Soil Science Division Focus Teams

The Soil Science Division has the following as its mandate:

- Inventory the soil and vegetation resources (ecology)
- Make soil maps
- Analyze soil survey data
- Provide interpretative soil information
- Provide data and information in a form useful to a wide range of customers
- Keep soil survey relevant

In order to be most efficient, we are developing focus teams composed of subject matter experts from within and outside the Division. The geographic diversity of the team members assures dissemination of knowledge, skills, and abilities across the Division. These teams are guided by a steering team and are expected to work within their given charges as well as have a robust interaction with other teams. The result shall be an integrated approach to fulfilling our mandate across all boundaries. Although the teams are predominantly focused inward, several (including Recruitment, Outreach, and NCSS Communications) shall look outside the Division to our partners and clients.

General Team Charges

- Act as liaisons across Division and the National Cooperative Soil Survey (NCSS)
- Provide leadership, guidance, and coordination with their specified area of activity
- Serve as a repository of information in specified area of activity
- Coordinate with other teams to ensure continuity of activities, training, and information exchange
- Coordinate and communicate with appropriate designated program and project leaders
- Supplement and enhance activities of regional and local board of advisors (BOA) and management teams (MGT)
- Provide a national perspective to regions and teams
- Report directly to steering team
- Develop and maintain website(s)

Teams

- Coastal Zone Mapping
- Database
- Digital Soil Mapping
- Ecological Sites
- Initial Mapping
• Leadership and Recruitment
• NCSS Communication
• Outreach
• Soil Biology
• Soil Taxonomy
• Research
• Training
• Urban Soils

Steering Team
• Soil Science Division Director: Dave Lindbo, NRCS, Washington, DC
• National Soil Survey Center Director: Dave Hoover, NRCS, Lincoln, NE
• Regional Directors: Chad Remley, NRCS, Salina, KS; Eva Muller, NRCS, Bozeman, MT
• State Soil Scientists: Cory Owens, NRCS, Portland, OR; Debbie Surabian, NRCS, Tolland, CT; Wade Bott, NRCS, Bismarck, ND
• NCSS Cooperators: Larry Laing, US Forest Service, Washington, DC; Mickey Ransom, Kansas State University, Manhattan, KS; Joey Shaw, Auburn University, Auburn, AL
• National Leader: Mike Robotham, NRCS, Washington, DC
Coastal Zone Mapping Team

Since the 1990s, soil survey mapping and data collection have been improving the soil survey along the coastal zone from the Mid-Atlantic to New England. This area includes the dunes, marshes, beaches, and shallow sub-tidal soils in coastal lagoons, bays, and inlets. Coastal zone soil surveys (CZSS) are now available for Rhode Island, Connecticut, and New Jersey. The NCSS is expanding this work throughout the coastal United States. Soil mapping in these areas has proven useful for restoration efforts, inventory of current conditions, and predictive interpretations. The team consists of individuals with expertise in mapping subaqueous soils, boat operation, logistics, and database population as well as GIS utilization and data needs.

Members
- Rob Tunstead, MLRA Soil Survey Office Leader, NRCS, Hammonton NJ
- Greg Taylor, Senior Regional Soil Scientist, NRCS, Raleigh NC
- Jim Turenne, Assistant State Soil Scientist, NRCS, Warwick RI
- Debbie Surabian, State Soil Scientist, NRCS, Tolland CT
- Maggie Payne, Resource Soil Scientist, NRCS, West Wareham MA
- Phil Schoeneberger, NSSC Research Soil Scientist, NRCS, Lincoln NE
- Donald Parizek, MLRA Soil Survey Office Leader, NRCS, Tolland CT
- Jon Wiedenfeld, MLRA Soil Survey Office Leader, NRCS, Rosenberg TX

Charges
- Coordinate coastal zone mapping activities (e.g., procedures, use of equipment, safety) across the Division
- Identify training needs and make recommendations for needed trainings/workshops
- Identify needs to update standards and propose solutions
- Identify needs to update Soil Taxonomy and propose solutions
- Assemble existing data
- Identify data gaps and needs
- Work with BOA and MGT to provide guidance on priority areas
- Identify coastal zone research needs
- Promote coastal zone soil survey through outreach and educational activities
- Broaden the Soil Survey Division partnership in the coastal zone area
- Encourage the development of coastal zone ESDs
- Assist States in promoting coastal zone soil surveys
- Communicate the importance of coastal zone soil surveys to NRCS, cooperators, partners, and the public

