



Soils Drainage Class: Dominant Condition

The U.S. Natural Resources Conservation Service (NRCS) manages several soils datasets; two commonly used datasets are STATSGO, developed at 1:250,000 for broad regional areas, and SSURGO, created at a more local (county) scale. SSURGO is a very large and complex dataset that contains all the variables found in county soil surveys, such as those relating to soil characteristics, capabilities, and limitations for use.

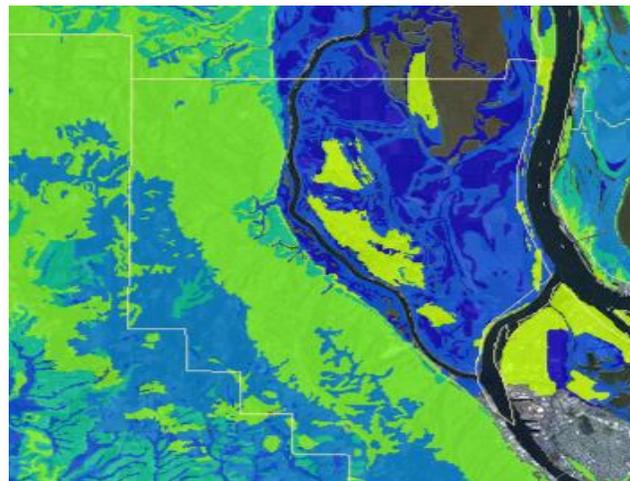
SSURGO is useful for local level resource management by land managers and landowners to identify wetlands, aquifers, erodible soils, land use potential, and best management practices.

The SSURGO variable *natural drainage class (dominant condition)* was selected for use in EnviroAtlas because it indicates soil wetness or degree of saturation. The term *natural* refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Poorly drained soil conditions occur when water added to the soil exceeds its removal by drainage or evapotranspiration due to impermeable material in the subsoil or a high groundwater table. Natural drainage class contains 7 subclasses ranging from very poorly drained through well-drained to excessively drained soils. The classes are distinguished in the field partly by the color and presence of iron compounds that change color depending on their exposure to oxygen in the air. Long periods of inundation reduce the oxygen content in soil and change the color of iron compounds from red to gray.

Soil drainage is an important factor in identifying aquifers and recharge areas, in monitoring the passage of chemicals through soils, and in determining the suitability of particular areas for conservation, agriculture, or development; the data layer can be used in EnviroAtlas to explore similar questions. The variable is also related to the National Wetlands Inventory data layer, which focuses on the wettest drainage classes.

Things to know before using these data:

Because this data layer was created at scales ranging from 1:12,000 to 1:63,360, legend items and map symbology will not be visible until that scale range has been reached.



Where can I go for more information?

Read more from NRCS about soil characteristics and site indicators for the seven natural [soil drainage classes](#).

SSURGO data is available online through the NRCS Web Soil Survey ([WSS](#)), web-based county soil surveys), which can be used for local planning for 95% of the nation's counties.

The [SSURGO Downloader](#) allows ArcGIS Rapid Direct Access to SSURGO Data. The site provides easy access via an interactive map to 130 of the most useful SSURGO variables summarized by hydrologic unit (HUC8) for the U.S.

Another NRCS [website](#) provides a full description of SSURGO data, ordering information, and metadata.

NOTE: The data described in this fact sheet have not been prepared or reviewed by the EnviroAtlas team; they are sourced from publically available external web services and as such are prepared, stored, and managed by the organization listed above. With current technology, the EnviroAtlas team has no control over the way these data display in our application. Please go to the sources listed here for more information.