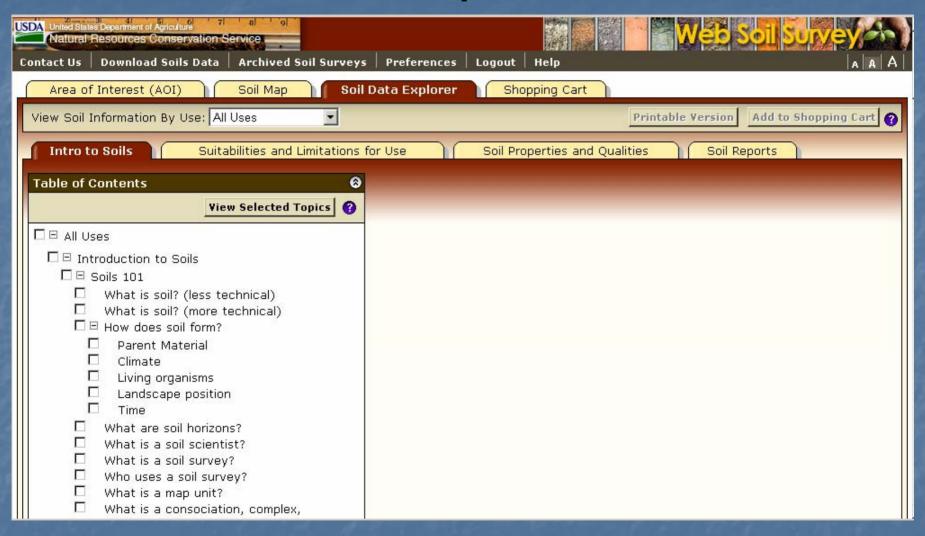
Soil Data Explorer Features

- Filter the soil information by land use category
- Learn the terminology and concepts of soils and specific land uses
- View interpretive soil data and soil properties in the form of thematic maps, tables, and text description
- Access ecological site information
- Print individual maps and reports
- Add content to Shopping Cart

