

Soils and Conservation Planning on Your Farm

Conservation planning is a great way for farmers to protect, conserve and enhance natural resources, to use their land productively and address resource concerns. Many agencies and partners collaborate to make conservation and nutrient management planning for farmers valuable. Here is a step by step guide to how soils data is used for planning.

1 USDA-NRCS soils data is the foundation of the conservation and nutrient management planning processes.

Collection and analysis of soils data is an ongoing research effort across geographic regions. Soils data is refreshed annually, so farmers have access to the most up-to-date, accurate information to plan for their farm.

3 The web soil survey is the official source of soils data and is used to provide general information on where soils with the described properties are located on the landscape.



2 *Soils data is a description of each layer or horizon in the soil. It includes the depth ranges of the horizons, their particle make up, organic matter content, chemical and physical properties and parent material. Soils data also includes information on where the soil is located in the landscape. For each soil map unit, there may be thousands of pieces of information entered in the database that describe the soil profile to a depth of five feet.*

Soil properties, such as drainage, texture and available water capacity, can be measured and are used to interpret a soil's or site's ability to be used for a specific purpose.

4 Soil interpretations: Organizations use official soils data to develop interpretations or models based on soil properties to support decision making processes. Soil survey interpretations assess soil suitability for specific uses and management practices and are used as guides to develop management practices that are applied to soils, such as cropland irrigation or tillage.

Each group below makes independent interpretations of soil survey data that are then used in conservation and/or nutrient management planning. When soils data is updated, the interpretations are also updated to reflect the improved information.



The USDA-Natural Resources Conservation Service updates tolerable soil loss (T) and erodibility factors (K) that are used in calculating erosion rates, how well a soil is suited for septic tanks and land evaluation based off of soil productivity.



Department of Soil Science
UW Extension

The University of Wisconsin-Madison Department of Soil Science assigns each soil map unit to a soil group and soil yield potential category. Soil groups (loamy, sandy, organic) are used primarily for P & K recommendations. Soil yield potential is used in the N rate guidelines for corn.



The Department of Agriculture, Trade and Consumer Protection produces 590 restriction maps for farmers. Plans are based on soil test analysis by a DATCP certified lab following UW's nutrient application guidelines for crops. Plans protect soil health, surface and groundwater resources.



The Department of Natural Resources identifies potential manure application prohibition areas for livestock farms requiring water quality discharge permits under NR243 - Animal Feeding Operations.

5 Resources and Tools Available to Help Farmers, Landowners, Planners, Consultants and More! Look for more information and updates in the coming weeks from the USDA-Natural Resources Conservation Service; University of Wisconsin-Madison Department of Soil Science; Department of Agriculture, Trade and Consumer Protection; and Department of Natural Resources on web soil survey uses and limitations, SnapPlus (Wisconsin's nutrient management software), conservation planning, nutrient management and more. We're partnering to help you!