

Fact Sheet

April 2011

Natural Resources Conservation Service

What is a soil survey?

Soil surveys provide a field-based, scientific inventory of soil resources. Information compiled for a soil survey includes soil maps, data about the physical and chemical properties of soils, and information about the potentials and limitations of each soil—the information needed to properly manage and conserve soils.

Who conducts the soil survey?

The USDA Natural Resources Conservation Service (NRCS) has been charged with gathering soil information on private lands across the country. NRCS soil scientists also interpret soils data gathered in the field in order to provide the information to land use managers.

What happens during a soil survey?

NRCS soil scientists request access to private lands to conduct a physical soil survey. Once access is granted, soil scientists travel by foot, use a pickup, or all-terrain vehicle to reach representative sites.

The physical soil survey involves observing and documenting landscape characteristics such as vegetation, slope, aspect, landforms, and parent material as well as digging a pit. Pits are typically dug using hand tools and they are usually about 18 inches in diameter and three to five feet deep. The soil scientist determines soil texture, pH, color, and other physical and chemical characteristics for the horizons present in the soil profile.

The amount of time soil scientists will need to survey a property depends on factors such as travel time and accessibility of sampling locations. In general, one soil scientist can gather the information needed over a 300-acre area in one day.

NRCS soil scientists make every effort to leave no trace of their work; disturbing the smallest area

possible and packing up all equipment each day. The equipment used in most cases includes a Global Positioning System, sieves, color book, pH indicators, forms, and shovels.

What happens to the information gathered?

Information gathered by NRCS soil scientists is analyzed and compiled to develop soil map units and a corresponding database of soil properties. This information is made available on the Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov/> as it is completed. A hard copy of the soil survey can be made available upon request. Contact the local USDA Service Center to request a soil survey for your county or to get more information about the soil survey process.

How are soil surveys used?

Soil descriptions include soil depth; water infiltration rates and storage capacity; acidity or alkalinity; susceptibility to erosion; and interpretations of the potential or limitations for a variety of land uses. No matter the planned use for a piece of land (wildlife habitat, home building, or agriculture), soil information is a crucial element in decision-making. An NRCS soil survey report provides this crucial information to farmers and ranchers, real estate agents, land use planners, engineers, and others.

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