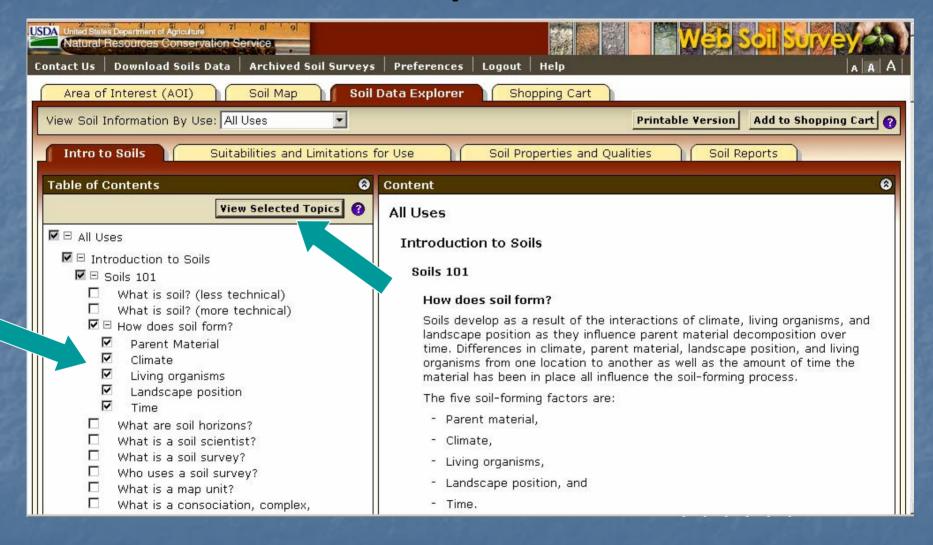
Soil Data Explorer - Help



Soil Data Explorer - Intro

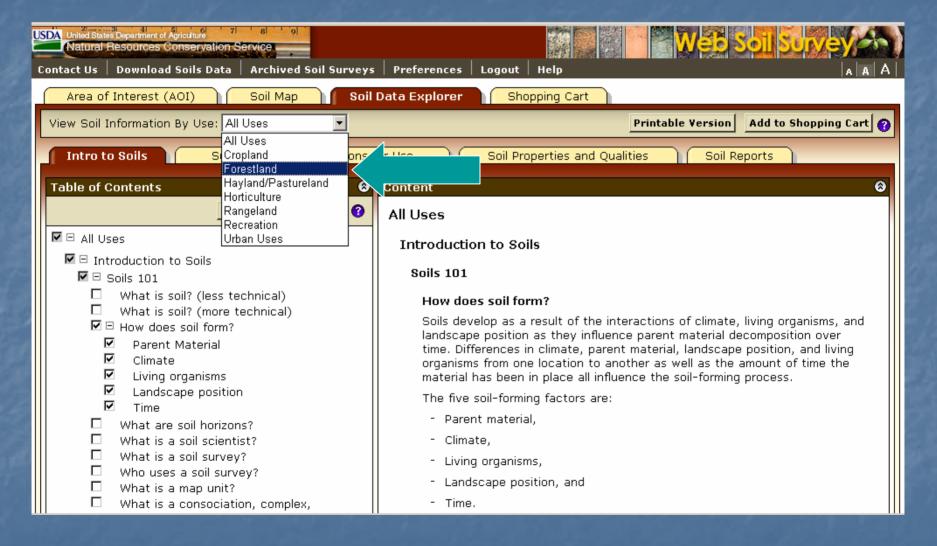


Soil Data Explorer - Intro



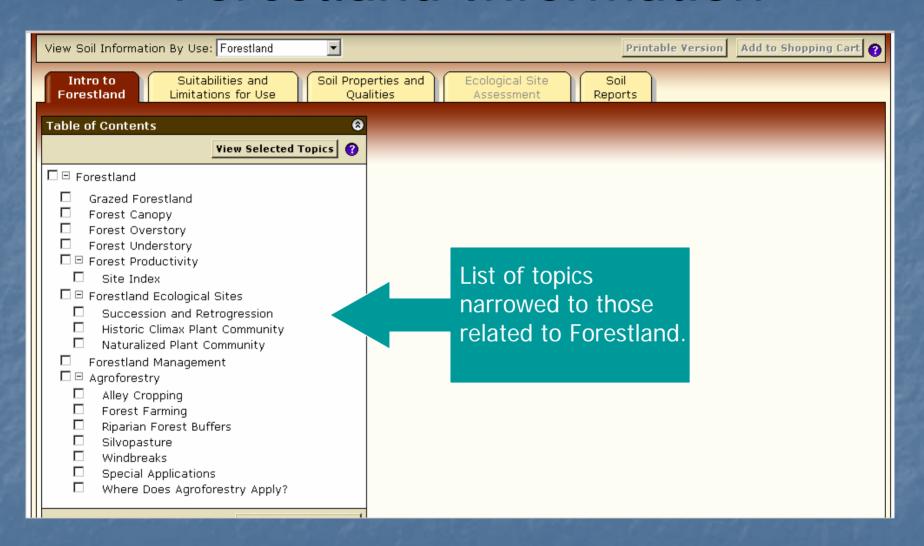
 Check item(s) in list, then click View Selected Topics to display text

Filter Information by Land Use

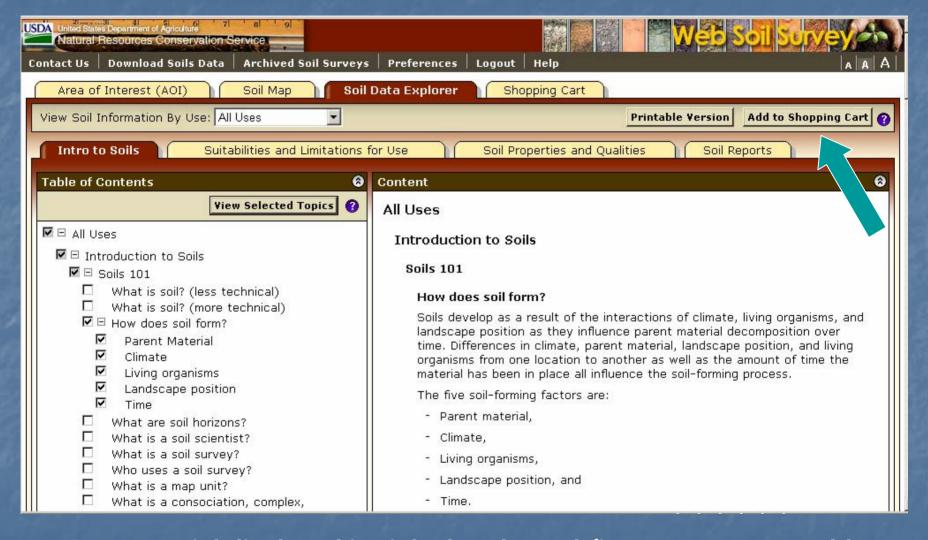


 Select a specific land use from drop down list to filter content on the Soil Data Explorer tab.

