Why Replace the Old Soil Survey?

The Old Soil Survey reflects the knowledge of soil properties and soil behavior relative to interpretation needs at the time of the field mapping. In Maryland, most field mapping for the original soil surveys was completed between 1945 and 1975.

Old Soil Surveys are an excellent source of data; however, they do not meet current National Cooperative Soil Survey (NCSS) standards.

New information about soils is needed to address changes in demographics, advances in technology, new environmental questions, and the greater intensity of land use.

1964 Soil Survey	Modernized Soil Survey
Does not meet data requirements for today's programs (Farm Bill)	Field work completed by transects and landform interpretation
Field work completed by random sample method	Current digital orthoimagery
Out-of-date aerial photography	CD-ROM and Internet Publications
Data not geo-referenced	Georeferenced data
Hardcopy Manuscript	Soils data and interpretations readily accessible
Limited Soil Survey Access	New and updated soils interpretations for current landuse practices
Soil interpretations tailored to agriculture	

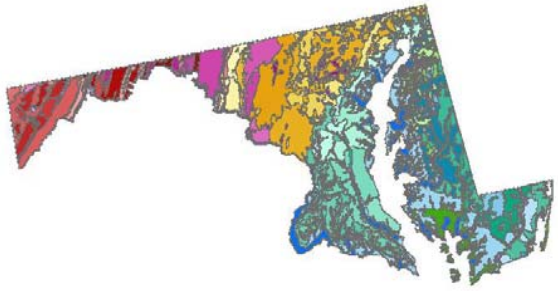
Learn more about Soil Survey…

- Visit with a Soil Scientist or Soil Conservationist at your county USDA Service Center
- Visit the USDA NRCS soils web site: http://soils.usda.gov
- Visit the Natural Resources Conservation Service (NRCS) Soil Data Mart online: http://soildatamart.nrcs.usda.gov/

Maryland State Office
339 Busch's Frontage Road, Suite 301
Annapolis, MD 21401
Phone: 443-482-2934

James H. Brown
NRCS State Soil Scientist
james.brown@md.usda.gov

W. Dean Cowherd
NRCS Assistant State Soil Scientist
dean.cowherd@md.usda.gov



Maryland NRCS
www.md.nrcs.usda.gov

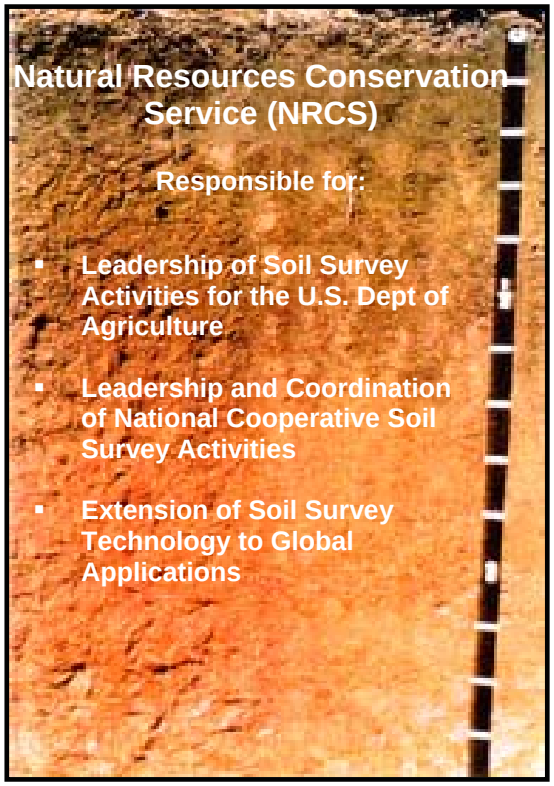
United States Department of Agriculture

Maryland

NRCS Natural Resources Conservation Service

Maryland Soil Survey
"Helping People Understand Soils"

The Soil Survey Update Process



Sassafras **–** *Maryland State Soil*
Established 1901

Jan 2004

A Summary of Soil Survey Update Activities

U.S. Department of Agriculture, Natural Resources Conservation Service, 2003, National Soil Survey Handbook, title 430-VI, [Online] Available: http://soils.usda.gov/technical/handbook/ .

