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Editor's Note

Issues of this newsletter are available on the World Wide Web (<http://soils.usda.gov>). Under Quick Access, click on NCSS, then on Newsletters, and then on the desired issue number.



You are invited to submit stories for this newsletter to Stanley Anderson, National Soil Survey Center, Lincoln, Nebraska. Phone—402-437-5357; FAX—402-437-5336; email—stan.anderson@lin.usda.gov.

Rapid Assessment of U.S. Carbon for Climate Change and Conservation Planning Through the Use of Infrared Spectroscopy

By Larry T. West, National Leader for Soil Survey Research and Laboratory, National Soil Survey Center, Natural Resources Conservation Service, Lincoln, Nebraska.

The first use of infrared (IR) spectroscopy in Soil Survey was for the study of soil organic carbon and mineralogical processes. Soil science has seen increasing interest into utilizing IR spectroscopy for the rapid characterization of soil organic matter and other properties. Up until now, such technology has been applied only in research settings. The National Soil Survey Center (NSSC) has acquired diffuse reflectance visible-near infrared (VNIR) spectrometers, which will be deployed to MO offices to aid in measurement of soil carbon and other appropriate properties.

The VNIR units are portable, weigh less than 20 pounds, and are suitable for field and MLRA Soil Survey Office laboratory use. Using newly received and archived samples, the NSSC Soil Survey Laboratory will develop predictive models for relevant properties that can be used to interpret VNIR spectra collected in the field or SSO laboratory. The time needed to collect spectra for a sample is generally less than 1 minute, and the spectra are expected to be used in the prediction of organic and inorganic carbon, clay content, CEC, and other soil properties.

Plans for initial use of the VNIR spectrometers are to measure soil carbon as part of a newly initiated program of the Soil Survey Division to assess soil carbon stocks for all soils and land uses/agricultural management systems in the U.S. This inventory will be used to

evaluate and document the capacity of U.S. soils to sequester carbon. It also will be used to develop decision support tools to aid planners, policy makers, and producers with conservation planning decisions. The assessment will include evaluation of soil carbon with VNIR technology and bulk density by traditional methods for horizons to a depth of 1 meter in benchmark and other important soils under different land uses, ecological states, and/or agricultural management conditions.

It is impractical to evaluate every land use and agricultural management for all soil series recognized. Thus, statistical procedures are being developed and tested to objectively consolidate soils into groups that have properties that are expected to result in similar soil carbon dynamics and sequestration potential as benchmark soils. A similar method will be used to develop land use/agricultural management groups within soils that are expected to result similar carbon amounts and dynamics.

Analysis of existing pedon data suggests that about 25 replicate sample points will need to be evaluated for each soil-land use/agricultural management combination to achieve the desired level of statistical confidence in mean values. The total number of sample points evaluated nationwide will depend on soil, landscape, and land use/agricultural management system complexity, but rough estimates suggest that about 35,000 sample points at 7,000 sites will be needed. Protocols for site selection, site description, data collection, and data storage are currently being developed and reviewed. As the protocol now stands, NRI points with requisite field confirmed soil and land use conditions will be used as sample points to aid in identification and documentation of land use history and agricultural management.

To accomplish this inventory, a dedicated team of 18 soil scientists (one in each MO) will have primary responsibility for the sampling, data collection, and data management associated with this effort. Short-term assistance will be needed from MLRA soil scientists and others familiar with the area to maximize sampling efficiency. Additional details on sampling design, grouping protocols, and other considerations for this project will be forthcoming as they become available. ■

Recommendations From Committees and Working Groups of the 2009 NCSS Conference, Las Cruces, New Mexico

http://soils.usda.gov/partnerships/ncss/conferences/2009_national/agenda.html

Standards Committee Recommendations

1. Standards Staff should take steps needed to implement the proposed revisions to NSSH 630—Benchmark Soils. (See report for specific recommendations to Benchmark soil protocol and definitions).
2. As soon as the policy is released, MLRA-SSO management teams should ensure that the guidance is used in evaluating the current BMS list, and that BMS are considered in guiding soil survey projects and investigations.
3. As SC/OSED are integrated into NASIS: the OSED should be enhanced to indicate that a soil is a BMS, and in which MLRA('s). Provision should be made to include the Benchmark Soil Narrative Record as part of the database so that it can be accessed and delivered as needed.
4. NSSC Standards Staff should take steps needed to include the revisions for acid sulfate soils into the 11th edition of *Keys to Soil Taxonomy*.