Forestland Information

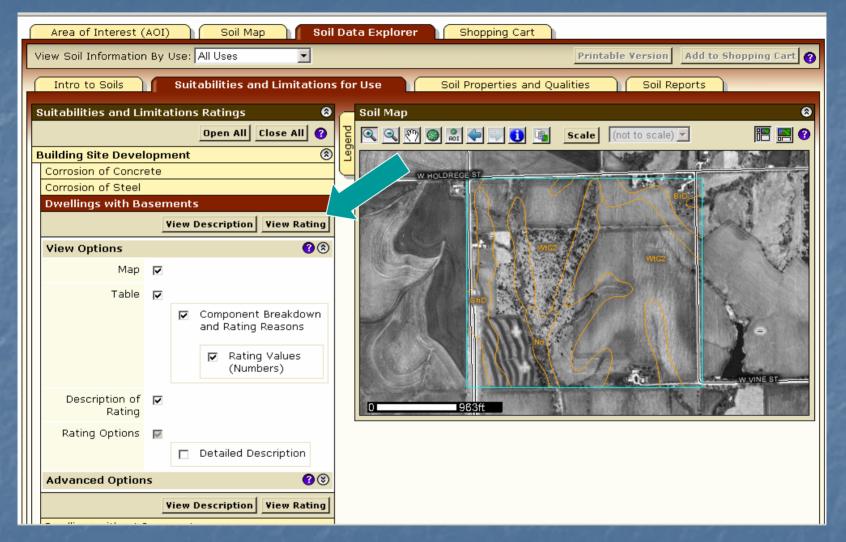


Shopping Cart



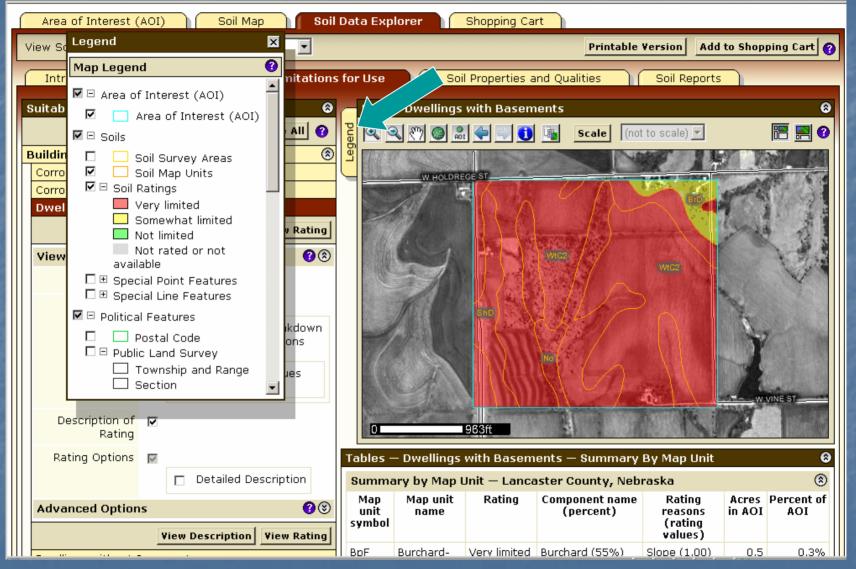
Any material displayed in right-hand panel (intro text, maps, tables, etc) can be added to the Shopping Cart for later retrieval. All added content is bundled into a single PDF file for download or printing.

Suitabilities and Limitations



- Display a variety of interpretations as a thematic map.
- Open a category folder, then select desired interpretation. Click View Rating

Display Interpretive Map



 Click Legend tab to display map legend. Table below map shows rating and limiting features of each soil in Summary Report.

Summary Report

Tables -	– Dwellings	with Basem	ents — Summary	By Map Unit		6
Summa	ary by Map l	Jnit — Lanca	ster County, Neb	raska		8
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (rating values)	Acres in AOI	Percent of AOI
BpF	Burchard-	Very limited	Burchard (55%)	Slope (1.00)	0.5	0.3%
	Nodaway complex, 2 to 30		Nodaway, frequently flooded	Flooding ooded (1.00)		
	percent slopes		(45%)	Depth to saturated zone (0.35)		
BrD	Burchard clay loam, 6 to 11 percent slopes	Somewhat limited	Burchard (100%)	Slope (0.04)	6.5	3.9%
No	Nodaway silt loam, 0	Very limited	Nodaway, occasionally	Flooding (1.00)	4.2	2.5%
	to 2 percent slopes		flooded (95%)	Depth to saturated zone (0.35)		
			Colo, occasionally flooded (5%)	Flooding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.50)		
ShC	Aksarben silty clay loam, 2 to 5 percent slopes	Very limited	Aksarben (100%)	Shrink-swell (1.00)	14.8	8.9%
ShD	Aksarben	Very limited	Aksarben (100%)	Shrink-swell	11.8	7.0%

Interpretation Description and Rating Options

Description — Dwellings with Basements

8

Dwellings are single-family houses of three stories or less. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

