

# 2023 NCSS National Conference Posters

## Soil Science Session

[The Rationale Behind Digital Soil Mapping \(DSM\): A Case for Raster Soil Survey](#). Brianna Wegner, MLRA Soil Survey Office, Fargo, ND

[Soils2026: Digital Soil Mapping for Class 5 Products](#). Suzann Kienast-Brown, USDA-NRCS

[South Central Region – Past, Present, and Future Vision](#). J. Josiah Parsley, USDA-NRCS-SPSD-South Central Region

[Numerical Classification of Soil Profiles](#). Dylan Beaudette, USDA-NRCS Soil and Plant Science Division

[Mark Twain National Forest: Soil Survey Built on Collaboration](#). John Hammerly, USDA-NRCS

[Northeast Soil Survey Region Activities](#). Luis A. Hernandez; NRCS-SPSD-NE Soil Survey Region

[Origin and Distribution of Silty Deposits in the Southern Part of the Western Lowlands of Arkansas](#). Edgar Mersiovsky, USDA-NRCS-SPSD

[Exploring the Influences of Soil Survey Attributes on the Occurrence of Landslides in Puerto Rico Using a Multivariate Approach](#). Edwin O. Irizarry Brugman, USDA Natural Resources Conservation Service, 3-HAM – Soil Survey Office, Northeast Region, Soil and Plant Science Division

[Analysis of Dynamic Soil Properties of Terrace Soils in the South Canadian River Valley](#). Tyson Morley, USDA-NRCS, South Central Region, Soil and Plant Science Division

[Digital Soil Mapping to Complete the Pine County, Minnesota Initial Soil Survey and Reconcile Surrounding Soil Survey Areas](#). Betsy M. Schug, USDA-NRCS-SPSD

[Updating Soil Surveys on Surface-Mined Landscapes](#). Daniel J. Benyei; USDA-NRCS SPSPD; Marietta, OH

[Mine Soils in the Eastern Allegheny Plateau and Mountains MLRA 127](#). Ann Tan, USDA- NRCS

[Marcellus Formation and Needmore Shale, Undivided Characterization Sampling](#). Chris Seitz, USDA-NRCS

[Mineralogical Trends from a Milaca Pedon in Thin Section: An Analysis of Superior Lobe Till](#). Emily Jackson, North Dakota State University

[Distributions and Mineralogy of Manganese Oxides in Soils of the Mid-Atlantic Region, USA](#). Jocelyn L. Wardrup, University of Maryland, College Park, Maryland, USA.

[Clay Plaster: A Modern Assessment of an Ancient Practice](#). Meghan Krueger, USDA-NRCS, Soil and Plant Sciences Division, Soil Services Information Branch

[Geospatial Analysis and Assessment of Soil Lead Contamination in Lafayette, LA](#). Holly L. Heafner, Delta Urban Soils Laboratory, School of Geosciences, University of Louisiana at Lafayette

[Assessing soil change across contrasting spatio-temporal scales representing Ohio physiographic regions using DRIFTS](#). Thomas Doohan, Ohio State University

[Examining Patterns in Soil Form and Function](#). Dylan Beaudette, USDA-NRCS

[Dynamic Soil Properties in National Forests of the Great Lakes Region](#). Dan Wing, USDA Natural Resources Conservation Service – North Central Region SPSD

[Mapping Infiltration in an Urbanizing Mixed-Use Appalachian Watershed with Static and Dynamic Environmental Covariates](#). Jim Thompson, Division of Plant and Soil Sciences, West Virginia University

[Topographic Wetness Index as a Proxy for Soil Moisture In a Site Survey Application](#). H. Edwin Winzeler, USDA ARS, Booneville, AR

[Floating bog soils have limited acreage but great diversity across the globe](#). Barret M. Wessel, Department of Plant, Soil and Microbial Sciences, Michigan State University, East Lansing, MI

[Problematic Hydric Soils in Idaho](#). Shanna Bernal-Fields, USDA-NRCS

[Coastal Zone Soil Survey: Long Island Sound](#). Donald Parizek, USDA-NRCS-SPSD, Tolland, CT

[Utilizing Mn and Fe-coated IRIS Films in Restored Wetlands](#). Grace M. Bodine, Univ. of Maryland, College Park, MD, USA

[The Dynamic Soil Properties for Soil Health Phase 1 and 2 Dataset](#). Ekundayo Adeleke, USDA-NRCS-SPSD-National Soil Survey Center