New Technology Committee Suggestions

1. There should be a survey and review written regarding digital mapping.
2. A forum should be created to discuss the issues.
3. A survey of Land Grant cooperators is needed to get highlights from their programs and try to summarize the current state of the art.
4. A survey should be conducted from within the agency to find out how people are utilizing digital resources to aid mapping.
5. Develop a catalog of band ratios (by land resource areas)/library of spectra.
6. Develop remote sensing curriculum.
7. Publicize success stories in NCSS newsletter or other medium.
8. Develop a primer for DSM.
9. Develop a bridge between universities and NCSS DSM process (do universities need to teach DSM and provide training to undergraduate, graduate, NCSS soil scientists) students) Each region could provide a DSM course that captures what technology works.
10. The USDA-NRCS Soil Survey and University Land Grant Cooperators should develop a publication similar to the Soil Survey Manual to determine standards and methods. Methods for initial soil surveys, as well as, map updates are needed. Currently, soil survey offices are using different methods at different levels. Manual would help standardize the mapping activities. This document should provide guidelines for soil survey evaluation, validation and scales for evaluation techniques.
11. Provide a 2 week course similar to the current Soil Survey Course. The agency could provide courses for beginners and for advanced training.
12. The University Cooperators should provide better undergraduate training of basic GIS skills. This could be accomplished through online courses so that students at institutions where GIS is not emphasized could have access to the information. If GIS were listed as a skill needed in the job description, students would see the need for this type of training.
13. Develop training supplemented with a GIS knowledge resource (GIS hotline) would ensure that training and education would continue. Create a GIS person dedicated to helping field staff. With GIS resources available (personnel), soil scientists will be able to call for help when they are stuck and then move forward and complete projects. Without the resource, projects may stop due to frustration with learning the new tool.
14. Fill all MO GIS positions; supplement with centralized position for support to the MOs.
15. Encourage a reward structure which supports scientists to learn new tools. Currently, field soil scientist would not achieve goals of mapped acres if they invested time into learning GIS tools. Giving credit for achievement in gaining knowledge in the new technologies would eventually yield great returns for the Survey. Use training development plan.

Research Agenda Committee Recommendations

1. Consensus of the committee discussions was that research needs should be prioritized in a different manner than has been done in the past. The committee suggestion was to group research issues into three broad categories; Short-Term Priorities, Global Priorities, and Application of Soil Survey Data
2. The committee recommended that lists of research topics identified at the NCSS conference should be prominently posted on the Soil Survey Division web site such that they referred to in research proposals as topics identified as important by a national group.
3. The committee should continue as a standing committee of the National NCSS conference.

4. The committee recommended that the Research Agenda and New Technology committees be more closely linked including potential for joint forums and discussion periods at the regional and national NCSS conferences. If possible, overlapping sessions for these two committees should be minimized.

5. Establishment of advisory groups for specific applications such as spectroscopy, hydrogeological measurements, and remote sensing should be considered. These groups could be composed of NCSS members and others recognized as experts in the field. Advice from these groups would help ensure that data is collected in a scientifically defensible and efficient manner.

6. The committee recommended that lists of research topics identified at the NCSS conference should be prominently posted on the Soil Survey Division web site such that they referred to in research proposals as topics identified as important by a national group.

7. Business requirements for a NCSS publication outlet similar to the USGS Open File system have been developed. The publication outlet will be established as part of a larger Content Manager system within NASIS as resources become available. The Soil Survey Investigations Report (SSIR) series is proposed as an interim publication outlet. Review process for SSIRs may be a way to strengthen involvement of NCSS partners if a standing editorial committee is formed.

Interpretations Committee: ESD Issues and Barriers (No Specific Recommendations)

1. Clear policy to point to for those involved in developing ESDs—NHQ support.
2. Lack of knowledge—what, how, who?
3. ESDs and DSP need to move forward in tandem.
4. Creative staffing to accomplish.

FLAG Report

1. Finalize “All Lands Initiative.”
2. Complete MLRA implementation plan.
3. Develop personnel organization plan.

Subaqueous Soils Working Group

1. Develop SAS informational primer, tech notes, information sheets to explain concepts and create understanding of the purpose, mechanisms, and products.
2. Produce Methods Manual to map and characterize SAS properties—into SSM, NSSH, and into separate document.
3. Organize SAS Workshop—to help standardize techniques/methodology—teach principals applicable to various regions and SAS-types.
4. Ecological Site Descriptions—create small working group with ESD and SAS personnel to explore the possibility of merging ESD concepts into SAS. This concept will expand beyond plants into all ecological components.
5. Hire ecologist to help identify vegetative and benthic communities in coastal environments.
6. SSURGO certification of products and posting on Web Soil Survey and Soil Data Mart: Coastal Lagoons of Washington Co., RI, and Little Narragansett Bay, RI and CT
7. NASIS: Populate SAS datafields when available in next NASIS version. Write interpretation scripts for properties, such as of oxidized pH (presence of sulfidic materials), bottom type (moorings)
8. Interpretations: List and prioritize. Document work completed to date and finalize interpretations.