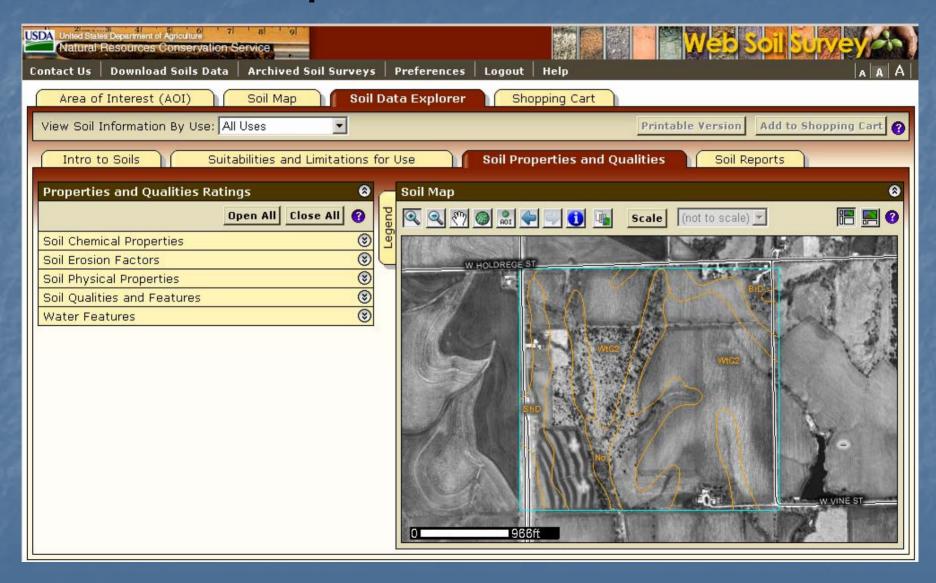
Rating Options — Dwellings with Basements

8

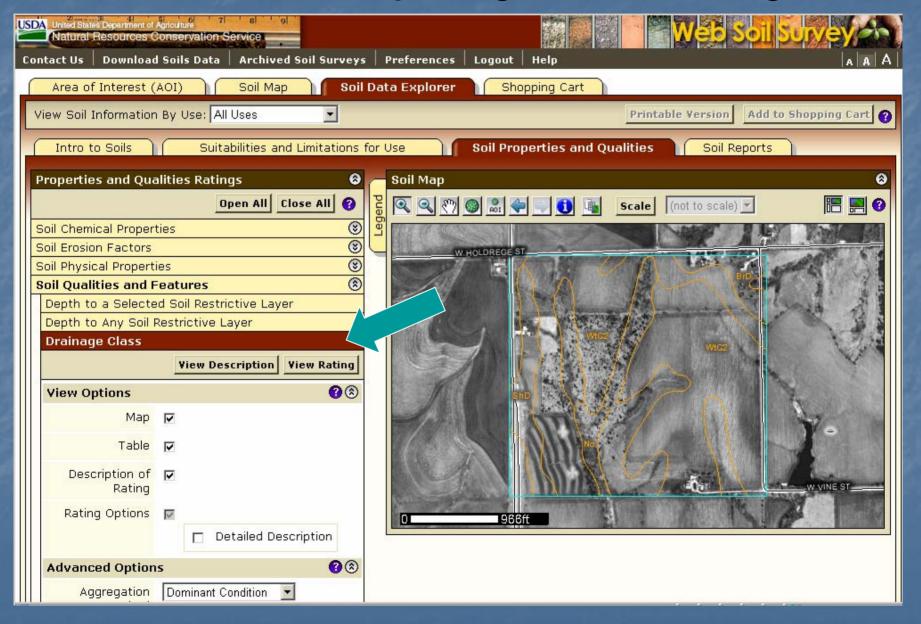
Aggregation Method: Dominant Condition
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