Potential Sub-Teams
- Procedures (to write guides, such as for how to pull vibracores, how to properly and safely operate a boat, etc.)
- Boat Safety and Certification
- Detail Coordination
- GIS – Topobathy Data

**Short-Term Goals**
- Complete list of existing and short-term future projects
- Complete the design and purchase of a boat
- Continue to create and update interpretations as needed
- Populate website for outreach

**Current and Proposed Soil Surveys**
- Jamaica Bay Subaqueous Soil Survey
- Peconic Bay Subaqueous Soil Survey
- Greenwich Harbor, Smith Cove and Indian Harbor Subaqueous Soil Survey
- Great Bay Subaqueous Soil Survey
- Puerto Rico CZSS Project in Jobos Bay
• MLRA 149A, 153D – Hammonton, NJ Soil Survey Office, Coastal Barrier 4 County Soil Survey Update
• MLRA 153D – Subaqueous Soil Survey Data Commit DE & MD
• MLRA 149A – Shrewsbury River Subaqueous Soil Survey
• MLRA 153D – Great Bay Subaqueous Soil Survey
• MLRA 153D – Lakes Bay Subaqueous Soil Survey
• MLRA 153B – Richmond, VA Soil Survey Office, Albermarle-Pamlico Sound subaqueous Soil Survey
• MLRA 149A – Hammonton, NJ Soil Survey Office, Rhode River Subaqueous Soil Survey
• MLRA 149A – Hammonton, NJ Soil Survey Office, Navesink River Subaqueous Soil Survey
• MLRA 153D – Hammonton, NJ Soil Survey Office, Little Assawoman Bay Subaqueous Soil Survey
• MLRA 153D – Hammonton, NJ Soil Survey Office, Assawoman and Isle of Wight Bays Subaqueous Soil Survey
• MLRA 153D – Hammonton, NJ Soil Survey Office, Newport Bay Subaqueous Soil Survey
• MLRA 144A – Coastal Zone Soil Survey – Great Bay, NH
• MLRA 144A, 145 – Coastal Zone Soil Survey: Water_CT600
• MLRA 144A, 149B – Populating Bulk Density in Wassents and Wassists
• MLRA 149B – Resistant Minerals
• MLRA 144A, 149B – Spatial Distribution and Inventory of Tidal Marsh Ecological Sites and Soils
• MLRA 144A, 145, 149B – Costal Zone Soil Survey: Surge Inundation
• MLRA 144A – Coastal Zone Soil Survey - Phase VI, Niantic River, Niantic Bay, and Jordan Cove, CT
• MLRA 144A, 145 – Beaches Phase Mapping
• MLRA 144A, 149B – Dunelands and barriers spatial modeling
• MLRA 144A – Subaqueous Soil Map Unit Update
• MLRA 149B – Beaches Phase Mapping
• MLRA 144A – Phase mapunits within marine limit with 'marine influence'
• MLRA 144A – Coastal Soil Halinity Classes - Phase II
• MLRA 144A – Coastal Zone Soil Survey - Phase VII,Nelson, Gardiner, Nonquit and Nannaquaket Ponds

Projects under Discussion
• Cooperative project with Albemarle – Pamlico National Estuary Program (APNEP) to map a pilot area of Pamlico Sound in NC
• Work with University of Georgia for pilot project along the GA coast
• Potential pilot project working with Coastal Carolina College near Murrells Inlet, SC

Other Activities
• Creating and updating interpretations
• Weekly meetings
• Story Map for outreach
• Attending conferences and meetings, from New Orleans to Rhode Island and from Puerto Rico to New York, in order to build partnerships and promote CZSS
Soil Survey Database Team

The Soil Survey Database Team is comprised of a diverse group of Soil Science Division (SSD), State Office, and National Technology Support Center staff. The members of the team bring a wide range of database skills and perspectives that will assist with decision-making and create outcomes that better serve the database needs of the SSD. While the National Soils Information System database (NASIS) will be a major focus of the team, we will also be discussing the full suite of interconnected SSD corporate databases and associated software. These include, but are not limited to, Pedon PC, Laboratory Information Management System (LIMS), National Soil Survey Center (NSSC) Lab Data Mart, Soil Data Mart, Web Soil Survey, Official Series Descriptions (OSDs), R, Ecological Site Information System (ESIS), and ArcGIS.

