



Natural Resources Conservation Service

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MENU

Soil Survey Geographic Database (SSURGO)

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The Soil Survey Geographic Database (SSURGO) contains information about soil as collected by the National Cooperative Soil Survey over the course of a century. The information was gathered by walking over the land and observing the soil. Many soil samples were analyzed in laboratories.

Feedback

Description of SSURGO Database

The SSURGO database contains information about soil as collected by the National Cooperative Soil Survey over the course of a century. The information can be displayed in tables or as maps and is available for most areas in the United States and the Territories, Commonwealths, and Island Nations served by the USDA-NRCS. The information was gathered by walking over the land and observing the soil. Many soil samples were analyzed in laboratories. The maps outline areas called map units. The map units describe soils and other components that have unique properties, interpretations, and productivity. The information was collected at scales ranging from 1:12,000 to 1:63,360. More details were gathered at a scale of 1:12,000 than at a scale of 1:63,360. The mapping is intended for natural resource planning and management by landowners, townships, and counties. Some knowledge of soils data and map scale is necessary to avoid misunderstandings.

The maps are linked in the database to information about the component soils and their properties for each map unit. Each map unit may contain one to three major components and some minor components. The map units are typically named for the major components. Examples of information available from the database include available water capacity, soil reaction, electrical conductivity, and frequency of flooding; yields for cropland, woodland, rangeland, and pastureland; and limitations affecting recreational development, building site development, and other engineering uses.

SSURGO datasets consist of map data, tabular data, and information about how the maps and tables were created. The extent of a SSURGO dataset is a soil survey area, which may consist of a single county, multiple counties, or parts of multiple counties. SSURGO map data can be viewed in the Web Soil Survey or downloaded in ESRI®

Shapefile format. The coordinate systems are Geographic. Attribute data can be downloaded in text format that can be imported into a Microsoft® Access® database.

Status Map of Soil Surveys (<https://websoilsurvey.nrcs.usda.gov/DataAvailability/SoilDataAvailabilityMap.pdf>) available from the Web Soil Survey.

Metadata

SSURGO/STATSGO2 Structural Metadata and Documentation (</resources/data-and-reports/ssurgo/stats2go-metadata>).

Recommended Data Citation

The following format is suggested for citing Web Soil Survey:

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <https://websoilsurvey.nrcs.usda.gov/> (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>). Accessed [month/day/year].

Technical Information

To obtain technical information about the use of soil data, please contact the NRCS State Soil Scientist in your state, or email

Soils Hotline Staff (<mailto:soilshotline@usda.gov>).

Ordering Information

To obtain SSURGO soil spatial and attribute data:

Web Soil Survey (<https://websoilsurvey.nrcs.usda.gov/>) (download only)

Soil Data Access (<https://sdmdataaccess.nrcs.usda.gov/>) -- Soil Data Access is the name of a suite of web services and applications whose purpose is to meet requirements for requesting and delivering soil survey spatial and tabular data, that are not being met by the current Web Soil Survey and Geospatial Data Gateway websites.

Custom ArcTools for merging SSURGO datasets into a single file geodatabase can be found on the gSSURGO webpage (</resources/data-and-reports/gridded-soil-survey-geographic-gssurgo-database>).

All data are bundled by survey area regardless of the delivery method.

Contact Soils

Please contact us if you see something that needs to be updated, if you have any questions, or if you need accessibility assistance.

Soils Assistance

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