Possible interpretations:

- SAV Restoration
- Crab Habitat
- Aquaculture/Shellfish Restoration
- Management for Sustainable Production—Shellfish
- Nutrient Reduction/Health/Water Quality
- Benthic Preservation Site Identification
- Wildlife Management
- Critical Habitats for Wading Shore Birds
- Nurseries and Spawning Areas
- Habitat Protection for Horseshoe Crabs
- Dredging Island Creation
- Tidal Marsh Protection and Creation
- Navigational Channel Creation/ Maintenance
- Effects of Dredging on Benthic Ecology
- Off Site Disposal of Dredge Spoil
- Acid-Sulfate Weathering Hazards
- Accretion Rates
- Heavy Metals/Health Issues
- Habitat Mapping
- Impacts on Sea-level Rise
- Survival of Seagrass
- Risk/susceptibility of Invasive Species (e.g., Milfoil)
- Herbicides Use and Movement

Soil Change Working Group

Challenges Identified

1. How to identify steady states, especially in cropland
2. Need to include both a management narrative and a limited set of classes for comparison among projects in the database
3. How to handle natural disturbance
4. Need further input & consensus on Minimum Data Set

Recommendations

1. Add text to Charge #2 to reflect capture of management data (completed)
2. Develop a concept statement of the NCSS role in soil change, i.e. define the role of pedology at the human time scale
3. Review & comment of NRCS Strategic Plan for Soil Change Implementation
4. Develop appropriate definitions of) landscape for soil change
5. Use properties that reflect information needs; continue work on MDS
6. Consider availability of LT research when choosing soils (and defining benchmarks)
7. Consider extending initiative to include subaqueous soils
8. Report outcomes to the SSSA WG
9. Continue the Soil Change Working Group

University Report Recommendations

1. The university cooperators discussed the need for future funding to support cooperative research with NRCS. This cooperative research could be in-kind services such as laboratory analyses, use of laboratory and/or field equipment, and including staff at the National Cooperative Soil Survey Center or other investigators on cooperative research studies. Discussion also pointed out that cooperative research

could be accomplished with NRCS as well as with other federal agencies such as the Forest Service, National Park Service, Bureau of Land Management, NASA, and the US Geological Survey. The cooperative research could include student training (undergraduate and graduate) and technology transfer (capacity building).

2. The university cooperators greatly support and encourage growth in Student Temporary Experience Program (STEP) and the Student Career Experience Program (SCEP). States that do not have these career paths are encouraged to establish the programs.

3. University cooperators would like to be involved with GlobalSoilMap.net, the Global Soil Classification System, and to continue our international relationships with joint projects involving other countries.

4. Lastly, we would like to be kept informed of US Soil Taxonomy proposals. A dialog should be maintained on who is responsible on the cooperators' end to submit comments and suggestions concerning Soil Taxonomy.

Federal Breakout Report

1. NCSS would like to put a bulletin that lays out criteria for the Soil Science Institute and Geomorphic Institutes and put out a call to ask for proposals for who wants to host the Institutes from the NCSS University community

2. The universities want to know what we would like as minimum criteria for new employees. They might not be able to handle classes within one university but could create a consortium with distance learning. Work with HR to identify nontraditional soils courses in related departments (eg non-traditional courses might include soil biology, terrestrial biogeochemistry).

3. Database integration/Toolkit with the USFS both in ESIS and NASIS; TEUI is used for analysis and should be integrated in Toolkits with leveraged resources.

4. Federal lands need to be more incorporated in long-term plans; Federal lands will be remote difficult mapping (different protocols) and over 200 million acres of initial acres. BIA—every State does things differently—MOU BIA/NRCS/FSA states that we will work together—BIA would like to be treated in each State as a full member of the NCSS, which includes data sharing and long-term planning

5. Need to establish an aggressive marketing plan for Soil Survey with new customers and under served customers. NSSC has been attending alternative Society meetings from other disciplines. Electronic media are being developed.

Business Meeting

All committee recommendations were approved. Research Agenda has a caveat: Form a continuing Work Group in Soils that are affected by Gypsum and Salts. Evaluate the progress of the task force groups and report out at the Regional Meetings in 2010. ■

Deployment of Soil Active Carbon Kit

From Soil Survey Division, "Weekly Update," September 8,, 2009.