Members
- Kyle Stephens (Team Chair), Soil Data Quality Specialist, NRCS, Portland OR
- Steve Campbell, West National Technology Support Center Soil Scientist, NRCS, Portland OR
- Jason Nemecek, State Soil Scientist, NRCS, Madison WI
- Jeff Thomas, Senior Regional Soil Scientist, NRCS, Morgantown WV
- Kevin Godsey, MLRA Soil Scientist, NRCS, Springfield MO
- David Zimmerman, Soil Data Quality Specialist, NRCS, Amherst MA
- Jay Skovlin, MLRA Soil Survey Office Leader, NRCS, Bozeman MT
- Wayne Gabriel, Senior Regional Soil Scientist, NRCS, Temple TX
- Adolfo Diaz, Regional GIS Specialist, NRCS, Madison WI
- Stephen Roecker, Soil Data Quality Specialist/ GIS Specialist, NRCS, Indianapolis IN

Charges
- Coordinate database activities across the SSD
- Identify database-related training needs
- Identify new database-related software, tools, and procedures
- Review and organize new database tools and ideas
- Assist in upgrading NASIS and related databases

Potential Sub-Teams
- Database Training Needs
- Soil Data Access
- R
- OSD Database
- NSSC Lab Data Mart
- NASIS - Incorporating Spatial Data
- NASIS - Forms
- NASIS - Data Model Updates
- Web Soil Survey
**Short-Term Goals**
- Finalize list of team members
- Establish SharePoint site and website
- Hold first of regularly scheduled monthly meetings and begin setting priorities and documenting action items
- Develop process for receiving and reviewing proposed NASIS data model changes

**Highlights**
- The team is nearly finalized and will begin holding monthly meetings in early April.
Digital Soil Mapping Team

The motivation of this team is to produce the next generation of soil information products that will provide a flexible raster-based product for interpretation of soil physical, chemical, and biological properties across the US. The focus will be fundamental pedology, i.e., understanding the soil resource as a natural body. The primary difference will be inclusion of the latest technological resources—hardware, spatial data, quantitative methods—adaptively applied throughout the process. Consequently, we aim to emphasize that:

- This effort is about soil knowledge. The resulting data and information will be a product of our knowledge of the soil resource.
- This effort is focused on systems thinking and the resulting product line.
- This effort is focused on the user of soils data.

Members (Team Leads)
- Michael Whited, Soil Survey Regional Director, NRCS, St. Paul MN
- Tom D’Avello, NSSC GIS Specialist, NRCS, Morgantown WV
- Suzann Kienast-Brown, Regional GIS Specialist, NRCS, Bozeman MT
- Jim Thompson, Professor, West Virginia University, Morgantown WV

Charges
- Coordinate DSM activities across the Division
- Identify training needs
- Identify needs to update standards and propose solutions
- Initiate annual field weeks to investigate soil-landscape relationships in selected DSM project areas
- Assemble existing data
- Identify gaps
- Work with BOA and MGT to provide guidance on priority areas
- Produce raster-based soil data and information products

Sub-Teams
- Knowledgebase (to assemble and develop spatial data representing tacit knowledge to assist multiple projects)
- Development (to develop models and resulting predictive soil maps using seamless raster data for entire USA to be used for mapping efforts)
- Validation, or Quality Assurance (to perform QA/QC of model performance and map products, including accuracy assessment)
- Interpretations (to develop interpretation engine, educational resources, and outreach to users for utilization of raster-format soil data)
- Standards and Delivery (to develop requirements for utilization and delivery of raster class and property data)
- Review (for independent review of process and resulting products)

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**DSM Team structure**

**Short-Term Goals**
- Develop one-page fact sheet on DSM and/or the use of raster data for mapping
- Establish sub-team leaders and solicit volunteers to become members of sub-teams
- Determine delivery mechanism
- Deliver GlobalSoilMap products as proof of concept
- Develop means to accommodate storage and sharing of large working datasets

**Current Activities**
- Soil Survey of the Boundary Waters Canoe Area Wilderness
- Initiated discussions with Raster Standards lead regarding development of raster standards
- Continuing the DSM training, e.g., recent ArcSIE in St. Paul, MN
Ecological Sites Team

Ecological Sites (and their precursors) have been a part of resource management and agency operations for more than half a century. Recent efforts by agency and government leadership to unify concepts and applications and strengthen links to operations and programs has created many opportunities and uncertainties. Managing the uncertainties and taking advantage of the opportunities requires both tactical and strategic coordination. Because of the interagency history and long-standing university involvement, there are several working groups addressing various aspects of Ecological Site development, implementation, and testing. These workgroups are:

