

# FY 2018 Priorities

## Soil Science Division



**The Soil Science Division (SSD) supports the NRCS mission by delivering vital information and expertise to agency staff, partners, and the public in innovative ways. The division's priorities for FY 2018 will enable it to continue that service.**

### Soil and Ecological Site Inventory

#### Initial Soil Inventory

*Accelerate the foundational (initial) soil inventory on all lands, including private, Tribal, and Federal lands*

The initial soil inventory is the foundation upon which all subsequent soils products and information are developed, maintained, and interpreted. As of 2017, an initial survey had been completed on more than 80 percent of the United States, including 92 percent of non-Federal lands. Detailed soil survey maps and data are accessible through Web Soil Survey for these areas.

More than 450 million acres of soils have not yet been inventoried. Over 70 percent of this acreage, 330 million acres, is on Federal lands. The remaining 120 million acres include conservation-priority areas, such as Tribal lands in Alaska. The Soil Science Division, in collaboration with National Cooperative Soil Survey (NCSS) partners and State Conservationists, is implementing a plan to accelerate the inventory of the remaining private and Tribal lands. The plan proposes completion of the foundational soil inventory by 2026. Priority will be given to Tribal and private lands on which

conservation technical assistance and farm bill program delivery are NRCS priorities.

The initial inventory is the basis for customers to ask questions, request existing data, and seek current soil interpretations. It is also the basis for development of new data and interpretations. It is needed in the development of conservation programs and provides the scientific basis to address soil health issues and other emerging land use concerns.

#### Ecological Sites

*Provide ecological site products to broaden conservation applications and training in collaboration with national, center, and State technical staff and Federal partners*

Ecological site inventory, state-and-transition models, and ecological site descriptions are critical for selecting, implementing, and assessing conservation practices; recognizing thresholds of irreversible change in managed ecosystems; and estimating potentials for soil carbon sequestration. The use of ecological site information for conservation planning is an application of existing NRCS guidelines. The first step of this use is selecting the ecological site and ecological state; the next step is defining conservation goals and objectives; the third step is selecting appropriate conservation practices; and the fourth step is monitoring the impact of the practices to adjust future management decisions. Long-range and project plans for soil survey will include protocols for

the definition, inventory, and description of ecological sites. Provisional ecological sites are planned to be available for the continental United States by 2020 and for the entire country by 2025.

#### Dynamic Soil Properties

*Accelerate the collection of dynamic soil property (DSP) data*

Dynamic soil properties, which are those properties that change with land use and management, enhance soil survey products. Dynamic soil properties are used to frame, measure, and predict the response of soils to disturbances caused by human and nonhuman factors. Dynamic soil properties link soil inventories—as collected by traditional soil survey methods—to advancing areas of soil health, conservation, and management practices. Potential levels of DSPs are determined by inherent soil properties, but a range of actual observed values are possible. The range can depend on land use, land cover, management practices, and individual field conditions. Links can be made between ecological sites, interpretive soil groups (such as forage suitability groups), and DSP values in both absolute and relative terms. There is an increasing demand for dynamic soil property data to inform management activities, to better assess the impact of those activities (ecosystem services), and to provide more detailed and site-specific information for model development and for applications. Collection of DSP data will be integrated into all projects and will become a routine component of soil inventory.

# VISION

A society that values soil as essential to life.

# MISSION

Provide scientifically based soil and ecosystem information to manage natural resources



## Major Land Resource Area Updates

*Accelerate field activities of major land resource area (MLRA) updates in order to develop a seamless coverage of soils information across the Nation*

Updating soil survey information by MLRA ensures that current, accurate information is available to meet the needs of the majority of users and is delivered in a timely manner. Project plans are coordinated across the existing (i.e., “traditional” or “non-MLRA”) soil survey area boundaries and follow natural landforms. The MLRA process facilitates mapping, interpreting, and delivering seamless soils information across broad geographical areas that have common resource values, land uses, and management concerns. The MLRA update process is driven by the outcome of previous and ongoing Soil Data Join Recorrelation (SDJR) activities as well as by collaboration with NCSS partners. NCSS partners will be involved in all aspects of the planning and field work processes through their involvement on technical teams, management teams, and boards of advisors.



## Technical Soil Services

*Assist States in providing science-based technical soil services to enhance and support soil health activities, conservation planning, and program delivery and to maintain and expand our partnerships with university cooperators and external customers*

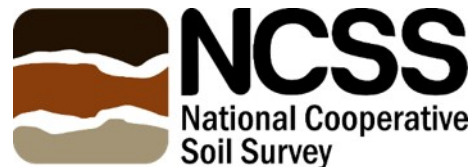
The Soil Science Division (SSD) is committed to assisting the State Conservationists through State soil scientists. The SSD provides assistance to improve the quality and quantity of technical soil services that support agency priorities. The SSD, the Ecological Sciences Division, and the Soil Health Division will continue to work in partnership with States to provide science-based soil property information and applications. The SSD will continue to collaborate with State soil scientists to promote the application of soils information in resource assessment for conservation planning, onsite investigations to support conservation practice design, assessments of soil health and dynamic soil properties, identification of hydric soils for wetland determinations, and other conservation technical assistance. The SSD is also committed to assisting States as they help customers understand and properly use the soil survey, provide customers with predictions and interpretations about the behavior of soil, and offer help to traditional, nontraditional, and

underserved customers through soil workshops, training sessions, and volunteer opportunities. These services will be beneficial for assisting in critical conservation areas and for broadening the conservation partnership.

## National Cooperative Soil Survey

*Strengthen the National Cooperative Soil Survey (NCSS) through increased transparency and collaboration with internal and external partners*

The strength of the NCSS derives from collaboration between NCSS partners—Federal, State, and local government agencies, universities, and the private sector—to achieve common goals in advancing soil science. The Soil Science Division will work through State Conservationists and State soil scientists to strengthen communication lines among NCSS partners. The SSD will promote agency priorities in soil health, conservation initiatives, and conservation planning to landowners. The SSD will encourage NCSS partners to actively participate in regional and national conferences and to serve in subject matter training cadres.



Natural Resources Conservation Service

[nrcs.usda.gov/](http://nrcs.usda.gov/)