[Standardizing and Expanding Soil Enzyme Assay Methodology as a Dynamic Soil Property for Soil Health Assessment](#). Chammi Attanayake, Department of Crop Sciences, University of Illinois Urbana-Champaign, IL

[Landscape-scale modeling of soil organic carbon dynamics \(1984-2018\) in a coastal agricultural region in British Columbia, Canada](#). Siddhartho S. Paul, Department of Agronomy, Purdue University, West Lafayette, IN, USA

[Using a Soil Survey Approach to Quantify and Understand the Fate of Blue Carbon: A Case Study of the Albemarle-Pamlico Estuary, North Carolina](#). A. Reuben Wilson, USDA-NRCS-SPSD, Raleigh, NC

[Identifying and evaluating sources of uncertainty for Soil Organic Carbon stock estimates](#). Zamir Libohova, USDA-ARS, Dale Bumpers Small Farms Research Center, Booneville, Arkansas

[Major Pedo-geomorphic Factors Affecting Blue Carbon Storage in Tidal Marsh Systems](#). Marissa A. Dellinger, Dept. of Crop and Soil Science, North Carolina State University

## Climate Session

[Western States USDA Climate Hubs](#). Cory Christine Owens, USDA-NRCS, Oregon

[Using NASA Earth Observations to Identify Spatial and Seasonal Trends of Harmful Algal Events in Lake Champlain](#). Zachary Warning, Soil Scientist, USDA-NRCS, Belmont, NY

[An Evaluation of Select Dynamic Soil Properties in a Semi-arid Region in North Dakota](#). Samson-Liebig, S.E., USDA-NRCS-ND

[Soil and Plant Survey Division Soil Sampling for Mesonet in the Upper Missouri River Basin](#). John Warner, NRCS-SPSD-NCR

[A Holistic Understanding of Andisol Soil Organic Matter Across an Environmental Gradient and its Role in Volcanic Island Resilience](#). Tanner B. Beckstrom, Department of Natural Resources and Environmental Management, University of Hawai'i at Mānoa, Honolulu, HI

[Carbon Storage in Mid-Atlantic Tidal Marshes](#). Martin Rabenhorst, Univ. of Maryland, Dept. Environmental Sci. and Technology

[Distribution of Blue Carbon in Tidal Marsh Soils in Southern New England](#). Mark H. Stolt, Department of Natural Resources Science, University of Rhode Island

[Installing and Maintaining Soil Moisture and Temperature Sensors in the Fernow Experimental Forest](#). Ann Tan, USDA-NRCS

[Land Use Influence on Soil Water Dynamics in a Semi-arid North Dakota Soil](#). Luciano, R., USDA NRCS-FL

[A framework for assessing soil properties and function under varying hydroclimatic conditions and agricultural management practices](#). Amanda Pennino, USDA-NRCS-SPSD-NSSC

## Ecology and Agronomy Session

[Northwest Soil Survey Region – Soil and Ecological Sciences](#). Eva Muller, USDA-NRCS-SPSD Northwest Region

[Using Inherent Soil and Climate Properties to Rate Reclamation Suitability of North Dakota Soils](#). Bott, W.D., USDA-Natural Resources Conservation Service, Bismarck, North Dakota USA

[The Barnes series of North Dakota; micromorphologic contrasts between cropped and reference state pedons](#). David Hopkins, Department of Soil Science, School of Natural Resource Sciences, NDSU, Fargo, ND

[Carbon Dynamics in Three Land Management Systems in The Northern Great Plains](#). Maria Batool, North Dakota State University, Department of Soil Science, Fargo, ND, USA

[Soil color and organic carbon relationships in Nebraska](#). Judith Turk, School of Natural Resources, University of Nebraska-Lincoln

[Ecological sites of glacier national park – a story map](#). Stephanie Shoemaker, USDA-NRCS

[Soils of Upland Wooded Green Ash Draw Ecological Sites in MLRA 58C](#). Krista Bryan, USDA-NRCS-SPSD-Dickinson, ND

[Soil Survey Forest Productivity Data in Maine: A New Method For Improvement?](#) Nicholas Butler, USDA-NRCS -Maine

[Utility of canopy height models to show variability of site index within stands](#). Greg J. Schmidt, USDA-NRCS-SPSD-Grand Rapids, MI

[Developing quantitative cropland state-and-transition models using Bayesian network analysis](#). Jonathan Maynard, USDANRCS National Soil Survey Center