- National Ecological Site Core Team (NRCS national discipline leaders coordinating handbooks, protocols, and procedures; subgroups include forestry, cropland, conservation planning, training, soil health, riparian/wetland, and software)
- Federal Lands Advisory Group (cross-departmental technical leads coordinating soil survey and ecological site application on all Federal lands)
- Interagency Ecological Site Implementation Team (FS, BLM, and NRCS discipline leaders coordinating application of the interagency MOU and Rangeland Manual)
- National Ecological Site Team (collaboration of ARS, NMSU, and NRCS staff based at the ARS Jornada Experimental Range)

There has not been a concerted effort to bring a line-leadership strategic perspective to the development and implementation of Ecological Site information and products. This focus team will play an important role in increasing the value of Ecological Site information to the agency and beyond.

Members

- Joel Brown (Team Lead), NSSC, National Ecological Site Team Leader, NRCS, Las Cruces NM
- Ron Alvarado, State Conservationist, NRCS, Portland OR (invited)
- Craig Derickson, State Conservationist, NRCS, Lincoln NE
- Terrell Erickson, Ecological Sciences Division Director, NRCS, Washington DC
- Jane Hardesty, State Conservationist, NRCS, Indianapolis IN (invited)
- Luis Hernandez, Soil Survey Regional Director, NRCS, Amherst MA
- Cathy McGuire, Soil Survey Regional Director, NRCS, Phoenix AZ
- Chad Remley, Soil Survey Regional Director, NRCS, Salina KS

Charges

- Provide leadership and guidance for the integration of Ecological Site information into NRCS programs and policies
- Identify emerging opportunities for Ecological Site applications with Federal and State partners
- Recommend new Ecological Site products to support conservation planning, implementation, and assessment
• Develop strategic outreach to increase the utility and impact of Ecological Site information and products

THE ECOLOGICAL SITE UNIVERSE
Initial Mapping Team

The Initial Mapping Team’s overall goal is to develop a plan to deliver soil and ecological inventory and interpretations to users and managers in the U.S. who currently do not have a NCSS-sanctioned soil and ecological inventory. The planning phase will include evaluating existing information, determining needs for all areas, and achieving a consensus on methods to complete the remaining inventory. The team is currently comprised of staff from various land managing agencies, the University of Wyoming, NRCS SSD, and NRCS State staff who represent the private landowners. One of the short-term goals for the Federal land managers will be to create sub-teams to gather existing inventory data to be evaluated. Concurrently, the Initial Mapping Team will be working with the other focus teams to coordinate potential strategies for delivering soil and ecological information to users. It will also be exploring possible new standards for non-traditional products.

Members
- Mike Regan (Team Lead), Soil Survey Regional Director, NRCS, Portland OR
- Jeff Bruggink, Regional Soil Scientist, U.S. Forest Service, Ogden UT
- Cory Cole, State Soil Scientist, NRCS, Palmer AK
- Eric Geisler, Forester, Bureau of Land Management, Anchorage AK
- Dave Kingsbury, Soil Survey Regional Director, NRCS, Morgantown WV
- Parker Martyn, Inventory Coordinator, National Park Service, Anchorage AK
- Josh Rose, Hydrologist, U.S. Fish and Wildlife Service, Fairbanks AK
- Karen Vaughan, Assistant Professor of Pedology, University of Wyoming, Laramie WY
Toby Rodgers, Soil Scientist, NRCS, Mount Vernon WA

**Short-Term Goals**
- Create a map of geographic areas that shows what type of inventory or interpretations are needed. The extent will be all lands that are currently NOTCOM in the SSURGO databases. Using this map and the evaluations, the team will draft a plan of methods and resources needed for each area.
- Develop a system to identify and make accessible all best available base data layers that might assist with GIS analysis. This will be done in conjunction with the Digital Soil Mapping Team.