Soil– A natural body comprised of solids (minerals and organic matter), liquids and gases, with either horizons, or layers or the ability to support rooted plants.

Soil Survey – The record of knowledge of the soils of a survey area in a given time period. It is the analysis and summary of information learned during the survey process.

Soil Survey Update or Modernization – The process by which additional data are collected and grouped in accordance to physical and chemical properties. The new data are associated with a particular landscape setting that is georeferenced.

The update process requires that a Soil Scientist do transects sampling, and landscape evaluation. After completing this evaluation, the Soil Scientist will determine whether the area needs to be *remapped*, or *recorrelated*, or if the map legend needs to be *redesigned.*

Redesign of the Mapping Legend– An initial soils legend of map unit names and symbols is developed using the existing soil survey legend. The legend is adjusted for any changes in soil series and series phases, and to meet alphanumeric standards.

Recorrelation –Recorrelation of a given Mapunit is done to separate soils with specific properties that will affect the use and management of that soil.

Remapping – The adjustment of soil line placement is necessary when a previously mapped soil must be subdivided or regrouped to accurately reflect the interpretations, as well as the use and management of the soil.

Interpretations - Data from research studies will be used to develop new interpretations, especially water quality interpretations and interpretations for local needs.

Map Compilation – The transfer of adjusted soils line work to new orthophotobase maps.

Coordination - Soil classification, correlation, interpretation, and mapping concerns that are identified during fieldwork are brought to the attention of other participants during the update process.

Map Finishing and Digitizing – The modernized soil survey will be in a digitized format with a certified spatial and tabular database capable of being loaded into a Geographic Information System (GIS).

Soil Database Development – New soil surveys require the development and maintenance of a soil attribute database using the National Soil Information System (NASIS). This attribute data is provided for the NRCS Field Office Technical Guide (eFOTG) and for use with the GIS of all cooperating agencies.

Special Studies

Updated Soil Surveys include special studies that benefit the unique soil concerns of the survey area. Some of the items that have been identified for special study in different Maryland Soil Survey Updates include:

Acid Sulfate Soils – Identification of sulfidic and sulfuric materials that are potentially dangerous to underground infrastructure, foundations, and the environment.

Crop Yield and Woodland Site Index Studies – Evaluation and revision of crop yield and woodland site index data for *updated* soil mapunits.

Hydric Soil Indicators – Evidence that soils were formed under conditions of prolonged inundation or saturation.

Udorthent Soils – Determining the physical properties and characteristics of soils that have been altered by cutting and filling activities due to construction.

Water Table Studies - Monitoring and collection of well data to evaluate soil features used to predict seasonally high water tables.

National Cooperative Soil Survey (NCSS)

- A nationwide partnership of federal, regional, state, and local agencies and institutions
- Cooperatively investigates, inventories, documents, classifies, and interprets soils.
- Disseminates, publishes, and promotes the use of information about the soils of the United States.
- Carries out activities on a national, regional, and state level.

NCSS Offices and Responsibilities

Soil Survey Project Office – Manages daily Soil Survey or Soil Survey Update activities.
Major Land Resource Area (MLRA) Project Leader - Coordinates projects among all of the project offices in the MLRA.
State Soil Scientist – Provides oversight to all Soil Survey Activities in the state.
Major Land Resource Area (MLRA) Office – Provides quality assurance for project activities.
National Soil Survey Center – Provides soil survey technology, standards, data and expertise.
National Headquarters – Responsible for oversight of national soil survey activities and coordination of soil survey reports and publications throughout the nation.

State and Local Cooperators

The Maryland Soil Survey Program is a cooperative effort. State and local contributors include:

- **County Commissioners**
- **County Soil Conservation Districts**
- **Maryland Agricultural Experiment Station (University of Maryland)**
- **Maryland Geologic Survey**
- **Maryland Department of Agriculture**
- **Maryland Department of Natural Resources**