Office of the Chief
Weekly Report

Soil Science and Resource Assessment
Soil Science Division

June 25, 2013

Deadline Reminders

Meeting attendance approval for ASA, CSSA, SSSA Annual Meetings due July 1 per NB 190-13-12ECS

Upcoming Meetings/Conferences

NSSC Webinar June 27, 1:00-2:00 CDT, "Properties and Spatial Distribution of Spodosols in the Northern Rocky Mountains", by Dr. Paul McDaniel, Professor of Pedology, Soil & Land Resources Division, University of Idaho

Soil Geomorphic Institute – Lincoln, Nebraska- July 8-26, 2013

Soil Correlation – Lincoln, Nebraska- July 15-19, 2013

Soil Science Division Update

2013 National Cooperative Soil Survey Conference held in Maryland

Maryland NRCS and the University of Maryland hosted the 2013 National Cooperative Soil Survey Conference in Annapolis, MD, June 16 - 20, 2013. The theme of the partnership conference was "Soil Survey – Planning for Soil Health in the Critical Zone." There were over 100 participants, with 75 university, state and federal partners. Breakout work sessions were conducted by the standing committees for Interpretations, New Technology, Research Agenda, Soil and Ecosystem Dynamics, and NCSS Standards on Monday and Tuesday. Program topics for plenary sessions included a session moderated by Dr. Wayne Honeycutt that focused on Soil Health and sustainable agriculture. Other plenary sessions included topics of Climate Change, Federal Lands Partnerships with the NCSS, The Expanding Horizons of the Soil Science Society of America, an International Forum, The National Ecological Observatory Network (NEON), and the International Soil Carbon Network. There were two interesting field tours held in conjunction with the conference: A preconference field tour into the Maryland Piedmont region on Sunday June 16 and a conference field tour on Wednesday June 19 the Delmarva Peninsula of Maryland's Eastern Shore. A retired SCS Director of Engineering presented a history of the Civilian Conservation Corps (CCC) in Maryland as guest speaker prior to the presentation of the NCSS Awards on Thursday June 20. The 2013 NCSS awards were given to Lindsay Hodgman, NRCS soil scientist in Maine for NCSS Soil Scientist of the year, James (Skip) Bell, NRCS soil scientist in West Virginia for NCSS Soil Scientist Achievement, and Dr. Mark Stolt, URI for NCSS Cooperator of the year. This conference is key to the National Cooperative Soil Survey Program in providing updates, information and input from all sectors of the partnership (including international) as to the best means of producing and using soil survey information. Conference coordinators used VTC technology to allow remote users to "virtually" attend the conference.

Dr. Martin Rabenhorst, Professor of Pedology at the University of Maryland, discusses soil parent materials and redoximorphic features at a technical stop of the Belmont Manor and Historical Park while Dr. Candiss Williams, research soil scientist of the NSSC, listens to the discussion.

Ground-penetrating radar (GPR) training and technical assistance to the Connecticut Soil Staff

During the week of 17 June, the Soil Survey Research and Laboratory Staff of the NSSC provided ground-penetrating radar (GPR) training and technical assistance to the Connecticut soils staff. Ground-penetrating radar was used to assist eight cultural resources projects that are being carried out in cooperation with the Connecticut State Archaeologist, Connecticut Archaeology Center, University of Connecticut, and the Friends of the Office of State Archaeology. NRCS soil scientists in Connecticut have provided technical assistance to a variety of archaeology-related projects. Their assistance has included soil profile descriptions, soil testing, and determining likely places to search for unmarked historical graves and structures. These assists have greatly increased public awareness to the commitment of NRCS in identifying and protecting our nation's cultural resources. The stewardship of cultural resources is an integral component of the conservation ethic that underlies NRCS's mission.

Debbie Surabian, Connecticut State Soil Scientist, discusses the results of a GPR survey and NRCS's cultural resources commitment to a group of visiting students at archaeological site.

Nebraska Chapter SWCS Meeting on Climate, Water, & Soil Health

On June 13 and 14, the Nebraska Chapter of SWCS hosted their annual meeting on the University of Nebraska East Campus in Lincoln Nebraska, focusing on climate, water, and soil health topics. Climatologists and staff from the National Drought Mitigation Center and the University of Nebraska delivered presentations on drought, climate change, and impacts on agro-ecosystems on the first day. The next morning several speakers from the University of Nebraska and NRCS presented topics related to irrigation management, groundwater resources, and soil health. Dr. Jerry Hatfield, Director of the National Lab for Ag and the Environment, provided an excellent overview on the connection between climate, water resources, and soil health. Dr. Hatfield stressed the importance of soil health in order for soils to have resilience during extreme climate events such as drought and heavy rainfall. On the final afternoon, the meeting was concluded on the Roger's Memorial Farm, where Paul Jasa, University of Nebraska Extension Engineer, provided an overview of no-till and cover crop research on the farm, and Dan Gillespie Nebraska NRCS no-till specialist presented several soil health demonstrations and a rainfall simulator demonstration highlighting the importance of healthy soils. The day concluded with Mike Kucera, agronomist for the NSSC Soil Quality and Ecosystems Branch, providing a hands-on demonstration on the use of various assessments included in the soil quality bucket with the attendees.

Integrated Erosion Prediction and Soil Quality Support for States

Linda Scheffe, agronomist for the NSSC Interpretations Branch, provided advanced integrated erosion prediction training for IN state staff during the week of June 17th. RUSLE2 is the official NRCS water erosion model that is used by field staff to plan, design and assess conservation practices and systems that reduce sheet and rill erosion as well as improve soil quality. New additions to the model, including grazing, hydrology, energy, carbon and ephemeral gully erosion calculators, were discussed. Practical applications of how integrated tools and approaches can assist in planning for improved soil quality were exemplified and future needs discussed. Mike Kucera, agronomist for the NSSC Soil Quality and Ecosystems Branch, demonstrated additional soil quality tools as well as provided a local tour of no-till farming operations. Integrated resource management planning is a method for addressing major resource concerns and identifying resource opportunities. These resource concerns include soil erosion, soil quality, water quality, and energy use and are key for assisting national and international planners, consultants, interagency partners, farmers and ranchers in designing and implementing sustainable resource management systems.

Soil Survey Assistance to Voyageurs National Park

During the week of June 17, Susan Southard, NSSC soil scientist liaison to the National Park Service (NPS), and Mike Whited, soil scientist from the soil survey regional office in St. Paul, participated in a field review and lab sampling in Voyageurs National Park in northern Minnesota. Mark Farina of Marquette, MI is the project leader for the survey and has been assisted by detailed soil scientists and contractors to complete the reimbursable agreement to map the park for the National Park Service. So far, 1,030 site observations have been made that have contributed to the recognition of three new soils in this glaciated lake country. Included in the lab sampling were some potential new Spodosols and soils derived from lacustrine deposits and water-worked till. The NPS is hoping the soil survey will help them manage

the land with resource issues that include fire effects on ecosystem dynamics, locating and understanding archaic cultural resources, and identifying subaqueous soils and their impacts on water quality.

Mark Farina, soil scientist from Marquette, MI and Roger Risley, MLRA soil survey leader from Duluth, MN discuss the properties of soils in Voyageurs National Park that formed in silty lacustrine deposits.

Personnel Highlights

None