**Mid-Range Goals**
- Identify staff and resources needed to complete the plan

**Proposed Revision to Charges (under discussion)**
1. Seek out existing data of value to soil and ecological inventory
2. Sort data into digestible format
3. Develop a correlation between users’ needs for unmapped lands and property data necessary to generate interpretations to fit geography of interest
4. Design a way to “view” the data for evaluation purposes
5. Based on evaluation, develop options for consideration by Steering Team
6. Cooperate to develop plan of action to deliver best available information prior to FY2027
7. Communicate with Steering Team as well as other partner focus teams
8. Implement plan
Leadership Development and Recruitment Team

This team will engage with the agency on two agency-established fronts: (1) Leadership Development and (2) Diversity and Recruitment. The Leadership Development component will design an SSD-centered framework as a companion to the current NRCS Leadership Development Framework. The SSD focus team will be responsible for crafting strategies, guidelines, and a culture of leadership from the time employees are recruited until the end of their SSD service. The Diversity and Recruitment component will work hand-in-hand with the NRCS Branch to develop strategies, guidelines, and a culture of diversity as well as recruitment geared toward the Division’s Vision and Succession plan. Today, organizations are in various states of change and it is necessary to develop a culture of leaders that can direct that change and a diverse staff to bring new and relevant perspectives.

Members
- Leslie Glover, Team Lead, SSD Assistant Program Manager, NRCS, Washington DC
- Kevin Norwood (Leadership; unofficial co-chair), Soil Survey Regional Director, NRCS, Indianapolis IN
- Luis Hernandez (Leadership; unofficial co-chair), Soil Survey Regional Director, NRCS, Amherst MA
- Jason Martin (Leadership), MLRA Soil Survey Leader, NRCS, Salem OR
- Ann Tan (Leadership), MLRA Soil Scientist, NRCS, Tupelo MS
- Dan Perkins (Leadership), MLRA Soil Survey Leader, NRCS, Pinedale WY
- Ryan Dermody (Leadership), MLRA Soil Survey Leader, NRCS, Waverly IA
- Candiss Williams (Leadership), NSSC Research Soil Scientist, NRCS, Lincoln, NE
- Jason Reed (Leadership), Soil Survey Regional Administrative Assistant, NRCS, Portland OR
- Janella Cruz (Diversity), MLRA Soil Scientist, NRCS, Paul Smiths NY
- Jessica Lene-Jobe (Diversity), Senior Regional Soil Scientist, NRCS, Auburn AL
- Maxine Levin (Diversity), National Leader for Soil Interpretations, NRCS, Beltsville MD
- Leander Brown (Diversity), East Technology Support Center Soil Scientist, NRCS, Greensboro NC
- Charles Kome (Diversity), World Soil Resources Soil Scientist, NRCS, Greensboro NC
- Manuel Matos (Diversity), State Soil Scientist, NRCS, San Juan PR
- Ben Hannibal (Diversity), Soil Survey Regional Administrative Assistant, NRCS, Morgantown WV

Charges
- Identify needs and gaps
- Provide framework for ongoing review of leadership
- Identify both internal and external training courses to encourage and enhance leadership development
- Identify recruitment needs and venues
- Coordinate recruitment
Potential Sub-Teams

- Leadership Development
- Diversity and Recruitment

*These subdivisions reflect efforts already being taken by the agency; the team wants to be part of what the agency is doing.*

Short-Term Goals

1. Meet with full Diversity sub-team
2. Develop next steps forward for Leadership Development and Diversity sub-team
3. Coordinate a recruitment activity to MANRRS Conference

Current Activities

- Leadership sub-team has a NEDC-approved protocol that aligns with agency leadership development.
- A commitment from George Washington University to help with Leadership activities has been secured.
- Diversity sub-team has met with the new Diversity and Recruitment Branch Chief to understand the agency vision.
- Diversity sub-team has met with National Civil Rights Committee and Special Emphasis Program Managers (SEPMs) to learn what they do and what role SSD is to play. The sub-team plans to develop a letter for Soil Science and Resource Assessment (SSRA) Deputy Chief on policy and a potential SSRA SEPMs.
- A Diversity sub-team member has visited one 1890 university.
National Cooperative Soil Survey Communications Team

The NCSS Communications Team was established during the NCSS Strategic Plan Workshop in May 2016. It was charged with developing a communication plan for the NCSS and improving the online delivery of information. Since the workshop in May 2016, the team has prepared a communication plan structured around short- and long-term goals. Currently, the team is working to expand the dissemination of NCSS-related news and information through GovDelivery. The team has adopted a logo for the NCSS and is developing a style guide. The newly adopted logo will be revealed at the NCSS National Conference in Boise, Idaho, in June 2017.

