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National Cooperative Soil Survey

2023 NCSS Conference
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Get ready for an exciting poster road trip at the
2023 NCSS Conference!

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(i) Soil Science, (ii) Climate, (iii) Ecology/Agronomy, and
(iv) Technology. Engage with passionate researchers and visit the
corresponding poster areas to expand your knowledge about soil
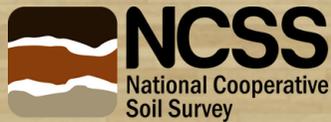science and related fields:
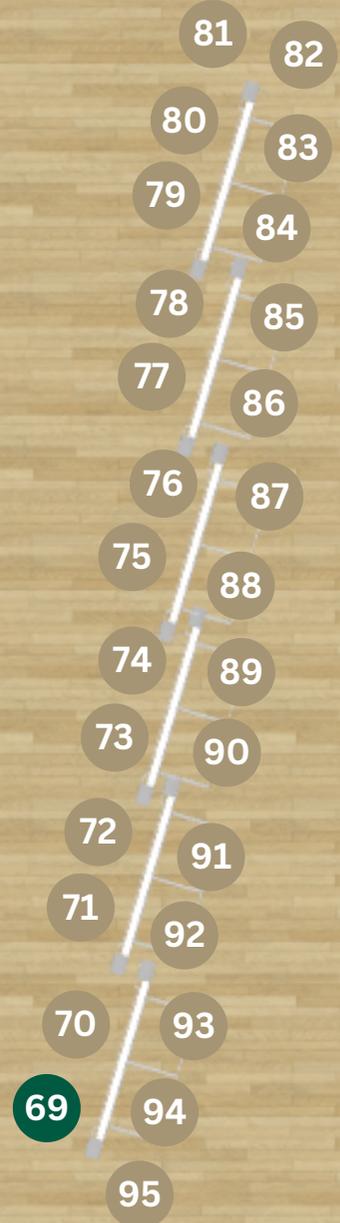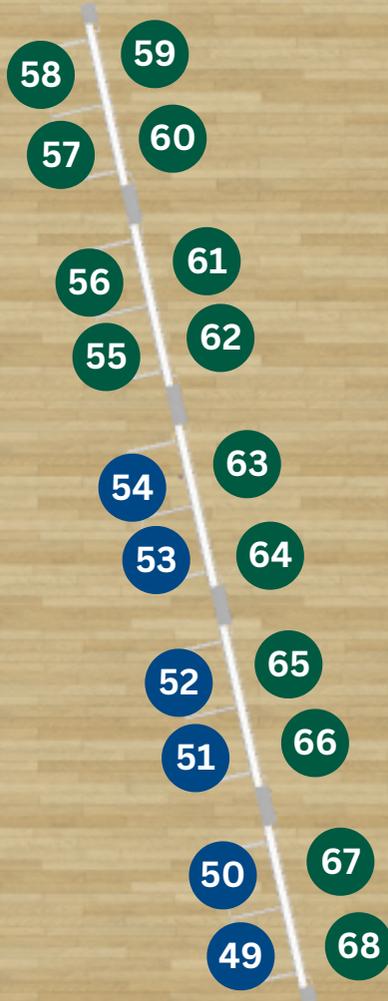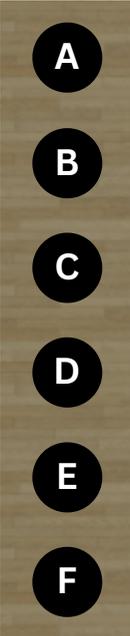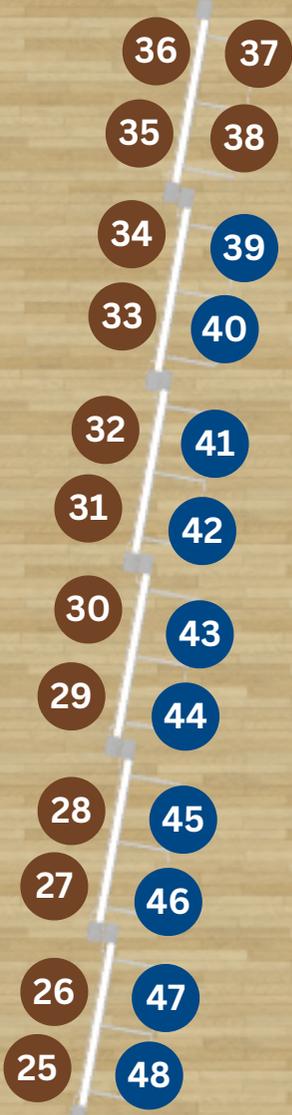
🔴 **Soil Sciences** 🟢 **Ecology/Agronomy** ⚫ **Poster for**
🔵 **Climate** 🟤 **Technology** **Presentation**

Prepare for an unforgettable research poster road trip adventure
that delves into the forefront of soil survey and conservation!