[From science to applications: Microbiome as a bioindicator for management practices: Global demonstration of microbiome properties as a bioindicator linked to differential management practices](#). Alberto Acedo

## Technology Session

[An automated, web-based soil property and soil health estimation tool using mid-infrared \(MIR\) spectroscopy and machine learning.](#) Yakun Zhang, University of Wisconsin-Madison, Department of Soil Science, Madison, WI

[Determining Dynamic Soil Position Spatial Variability using Digital Soil Mapping.](#) Sage Reuter, South Dakota State University

[Closed Depression Project and Digital Soil Model Creation.](#) Mackenzie Ries, USDA-NRCS-SPSD, MLRA 53B SSO, Bismarck, ND

[Developing Deep Learning Framework for Optimal Selection of Soil Sampling Sites.](#) Sravanthi Bachina, South Dakota State University, Brookings, SD

[Survey123 as a tool for rapid, location specific, and relatable ecological site data collection and management.](#) Grover, Henry S., US Forest Service Region 3 TEUI

[The Geospatial Data Act of 2018 and its Implications for the Soil and Plant Science Division \(SPSD\) and National Cooperative Soil Survey \(NCSS\).](#) Stephen Roecker, USDA-NRCS

[We're Listening: NCSS Communications and Outreach – What's New and Where Do We Go From Here?](#) Paul Reich, USDA-NRCS

[Putting the "C" in NCSS: Leveraging Interagency Partnerships for Multi-Purpose Data Generation.](#) Sharon Perrone, USDA-NRCS

[Can a visualization-based soil description form improve student recall of important soil properties and interpretations? Preliminary results.](#) Jaclyn C. Fiola

[Soil and Plant Science Division Training Team.](#) Meredith Albers, USDA-NRCS-SPSD

[NRCS-SPSD Safety Focus Team: Ensuring a Safe and Comfortable Working Environment for All.](#) Wendy Noll, USDA-NRCS-SPSD Safety Focus Team

["These are the skills we need in our major": Bringing digital soil mapping skills to non-soils undergraduate students through urban soil and ecosystem restoration.](#) Margaret Cullinan, The Ohio State University

[Converting U.S. Forest Service Terrestrial Ecological Unit Inventory Mapping to NRCS SSURGO Mapping.](#) Mike Rokus, USDA - NRCS, Duluth, MN

[The Use of Ground Penetrating Radar \(GPR\) in Technical Soil Services.](#) Alan Moore, USDA-NRCS-SPSD, Huntington, WV

[Following the Concept of the Most Important Line to Aggregate Digital Soil Maps to Scale-Dependent Vector Maps.](#) Kyle Thomson - USDA-NRCS-SPSD, Bismarck, ND

[Toward a National Assessment of Soil Biodiversity: A Framework for Biological Data Collection.](#) Tiffany Carter, USDA-NRCS-SPSD

[Partnerships, Projects, and Progress.](#) Patty Burns, USDA NRCS-SPSD, MN

[Use of Image Analysis to Update Urban Soil Survey in Kokomo, Indiana.](#) Sarah Smith, USDA-NRCS, IN

[Uses and limitations of portable XRF in urban gardens and soil surveying.](#) Eriell Jenkins, Delta Urban Soils Laboratory, Lafayette, LA

[Use of a Large Mid-Infrared \(MIR\) Soil Spectral Library for Dynamic and Hydrological Soil Property Estimations in Mississippi \(MS\) and Texas \(TX\).](#) Yasas Gamagedara, Department of Agricultural & Biological Engineering, Mississippi State University, Starkville, MS

[Climate-Smart Agriculture: Sensor-Based Irrigation Technology for Sustainable Hemp Cultivation.](#) J.Q. McComb, Southern University Ag Center, Baton Rouge, LA 70813; L.A. Hodges Southern University Ag Center, Baton Rouge, LA

[Impact of Viticulture Production Upon USDA-Major Land Resource Area \(MRLA\) 131A Southern Mississippi River Alluvial Soil.](#) L.A. Hodges, Southern University Ag Center, Baton Rouge, LA

[Lake Champlain Basin Initiative – Vergennes Catena.](#) Christopher Mann

[Improving soil survey deliverables with the integration of state-and-transition models: current restrictions and ideas for the future.](#) Jessica R. Lene-Ashley

[Federal Lands Advisory Group \(FLAG\): Building Bridges for Achieving a Dynamic Future.](#) Tiffany Allen, NRCS-SPSD