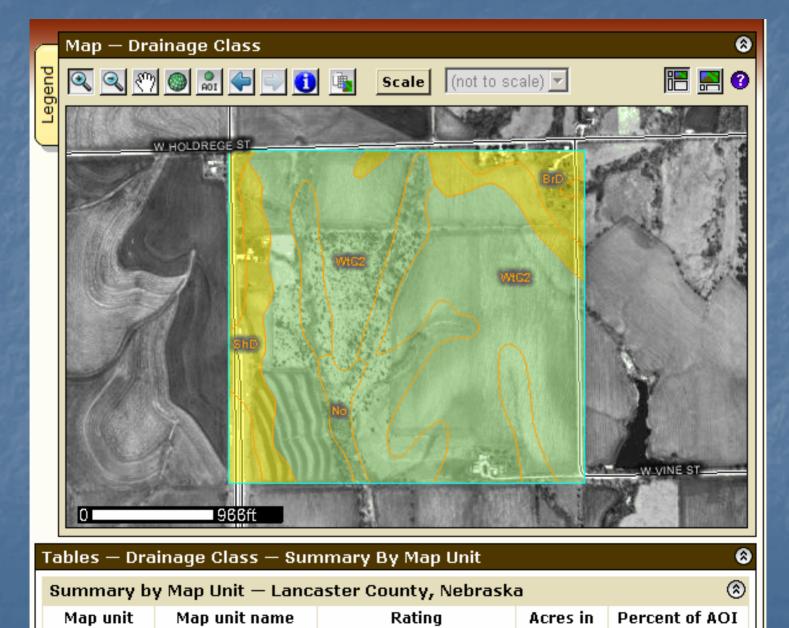
Soil Properties and Qualities



Select Property or Quality

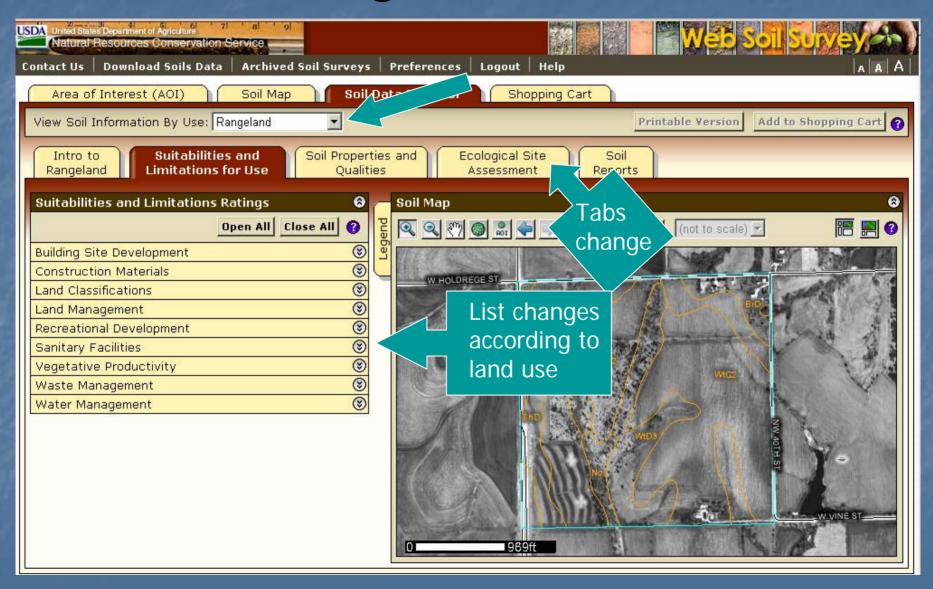


Display Results

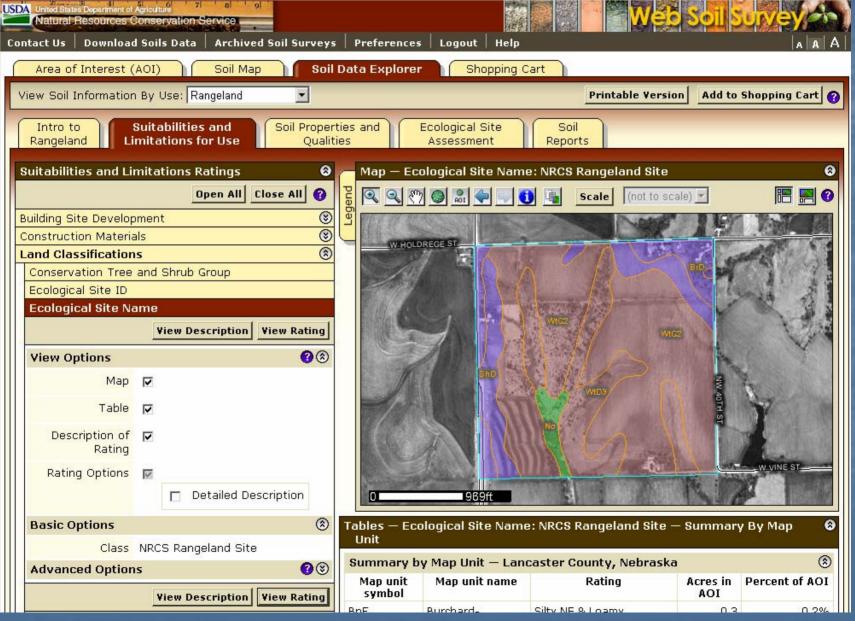


Tables — Drainage Class — Summary By Map Unit							
Summary b	y Map Unit — Lance	aster County, Nebraska	a	8			
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI			
BpF	Burchard-Nodaway complex, 2 to 30 percent slopes	Well drained	0.5	0.3%			
BrD	Burchard clay loam, 6 to 11 percent slopes	Well drained	6.5	3.9%			
No	Nodaway silt loam, 0 to 2 percent slopes	Moderately well drained	4.2	2.5%			
ShC	Aksarben silty clay loam, 2 to 5 percent slopes	Well drained	14.8	8.9%			
ShD	Aksarben silty clay loam, 5 to 9 percent slopes	Well drained	11.8	7.0%			
WtC2	Wymore silty clay loam, 3 to 7 percent slopes, eroded	Moderately well drained	97.3	58.2%			
WtD3	Otoe silty clay, 5 to 9 percent slopes, eroded	Moderately well drained	32.1	19.2%			
Totals for Arc	ea of Interest (AOI)	167.1	100.0%				

