

Soil and Plant Science Division

# Dynamic Soil Survey: Creating NextGen Products Right for You



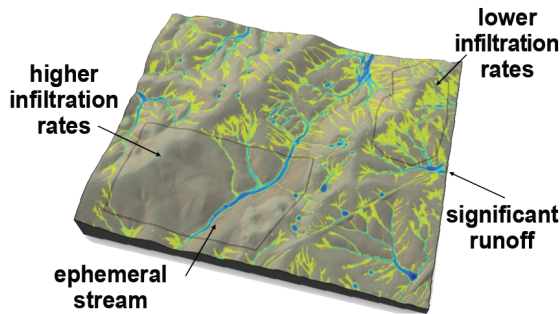
## Background and Where We're Headed

For the first 100 years of soil survey, the National Cooperative Soil Survey translated field work directly into maps, data, and interpretations. The original soil surveys were published as books. As technology advanced, soil surveys were made available in digital formats. The data collected from soil surveys became part of the Soil Survey Geographical Database, or SSURGO. If you access soils data via Web Soil Survey, you are using SSURGO data.

Over the next 100 years, the Dynamic Soil Survey (DSS) will take soil survey to the next level. In addition to utilizing field data, Dynamic Soil Survey incorporates remotely sensed data, ecological site descriptions, state-and-transition models (STM), dynamic soil properties (DSP), and soil climate and moisture data. Soil survey products are expanding to include raster soil surveys and models that incorporate DSPs, land use and management, soil climate and moisture, and more. These dynamic data products require a new, more dynamic online delivery platform.

Our ongoing field data collection informs our current soil survey and will be essential to our future Dynamic Soil Survey as well. The analytics happen behind the scenes. Our goal for data delivery is a one-stop shop for all our

data. The DSS platform will have a graphical interface and graphical menus, and it will serve as a decision support tool for you and our 79 million other soil survey users.



An example of what a "live" simulation looks like. The image depicts three zones with varying infiltration rates.

## What Products are Possible?

**Real-time modeling** is a window into how future DSS products incorporate different land uses. For example, where there is more color, there is more runoff, meaning less infiltration of water into the soil.

**Dynamic Ecological Site Descriptions:** Dynamic Soil Survey connects the static soil properties described in the ecological site concept, the temporal soil properties captured in ecological transitions, and the ecological states of STMs. In combination with conservation planning, STMs will provide the standard for land management decisions.

## About SPSPD

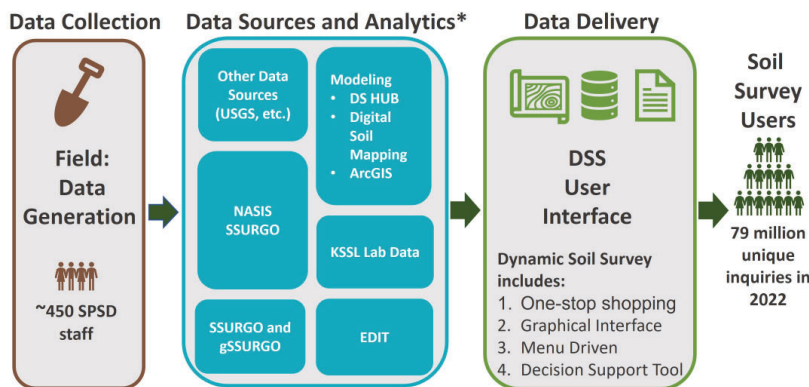
The Soil and Plant Science Division (SPSD) is responsible for the soil and ecological inventory of the United States. SPSPD produces meaningful products that provide data and information to meet different needs, such as: SSURGO, ecological site descriptions, state-and-transition models, gridded SSURGO (gSSURGO), raster soil survey, National Cooperative Soil Survey lab data, soil moisture data, like Snow Telemetry (SNOTEL) data, Soil Climate Analysis Network (SCAN) data, and State Soil Geographic Data (STATSGO).

## Other Possible Products:

- State-and-transition models with DSPs incorporated
- Real-time soil properties modeling
- User-friendly delivery
- Decision support tools
- Phone app (live)



Scan to visit the soil science part of the NRCS website.



\*Accessible to internal users and approved NCSS partners