Members
- Jennifer Mason (Chair), MLRA Soil Survey Leader, NRCS, Clinton TN
- Meredith Albers, Resource Soil Scientist, NRCS, Salt Lake City UT
- Linda Greene, Public Affairs, NRCS, Lincoln NE
- Paul McDaniel, Department Head and Professor, Plant, Soil and Entomological Sciences, University of Idaho, Moscow ID
- Pam Thomas, SSD Associate Director, Soils Program, NRCS, Washington DC
- Jim Thompson, Professor, West Virginia University, Morgantown, WV

Charges
- Increase the visibility and branding of the NCSS
- Utilize NCSS webpages as an “Online Clearinghouse” for information
- Adopt GovDelivery as the official mailing list repository for the NCSS
- Improve NCSS web content
- Serve as points of contact for issues on NCSS communications

Potential Sub-Teams
- NCSS Strategic Plan
- NCSS By-Laws
- NCSS Committees
- NCSS Conferences

Short-Term Goals
- Collect and review historical and guidance documents on the establishment and operation of the NCSS
- Review the structure of the NCSS webpages hosted by NRCS to determine needed improvements
**Current Activities**

- The team prepared and presented a poster at the 2016 Soil Science Society of America Meeting in Phoenix, AZ. The poster discussed the draft NCSS Strategic Plan as well as the short- and long-term goals of the Communications Team.
- The team hosted a teleconference for the members of the NCSS Strategic Plan Committee in January of 2017 to discuss the Draft NCSS Strategic Plan.
- The Communications Team is developing a style guide for the NCSS logo in preparation for reveal at the NCSS National Conference in Boise, ID.
- The primary contact and Soil Science Division Director, David Lindbo, will be presenting the Strategic Plan at the NCSS National Conference in Boise, ID, to be formally accepted and implemented in the by-laws. A special session will be held for discussion per the by-laws outlined in the “National Soil Survey Handbook.”
  
Outreach Team

Leadership created the Outreach Team to review the current status of efforts to increase public awareness on the importance of understanding soils and the appropriate use of our soils databases and information resources.

Members

- Paul Reich (Co-Chair), World Soil Resources Geographer, NRCS, Beltsville MD
- Susan Southard (Co-Chair), SSD Soil Scientist, NRCS, Davis CA
- Linda Greene (Co-Chair), NSSC Public Affairs, NRCS, Lincoln NE
- Tammy Cheever, NSSC Information Technology Specialist, NRCS, Lincoln NE
- Tammy Umholtz, NSSC Visual Information Specialist, NRCS, Lincoln NE
- Carla Rebernak, MLRA Soil Survey Leader, NRCS, Idaho Falls ID

The Outreach Team is seeking new members and welcomes your ideas.

Charges

- Identify internal and external audiences
- Identify specific needs for audiences
- Identify venues SSD should attend
- Develop newsletters or similar media outreach, beyond Weekly Update
- Work with other teams to establish coherent, consistent, and current webpages
- Develop displays, handouts, fact sheets, etc. for multiple types of venues
- Develop an outreach cadre

Short-Term Goals (within FY17)

- Solicit feedback from online customers
- Encourage visitors at exhibit booths at upcoming events to provide feedback
- Identify priority audiences
- Use feedback to identify other areas for improvement
- Identify needed brochures and displays that will help outreach efforts

Medium-Term Goals (1 to 3 years)

- Develop new exhibits
- Develop new brochures, PowerPoint presentations, YouTube videos, and audience-specific webpages
- Increase social media presence using Facebook, Twitter, YouTube, blogs, etc.
- Consider adding outreach to employee Individual Performance Plans to encourage wider participation in outreach activities.
Long-Term Goals (3 to 5 years)

- Create an infrastructure that enables Soils outreach to a larger and broader audience by utilizing more local staff to attend a greater number of conferences under limited travel budgets
- Enable a more coordinated targeting of our message to underserved groups
- Track “measurable goals” to ensure continuous improvement of outreach activities

A copy of the initial full report can be downloaded from the Soil Science Division SharePoint site: https://ems-team.usda.gov/sites/NRCS_SSRA/ssd/Shared%20Documents/Soils%20Outreach%20Team%20-%20Recommendations.pdf

You may also request a copy from paul.reich@wdc.usda.gov.

The team has begun the initial creation of focus team webpages to keep the public informed of team activities: https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/focusteams/

The Outreach Team has identified many opportunities for exhibiting at conferences across the Nation. The map below shows some major events in 2017. The team is currently leading an exhibit at the National Science Teachers Association National Conference in Los Angeles, March 30 to April 2.
Soil Biology Team

The Soil Biology Team will provide leadership and guidance on all aspects of the integration of soil biology in existing and future soil inventory and monitoring practices and procedures. The team will work collaboratively with all NRCS Divisions as well as with NCSS collaborators and the wider research community to improve the science and practice of collection, curation, and dissemination of data and information related to soil biology. The team will also serve as a review and advisory committee for proposals related to the collection of soil biological data.

