Available Virtual Resources for Soils Training

- NCSS Training Course Materials. Use these files as “refresher training” for training you’ve taken in the past.
  - Available at [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054324](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054324)
- Recommended curricula for specialty areas within the SPSD
  - [Ecological Site Specialist](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
  - [Geographic Information Specialist](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
  - [Soil Scientist](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
  - [Pathways](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)

- Videos and Webinars. If you have an idea for a webinar or series of webinars, please follow up with [shawn.mcvey@usda.gov](mailto:shawn.mcvey@usda.gov).
  - How-to videos on a variety of soil survey topics provide an excellent way to brush up on field and lab skills, or just learn what it is all about:
    - [von Post Scale of Humification](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [Chemical Response](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [How to Describe and Sample Fragments in the Field](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [Using Web Soil Survey playlist](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [How to Sample Bulk Density in the Field](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [How to Differentiate and Identify Soil Horizons in the Field](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [Video for Students of Soil Technology - Measurement and Data Evaluation](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [How to Use the Field Book for Describing and Sampling Soils](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [Virtual Tour of the Kellogg Laboratory](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [Water Movement in Soil](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)
    - [Particle-Size Analysis by Hydrometer](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054315)

- Soil Survey Webinars and PowerPoints (100’s Available)
    - Soil Business Systems
      - Digital Soil Mapping Webinar Series
      - Using R Powered Shiny Apps to Accelerate Soil Data Analysis
• Soil Quality and Ecosystems
  o Soil Health Conservation Webinars
  o O Horizons in Forest Soils
• Soil Survey Interpretations
  o Soil Vulnerability Index for Cropland
  o Soil Health Interpretations
• Soil Survey Research and Laboratory
  o Rapid Carbon Assessment
  o Soil Spectral Inference
• Soil Survey Standards
  o Soil Survey Manual
  o Training Resources
• Technical Soil Services
  o TSS Planning and Reporting
  o Working with the NSSC
• Other Videos of Interest
  o Coastal Zone Soil Survey
  o Effective Science Communication
  ▪ NSSC YouTube Channel available at: https://www.youtube.com/user/nrcsnssc
  ▪ S&T Training Library (Conservation Webinar Portal) Available at: http://conservationwebinars.net/
    o Hundreds of on-demand webinars and weekly live sessions available with verification certificates available for Continuing Education Units (CEUs) and other professional society/conservation planner certification credit
• NASIS Training Materials
  o NASIS User Guide Available at https://www nrcs usda gov/wps/portal/nrcs/detail/surveysurvey/tools/?cid=nrsc142p2_053545
  o NASIS Training Videos Available at https://www.youtube.com/channel/UCdHAmL4woeul8xdDUHfnKw
• Job Aids (something that can be used on the job to improve performance)
  o Classification
  o Correlation
  o GIS and Digital Soil Mapping for Soil Survey
  o Investigations
  o Operations & Management
- **Photography**
- **Promoting the Soil Survey**
- **Soil Databases, General**
- **Soil Databases, NASIS**
- **Soil Survey Graphics**
- **Technical Soil Services, Education**
- **Technical Soil Services, General**
- **Technical Writing**
- **Other Job Aids**

- **On-The-Job (OJT) Modules (100’s Available)** Includes instructions for adding completion to AgLearn. Available at [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054325](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/ncss/?cid=nrcs142p2_054325)
  - Map Unit Design and Mapping Soils
  - Soil Describing
  - Soil Classification
  - Soil Survey Documentation
  - Sampling and Characterization
  - Soil Survey Information
  - Equipment Use and Operation
  - Ecological Inventory
  - Geophysical Tools
  - Soil Science for Non-Soil Scientists
  - Soil Survey for Non-Soil Scientists
  - Describing Soils for Non-Soil Scientists

  - **Policy and Procedure**
    - National Soil Survey Handbook
    - Technical Notes - specific technical subjects for soil scientists.
      - Soil Survey Technical Notes
      - Hydric Soils Technical Notes
      - Soil Quality Technical Notes
      - Soil Quality - Agronomy Technical Notes
      - Soil Quality - Urban Technical Notes
      - Soil Quality - Soil Biology Technical Notes
  - **Classification**
    - Soil Taxonomy - principal reference to soil classification.
- **Keys to Soil Taxonomy** - taxonomic keys for field classification.
- **Guide to Pronouncing Taxonomic Terms**
- **Part 614 National Soil Survey Handbook**

### Soil Geography
- **Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin** (Ag Handbook 296)

### Field Guides
- **Field Book for Describing and Sampling Soils**
- **Field Guide to Classify Biological Soil Crusts for Ecological Site Evaluation**
- **Field Indicators of Hydric Soils**, version 8.2

### Soil Survey Office Laboratory References
- **Soil Survey Field and Laboratory Methods Manual (SSIR 51)**, version 2.0
  - Particle-size analysis by hydrometer data entry forms
- **Material Safety Data Sheets (MSDS) and recommended chemical disposal procedure**

### Laboratory Methods and Information
- **Lab Methods Manual (SSIR 42)**
- **Soil Survey Laboratory Information Manual (SSIR 45)**
- **A Routine Laboratory Method to Determine Phosphorus Availability, Capacity, and Release Characteristics for Soils (SSIR 55)**
- **Testing Methods for Phosphorus and Organic Matter**
- **Soil Sample Submission Protocol for the KSSL**
  - Soil Sample Submission Worksheets

### Geomorphic Description System
- **Geomorphic Description System**, version 5.0
- **Glossary of Landform and Geologic Terms (Part 629 of the National Soil Survey Handbook)**

### Geophysical Investigations
- **Trip Reports (Jim Doolittle)**
- **Trip Reports (Wes Tuttle)**

### Installing Monitoring Wells in Soils

### Forms

### National Soil Information System (NASIS)

### Land Use (Title 310)
- **National Land Evaluation and Site Assessment (LESA) Handbook**
  - Land Evaluation (LE) part of LESA
    - **Red Tart Cherry Site Inventory for Grand Traverse County, Michigan** (Unique Farmland Designations)
- Site Assessment (SA) part of LESA
  - Other References
    - Glossaries of Soil-Related Terms