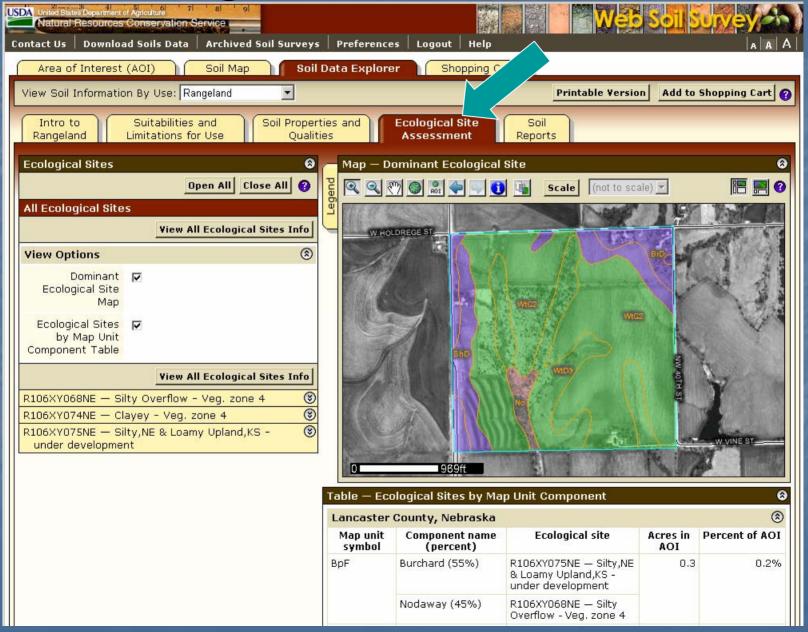
Change Land Uses



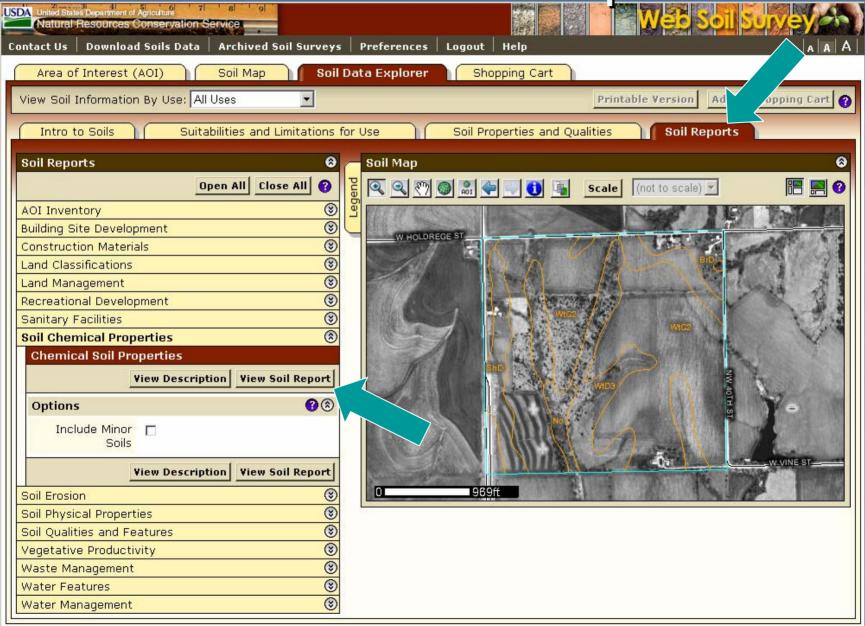
Ecological Site Name Map



Ecological Site Assessment



View Soil Data Reports



Chemical Soil Properties Report

Report — Chemical Soil Proper	ties							8
Lancaster County, Nebraska								
Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	meq/100g	pН	Pct	Pct	mmhos/cm	
BpF—Burchard-Nodaway complex, 2 to 30 percent slopes								
Burchard	0-8	15-25	_	5.6-7.3	0	0	0	0
	8-33	15-25	_	6.1-7.3	0	0	0	0
	33-60	15-25	_	7.4-8.4	5-10	0	0	0
Nodaway, frequently flooded	0-7	15-30	_	6.1-7.3	0	0	0.0-2.0	0
	7-60	10-25	_	6.1-7.3	0	0	0.0-2.0	0
BrD—Burchard clay loam, 6 to 11 percent slopes								
Burchard	0-8	15-25	_	5.6-7.3	0	0	0	0
	8-33	15-25	_	6.1-7.3	0	0	0	0
	33-60	15-25	_	7.4-8.4	5-10	0	0	0
No—Nodaway silt loam, 0 to 2 percent slopes								
Nodaway, occasionally flooded	0-7	20-25	_	6.1-7.3	0	0	0.0-2.0	0
	7-60	20-25	_	6.1-7.3	0	0	0.0-2.0	0
ShC—Aksarben silty clay loam, 2 to 5 percent slopes								
*1	0 7	05 05		F 4 7 F				

Access Archived Soil Survey Publications



 A listing of previous soil survey report publications for the Area of Interest is stored on an external web site. Click the highlighted link to go there.