**Specific initial focus activities include (but are not limited to):**

- Assessment of available methodologies for the collection of soil biology data leading to the development of a suite of recommended methods and standard procedures (soil biological sampling protocols)
- Development and dissemination of a minimum set of required metadata that will facilitate appropriate curation and analysis of soil biology data.
- Development of appropriate practices, protocols, and structures for the storage, curation, and retrieval of soil biology data initially focused on enhancements to the current National Soil Information System (NASIS) database.
- Provide guidance to the field on the collection of soil biology data in the context of both routine and intensive investigations.

Members (subject to change)

- Michael Robotham (Chair), Technical Soil Services and World Soil Resources National Leader, NRCS, Washington, DC
- Mark Abney (Co-Chair), Area Resource Soil Scientist, NRCS, Clinton MO
- Chad Remley, Soil Survey Regional Director, NRCS, Salina KS
We are seeking a member from the eastern part of the United States to join the team.

Charges
- Identify soil biological properties to be collected and stored in national database
- Propose methods for collecting soil biological properties
- Describe field and laboratory methodology
- Identify “tiers” of data tied to sample handling constraints (e.g., data that can be collected on air-dried samples vs. chilled vs. quick-frozen)
- Identify tiers of data collection by field staff based on activity (e.g., routine day to day vs. soil characterization)
- Identify minimum data set of required metadata to support interpretation of biological data collected in the field
- Collaborate with Research Team to determine if SSD needs to develop a soil biology research program
- Assist in development of high-level business requirements (HLBR) for upgrading existing data base

Potential Sub-Teams
- Laboratory methods for chosen soil biological properties—Some biological properties can be measured by different methods, selection of most appropriate method
- Research group for support of soil biological property—Supporting documentation for soil biological properties for addition of data storage in national database
- Metadata group to define what supporting information is required for each soil biological property — with what management metadata is NASIS populated to correlate management with observed, pedon-specific soil properties?
Soil Taxonomy Team

The core goal of this focus team is to make Soil Taxonomy more scientifically applicable (relevant) and to enhance its ability to provide “A basic system of soil classification for making and interpreting soil surveys.” Soil mapping is analytic; it divides the landscape into polygons. Soil Taxonomy provides a language of thousands of taxa that enable scientists to understand and communicate about the soils within those polygons. In addition to being analytic, Soil Taxonomy can also be synthetic. It can be used to understand how polygons (i.e., components) function together laterally and comprise a system. This is a system through which water, nutrients, and pollutants flow and that evolves geomorphically and serves as a template on which ecosystems reside and human land use operates.

Curtis Monger, NSSC Soil Survey Standards, National Leader, NRCS, Lincoln NE is the Chair.

Lists of co-chairs, team members, and sub-team members are currently being developed. The initial charges (listed below) remain pertinent. In particular, the Soil Taxonomy Team will link up with the SSSA Taskforce on Fundamental Changes to Soil Taxonomy to take advantage of that group’s energy and provide a way of reviewing their proposals using traditional methods of the National Cooperative Soil Survey (see figure below).

Charges
- Coordinate Soil Taxonomy update with NCSS and SSSA Taskforce
- Evaluate proposals quickly
- Evaluate the overall goal of Soil Taxonomy
- Proactively solicit input
- Hold annual Soil Taxonomy meetings or review – subject specific

Sub-Teams (5 to 6 members each)
- West
- High Plains and upper Midwest
- Southeast
- Northeast
- SSSA Taskforce

Short-Term Goal
- To hold three conferences on classifying marine and freshwater subaqueous soils and evaluating the need, if any, for developing an “Aquasol” order.

Long-Term Goal
- To update and publish the 3rd edition of Soil Taxonomy by 2022 and provide for its debut at the 22nd World Congress of Soil Science.
Figure shows color-coded steps involved in the reviewing and publishing updates to Soil Taxonomy.
Research Team

The Research Team is charged to identify investigation needs within the Soil Science Division, from soil survey offices to those of national scope, with the intent for the results to be practical, applied, and pertinent to the data needs of users.

