

United States Department of Agriculture

## **Ecosystem Restoration Tools**

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or utilized to the full extent. The **USDA-Natural Resources Conservation Service has** developed and utilizes many tools to help our nation's farmers, ranchers and rural communities conserve and restore our nation's private lands.



## Soil Survey

Soil survey in the US has succeeded for over 100 years; setting the standard for the world in classification, mapping and laboratory procedures. The first soil survey began under the USDA Weather Bureau as the Division of Agricultural Soil in 1894. A soil survey is a detailed report on the soils of an area. The soil survey has maps with soil boundaries and photos, descriptions, and tables of soil properties and features; providing detailed information on soil suitability, soil limitations, management and production potential. Soil surveys are used by farmers, real estate agents, land use planners, engineers and others who desire information about the soil resource.



Ecological Site Descriptions (ESDs) are reports that provide detailed information about a particular kind of land - a distinctive Ecological Site.

ESDs provide land managers the information needed for evaluating the land as to suitability for various land-uses, capability to respond to different management activities or disturbance processes, and ability to sustain productivity over the long term



ESD information is presented in four major sections:

- Site Characteristics physiographic, climate, soil, and water features
- Plant Communities plant species, vegetation states, and ecological dynamics

• Site Interpretations – management alternatives

• Supporting Information – relevant literature,

for the site and its related resources

information and data sources

- **Conservation Technical Notes** •
  - Identifying vegetative techniques and practices for ecological site restoration and conservation.
  - Evaluating plant and planting characteristics and parameters for successful site establishment.





- Replicated studies on plant attributes to support decision making.
- Plant collection and evaluation for identifying new conservation plant releases.
  - Collect identified native plants which have special characteristics to address defined resource concerns.
  - Evaluate and select plants based upon effectiveness of the plant to address the



## Web Soil Survey

Early into the 21<sup>st</sup> century, USDA-Natural Resources Conservation Service transitioned from the published soil survey books to electronic soil surveys which are available free of charge online at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

The online soil survey provides instant access to site specific soils information. The use of this information is critical in determining basic soils limitations and developing a plan of action for successful ecological site restoration projects.



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NRCS Ecological Site Description (ESD) reports are stored and accessed within the **Ecological Site** Information System (ESIS). https://esis.sc.egov.usda.gov/Welcome/pgReportLoc

ation.aspx?type=ESD

All completed and approved ESDs, both rangeland and forestland sites, are available to the general public from ESIS.

If your interest is to obtain soil and ESD information for your farm, ranch, or other lands, then use the **NRCS WEB Soil Survey** application. You can create your personal Area of Interest (AOI) and view, save, and print maps and reports providing soil

identified resource concern.



• Formally release conservation plant material for production and distribution within the commercial seed industry.





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	You are here: WSS Home Ab	out Soils Help Contact Us	
		I Want To	
Enter Keywords Go	The simple yet powerful way	<ul> <li>Start Web Soil Survey (WSS)</li> </ul>	
All NRCS Sites	to access and use soli data.	<ul> <li>Know the requirements for running Web Soil Survey</li> </ul>	
▶ Soils Home	Welcome to Web Soil Survey (WSS)	<ul> <li>Know whether my web browser works with Web Soil Survey</li> </ul>	
National Cooperative Soil Survey (NCSS)     Archived Soil Surveys	Web Soil Survey (WSS) provides soil data and information produced by the National	<ul> <li>Know the Web Soil Survey hours of operation</li> </ul>	
▶ Status Maps	the USDA Natural Resources Conservation Service (NRCS) and provides access to the lack access to	• Find what areas of the U.S. have soil data	
<ul> <li>Official Soil Series Descriptions (OSD)</li> </ul>	system in the world. NRCS has soil maps		
Soil Series Extent Managing Tool	percent of the nation's counties and anticipates having 100 percent in the near future. The site is	Announcements/Events	
► Soil Data Mart	updated and maintained online as the single authoritative source of soil survey information.	<ul> <li>Web Soil Survey 2.0 has been released! View description of new</li> </ul>	
▶ Geospatial Data Gateway	Three Basic Steps	features.	
▶ eFOTG	Define.		
National Soil Characterization Data	Area of Interest (A01)	I Want Help With	
N Sail Conshamintry	Use the Area of Interest tab	• How to use Web Soil	
://www.nrcs.usda.gov/		🕑 Trusted :	sites

Area of Interest Soil Map	Soil Data Explorer		
Intro to Soils Soil Limitations for Use Soil Properties and Qualities Reports Publications			
Soil Reports	Instructions		
Open All Close	All Viewing Soil Reports		
AOI Inventory Building Site Development Construction Materials Land Classifications Land Management Recreational Development Sanitary Facilities Soil Chemical Properties Soil Erosion Soil Physical Properties	<ul> <li>Soil reports are organized by category. If you are familiar with the Soil Data Mart (SDM) or with soil survey publications, you will recognize the list of soil reports as those available directly from the SDM and commonly included in soil survey publications. In fact, the soil reports you get from Web Soil Survey are generated directly from the Soil Data Mart.</li> <li>To view a soil report:         <ol> <li>Open a category in the panel to the left, and select a report.</li> <li>To learn more about the report, click View Description.</li> <li>In the Options pane, select the items you want to view.</li> <li>When ready, click View Soil Report.</li> </ol> </li> <li>Note: If you already have a PDF viewer configured to run in your browser, the document will appear in the PDF viewer in a separate browser window.</li> </ul>		
Soil Qualities and Features Vegetative Productivity	<ul> <li>If a PDF viewer is not configured to run in your browser, you will be given the option to download the PDF file. If you do not have a PDF viewer, you can download one by clicking the following link: <a href="mailto:carAdobe">carAdobe</a></li> </ul>		

and Ecological Site information defining your specific

piece of land.

USDA is an equal opportunity provider, employer and lender.