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Partnerships

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Soil Survey

- Listing Of Soil Surveys by State
- Status Maps
- Soil Survey Schedule
- Soil Data Mart
- eFOTG (county technical guides)
- National Soil Characterization Data
- Soil Geography
- Soil Research Results
- Soil Geochemistry Spatial Database

Find a Service Center
 States and Regions

▶ Centers and Institutes

Published Soil Surveys for Nebraska

Soil surveys are being completed and published on a continuing schedule. As time passes, the data in published surveys become dated. The official information about the soils in a given area is available from the <u>Soil Data Mart</u>, which provides the most current data about the soils. If spatial data are available, the <u>Web Soil Survey</u> also provides access to the most current information.

For information about areas not included on the following list of soil survey publications and for ordering or obtaining information about reference copies, contact:

State Conservationist Federal Building, Room 152 100 Centennial Mall North Lincoln, NE 68508-3866

Phone: 402-437-5300 FAX: 402-437-5327

Soil survey name (Follow links for online surveys.)	Date	Paper copy available	CD- ROM	Archived PDF Online	Web Soil Survey (Official Soil Data)
Adams	1923	No	No	No	No
Adams	1974	Yes	Yes	Yes	No
Adams	Current	No	No	No	Yes
Antelope	1921	No	No	No	No
Antelope	1978	Yes	No	No	No
Antelope	Current	No	No	No	Yes
Arthur	Current	No	No	No	Yes
Arthur and Grant	1977	Yes	No	No	No
Banner	1919	No	No	No	No
Pappar	1004	Vac	No	No	No

Access the Shopping Cart

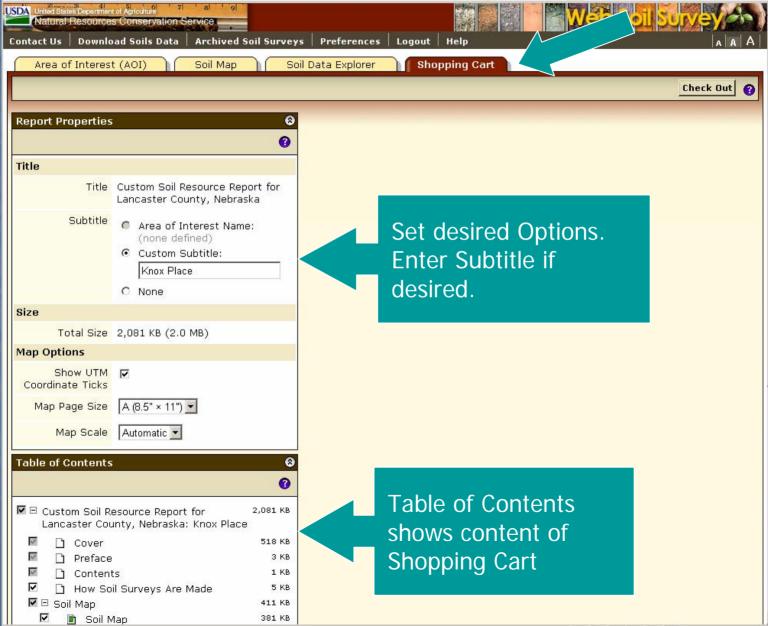
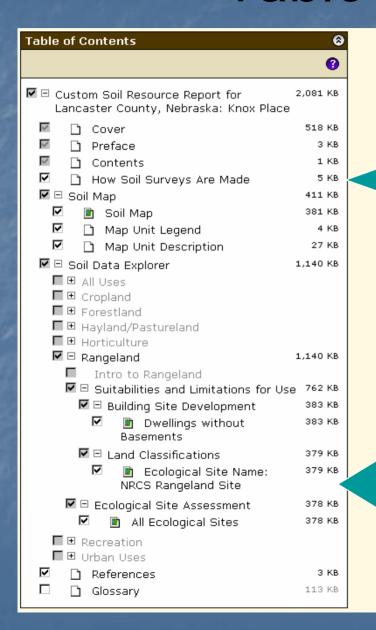