Members

- Charlie Ogg (Co-Chair), Southeast Region Modeling Unit Coordinator, NRCS, Auburn AL
- Michael Whited (Co-Chair), Soil Survey Regional Director, NRCS, St. Paul MN
- Dan Hirmas (Co-Chair), Associate Professor, The University of Kansas, Lawrence KS

Presently, the charges for the team remain unchanged. However, from our introductory meeting we believe the team should initially address eminent data needs by promoting techniques most easily performed by soil survey office staff. We expect tried-and-true methods for data collection will continue and hope new state-of-the-art methods will be introduced into sampling and analysis protocol. We envision small investigations within soil survey office areas will complement broader-scale regional and inter-regional investigations. Investigations conducted like this will accomplish short-term SSO project objectives and longer-term regional goals for improved data harmonization. Investigations will involve regional soils staff, KSSL scientists, and NCSS cooperators.
Training Team

The Training Team is a multidisciplinary coalition formed to address training needs within the Division. It is the responsibility of this team to review current training offerings, make recommendations on new and improved courses and means of delivery, and expand training efforts outward from the Division to NRCS and partners, as needed. The core goal of the Training Team is to create comprehensive training plans for all disciplines within the Division. It is also its goal to include intra- and inter-agency partners (e.g., State Soil Scientists, Resource Soil Scientists, Area Conservationists, and University professors) to broaden the scope of training opportunities and provide feedback.

Members

- Kevin Norwood (Lead), Soil Survey Regional Director, NRCS, Indianapolis IN
- Cynthia Stiles (Co-Lead), Soil Survey Regional Director, NRCS, Davis CA
- Shawn McVey (Co-Lead), NSSC National Training Coordinator, NRCS, Lincoln NE
- Kendra Moseley, Regional Ecological Site Specialist, NRCS, Davis CA
- Johanna Pate, Central National Technology Support Center Rangeland Management Specialist, NRCS, Ft Worth TX
- Carl Hill, SSD Cartographer, NRCS, East Lansing MI
- Joel Brown, NSSC Ecological Site Team National Leader, NRCS, Las Cruces NM
- Jason Reed, Soil Survey Regional Administrative Assistant, NRCS, Portland OR

Sub-Teams

- Ecologist Team — Responsible for reviewing training and creating a curriculum and identifying core courses for ecologists.
- Soil Scientist Team — Responsible for reviewing training and creating a curriculum and identifying core courses for soil scientists.
- GIS Team — Responsible for reviewing training and creating a curriculum and identifying core courses for GIS specialists.

Short-Term Goals

- Create a list of core courses for each discipline and relate each course to Soil Survey.
Urban Soils Team

The Urban Soils Team was created to address topics relevant to soils in the urban environment. Members are experienced urban soil mappers and bring together a diverse perspective of urban soil issues from cities with various mapping needs and historical backgrounds. The team will work together and provide a more uniform and informed approach to mapping and evaluating soils impacted by the urban environment. Several members are active participants with an international urban soils working group and are striving to maintain a global view of urban soils and their impact on ecological services and urban agriculture. This allows NRCS to remain apprised of the latest research interests and understanding of soils in the urban environment.

Members

- Rich Shaw (Co-Chair), State Soil Scientist, NRCS, Somerset NJ
- Randy Riddle (Co-Chair), MLRA Soil Scientist, NRCS, Oxnard CA
- Jacob Isleib, MLRA Soil Scientist, NRCS, Tolland CT
- Kristine Ryan, MLRA Soil Scientist, NRCS, Aurora IL
- Eric Gano, MLRA Soil Scientist, NRCS, Flint MI
- Kenneth Hall, MLRA Soil Scientist, NRCS, Rosenberg TX

Charges

- Coordinate urban activities (including procedures, use of equipment, and safety) across the Division
- Identify training needs
- Identify needs to update standards and database structure and propose solutions
- Identify needs to update taxonomy and propose solutions
- Assemble existing data
- Identify gaps and opportunities
- Work with BOA and MGT to provide guidance on priority areas

Short-Term Goals

- Develop the Urban Soils Website
- Continue assembling an inventory of urban soil surveys and projects in urban environments
- Provide comments and proposals for the human-altered and human-transported (HAHT) classification and criteria in the Keys to Soil Taxonomy

Current Activities

- SUITMA 9 preparations
- Review the Standards Team proposals for artifact sizes
- Propose a database solution for missing values
- Compile comments for the current anthropogenic classification and criteria
- Compile the urban soils projects inventory list
• Coordinate with EPA urban hydrology project