Oral Poster Session

(Poster A - Poster F)

A **Sensor-informed soil water, nitrate, and greenhouse gas monitoring and management for climate-smart agriculture.** *Jingyi Huang, University of Wisconsin-Madison*

B **Impacts of wildfire on the ecologic, hydrologic and geomorphic resiliency of forest soils in the Southwestern US.** *Craig Rasmussen, Department of Environmental Science, The University of Arizona*

C **State and transition models in a time of change: toolsets for integrated carbon management.** *J.A. Thompson, West Virginia University*

D **Legacy data rescue for retrospective soil survey and change detection in topsoil organic carbon stocks of the Corn belt, USA.** *Meyer Bohn, Geospatial Laboratory for Soil Informatics, Iowa State University Department of Agronomy*

E **Visualizing Soil Landscapes by Mining Soil Survey Taxonomic Data.** *Darrell G. Schulze, Agronomy Department, Purdue University, West Lafayette, IN*

F **Soil landscapes of the United States (SOLUS): A 21st century raster soil survey inventory.** *Suzann Kienast-Brown, USDA-NRCS, Bozeman, MT*

Soil Science Session

(Poster 1 – Poster 38)

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38. **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

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39. **An Introduction to USDA Climate Hubs and Opportunities for Collaboration.** *Cory Christine Owens, USDA-NRCS, Oregon*

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Ecology & Agronomy Session

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69. **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

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70. **Developing an automated, web-based soil property estimation tool using mid-infrared (MIR) spectroscopy and machine learning**. *Yakun Zhang, University of Wisconsin-Madison, Department of Soil Science, Madison, WI*

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72. **Digital Soil Model Creation for Closed Depressions in North Dakota.** *Mackenzie Ries, USDA-NRCS-SPSD, MLRA 53B SSO, Bismarck, ND*

73. **Deep-Learning Framework for Optimal Selection of Soil Sampling Sites.** *Sravanthi Bachina, South Dakota State University, Brookings, SD*

74. **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*

75. **The National Geospatial Data Act and its Implications for the SPSD and NCSS.** *Stephen Roecker, USDA-NRCS*

76. **We're Listening: NCSS Communications and Outreach – What's New and Where do we go From Here?** *Paul Reich, USDA-NRCS*

77. **Putting the "C" in NCSS: Leveraging Interagency Partnerships for Multi-Purpose Data Generation.** *Sharon Perrone, USDA-NRCS*

78. **Can a visualization-based soil description form improve student recall of important soil properties and interpretations? Preliminary results.** *Jaclyn C. Fiola*

79. **Training with the NRCS Soil and Plant Science Division.** *Meredith Albers, USDA-NRCS-SPSD*

80. **NRCS-SPSD Safety Focus Team: Ensuring a Safe and Comfortable Working Environment for All.** *Wendy Noll, USDA-NRCS-SPSD Safety Focus Team*

81. **"These are the skills we need in our major": bringing digital soil mapping skills to non-soils undergraduate environmental science students through urban soil and ecosystem restoration.** *Margaret Borders, The Ohio State University*

82. **Converting USFS TEUI mapping to NRCS SSURGO mapping.** *Mike Rokus, USDA - NRCS, Duluth, MN*

83. **The use of ground penetrating radar in technical soil services and soil survey updates.** *Alan Moore, USDA-NRCS SPSD, Huntington, WV*

84. **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*

85. **Toward a National Assessment of Soil Biodiversity: A framework for biological data collection.** *Tiffany Carter, USDA-NRCS-SPSD*

86. **Partnerships, Projects, and Progress.** *Patty Burns, USDA NRCS-SPSD, MN*

87. **Use of Image Analysis to Update Urban Soil Survey in Kokomo, Indiana.** *Sarah Smith, USDA-NRCS, IN*

88. **Review of the accuracy and precision of pXRF analyzers in relation to heavy metal contamination in heterogeneous urban soil.** *Eriell Jenkins, Delta Urban Soils Laboratory, Lafayette, LA*