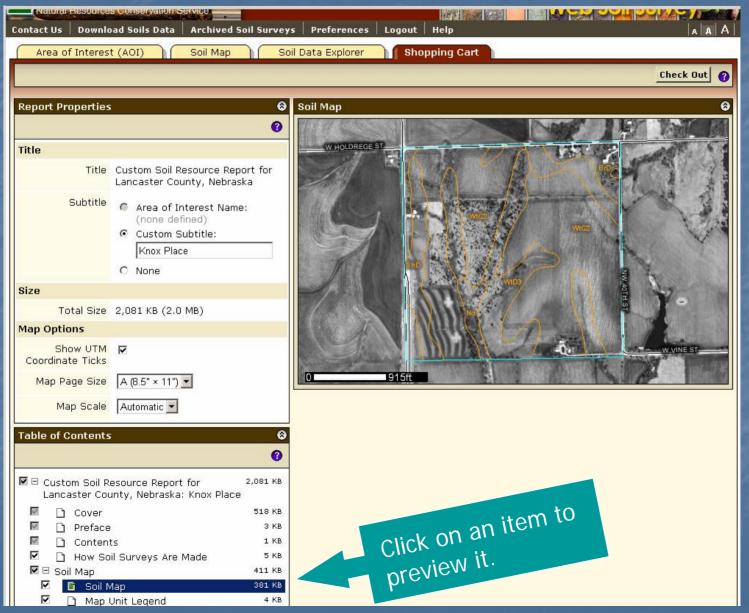
Table of Contents



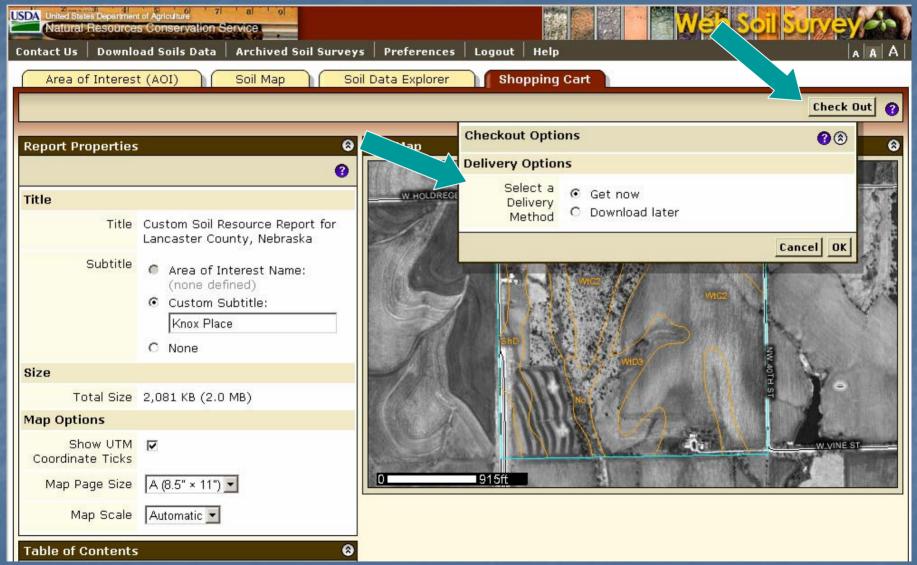
Soil map, map unit legend, and map unit descriptions are automatically added.

Items can be deselected by unchecking them on the list if you decide you do not want to get them. Additional items must be added in previous screens.

Preview an Item

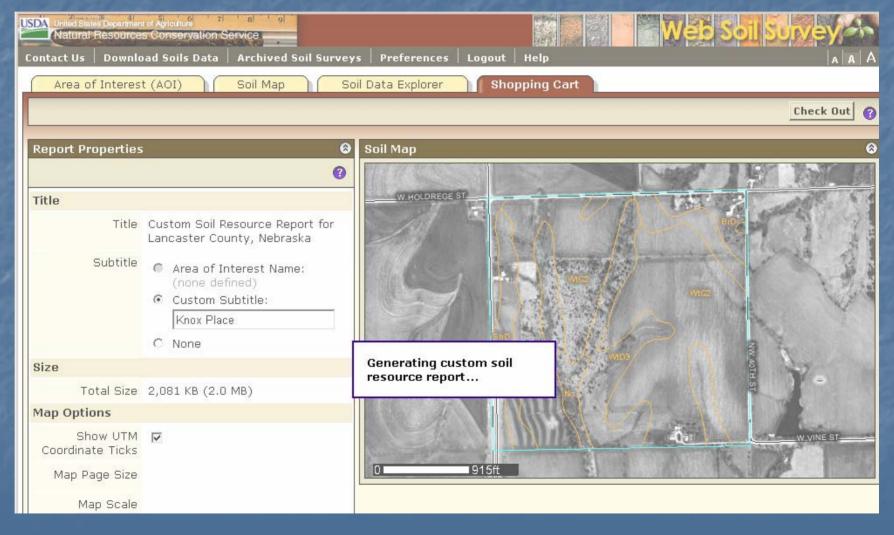


Check Out



- During Check Out you can elect to get the file now or later.
- Then click OK.

Custom Soil Resource Report being generated



Custom Soil Resource Report