89. **Portable X-ray Fluorescence Spectrometer Application for Assessing Salinity and Sodicity in Glacial Northern Great Plains Soils.** *Adam Devlin, South Dakota State University*

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90. **Mid-infrared Spectroscopy for Estimating Hydrological Soil Properties in Mississippi and Texas.** *Yasas Gamagedara, Department of Agricultural & Biological Engineering, Mississippi State University, Starkville, MS*

91. **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*

92. **Impact of Viticulture Production Upon USDA-MRLA 131A Southern Mississippi River Alluvial Soil.** *L.A. Hodges, Southern University Ag Center, Baton Rouge, LA*

93. **Lake Champlain Basin Initiative – Vergennes Catena.** *Christopher Mann*

94. **Improving soil survey deliverables with the integration of state-and-transition models: current restrictions and ideas for the future**. *Jessica R. Lene-Ashley*

95. **A Call to FLAG: Crosswalk to a Dynamic Future.** *Tiffany Allen, NRCS-SPSD*

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71. **Determining dynamic soil position spatial variability using digital soil mapping.** *Sage Reuter, South Dakota State University*
72. **Digital Soil Model Creation for Closed Depressions in North Dakota.** *Mackenzie Ries, USDA-NRCS-SPSD, MLRA 53B SSO, Bismarck, ND*
73. **Deep-Learning Framework for Optimal Selection of Soil Sampling Sites.** *Sravanthi Bachina, South Dakota State University, Brookings, SD*
74. **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*
75. **The National Geospatial Data Act and its Implications for the SPSD and NCSS.** *Stephen Roecker, USDA-NRCS*
76. **We're Listening: NCSS Communications and Outreach – What's New and Where do we go From Here?** *Paul Reich, USDA-NRCS*
77. **Putting the "C" in NCSS: Leveraging Interagency Partnerships for Multi-Purpose Data Generation.** *Sharon Perrone, USDA-NRCS*
78. **Can a visualization-based soil description form improve student recall of important soil properties and interpretations? Preliminary results.** *Jaclyn C. Fiola*
79. **Training with the NRCS Soil and Plant Science Division.** *Meredith Albers, USDA-NRCS-SPSD*
80. **NRCS-SPSD Safety Focus Team: Ensuring a Safe and Comfortable Working Environment for All.** *Wendy Noll, USDA-NRCS-SPSD Safety Focus Team*
81. **"These are the skills we need in our major": bringing digital soil mapping skills to non-soils undergraduate environmental science students through urban soil and ecosystem restoration.** *Margaret Borders, The Ohio State University*
82. **Converting USFS TEUI mapping to NRCS SSURGO mapping.** *Mike Rokus, USDA - NRCS, Duluth, MN*
83. **The use of ground penetrating radar in technical soil services and soil survey updates.** *Alan Moore, USDA-NRCS SPSD, Huntington, WV*
84. **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*
85. **Toward a National Assessment of Soil Biodiversity: A framework for biological data collection.** *Tiffany Carter, USDA-NRCS-SPSD*
86. **Partnerships, Projects, and Progress.** *Patty Burns, USDA NRCS-SPSD, MN*
87. **Use of Image Analysis to Update Urban Soil Survey in Kokomo, Indiana.** *Sarah Smith, USDA-NRCS, IN*
88. **Review of the accuracy and precision of pXRF analyzers in relation to heavy metal contamination in heterogeneous urban soil.** *Eriell Jenkins, Delta Urban Soils Laboratory, Lafayette, LA*
89. **Portable X-ray Fluorescence Spectrometer Application for Assessing Salinity and Sodicity in Glacial Northern Great Plains Soils.** *Adam Devlin, South Dakota State University*
90. **Mid-infrared Spectroscopy for Estimating Hydrological Soil Properties in Mississippi and Texas.** *Yasas Gamagedara, Department of Agricultural & Biological Engineering, Mississippi State University, Starkville, MS*
91. **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*
92. **Impact of Viticulture Production Upon USDA-MRLA 131A Southern Mississippi River Alluvial Soil.** *L.A. Hodges, Southern University Ag Center, Baton Rouge, LA*
93. **Lake Champlain Basin Initiative – Vergennes Catena.** *Christopher Mann*
94. **Improving soil survey deliverables with the integration of state-and-transition models: current restrictions and ideas for the future.** *Jessica R. Lene-Ashley*
95. **A Call to FLAG: Crosswalk to a Dynamic Future.** *Tiffany Allen, NRCS-SPSD*