The National Soil Survey Center National Laboratory in cooperation with the Soil Quality Team has developed a Soil Active Carbon Kit. The kit is now ready for deployment to the field. It allows rapid and timely measurement of an important soil quality component: biologically active carbon (potassium permanganate-oxidizable), which has been proposed to be an indicator of soil organic carbon and soil quality

changes related to land use, management, and other environmental factors.

Most of soil carbon is “passive” carbon, largely humus, which is not biologically active, providing little food for soil organisms. Active carbon includes microbial biomass, amino acids, soluble carbon, and soil carbohydrates. Active soil carbon is more sensitive to management effects than total organic carbon and is related to biologically mediated properties, such as respiration and microbial biomass. As an example, while the same field might show similar total carbon levels under till and no-till management, the no-till usually manifests a higher active carbon content.

It is therefore important for NRCS staff to document active carbon as a potentially significant component of soil quality and how it relates to changes in land use, tillage practices, and other environmental conditions. With this in mind, the kit was developed and extensively tested by the Soil Survey Laboratory (SSL) in conjunction with university cooperators throughout the United States across a range of soil and management conditions, including mineralogy, particle size, pH, and land use. Samples were collected and analyzed locally using the kit and by the SSL using the standard method to validate kit-derived data. Sites included in the validation were located in Alabama, Virginia, Iowa, Missouri, California, Idaho, and Oregon. Sampling was conducted quarterly (seasonally) at all sites over a 16-month period. Active Soil Carbon Kit data compared favorably to those collected under laboratory conditions.

The method, developed by Dr. Ray Weil et al., is based on the loss of color in the violet-hued extracting solution upon oxidation of active carbon. The kit contains all equipment and reagents necessary for the measurement, including control soil standards for quality assurance. The NSSC has a limited number of the Soil Active Carbon Kit available to NRCS staff upon request. ■

2010 Soils Planner—Development of the U.S. Soil Survey

By Maxine J. Levin, Samuel Stalcup, J. Douglas Helms, Paul Reich, and Harihran Eswaran, all of USDA, Natural Resources Conservation Service.

The recently distributed “2010 Soils Planner” focuses on the history of the U.S. Soil Survey and its important contributions to the cooperative conservation of the land. It highlights the history of the U.S. Soil Survey and Soil Conservation Movement. Combining aspects of this history with strong visual images into a calendar, we encourage students and the public, as well as SSSA members, to contemplate the subject all year long. Defining scientific ideas with images and clear, concise language encourages everyone to appreciate the subject and give it some thought with each month. SSSA has partnered with NRCS to provide the printed calendar to all its members since 2000.

In the context of historical development, we emphasize the interdisciplinary aspects of the Soil Survey and Soil Conservation Movement. These disciplines integrated landscape ecology, agriculture, chemistry, physics, and geosciences. Soil surveying and soil science in the United States developed only a little more than a century ago, starting in the late 1890s with several state and regional surveys of agricultural soils. Development of the soil survey program parallels the developments in the related sciences. As such, the program used all available techniques for its work and trained staff and provided equipment and facilities to ensure that measurements were correct and observations were reproducible.

Soil survey is a multi-disciplinary science, which implies that the soil scientist must have an appreciation of related sciences, such as ecology and environment, and even specialized disciplines, such as botany and zoology. Soil science brought together the tools of chemistry, physics, biology, climatology, geography, and other sciences to the

study of soil. As the scientific field of soil survey was developing, the Soil Conservation Movement began to gain momentum in the late 1920s. With a surge in interest in healing and protecting the land for agriculture, the U.S. Government moved closer to the establishment of an agency that would deal head-on with the issues of soil erosion and land degradation in the U.S. The purpose of the Soil Survey from its beginning has been to enhance the use and management of soils.

Soil conservation work nationwide was hastened with the passage of the Soil Conservation Act in April of 1935. Recognition of the first conservation district, bounded by the Brown Creek watershed in North Carolina, on August 4, 1937, established a method for the service to assist farmers in the conservation districts. Locally elected citizens established priorities and plans for the district's work. The Bureau of Soils continued as its own entity for 17 years until it merged most of its soil survey functions with the Soil Conservation Service in 1952 under the Department of Agriculture. With that merger, the strengths of both agencies' viewpoints in the field of soil science came together to create a partnership.

Using the communication tool of a calendar targeted to professionals, laymen, and students, NRCS planners (with SSSA and other groups partnering in printing and distribution) have been distributing soils information to a variety of users over a 10-year period. As it approaches its 75th anniversary, the Natural Resources Soil Conservation Service reflects on its accomplishments and discoveries with the Soil Conservation Movement and on the people and ideas that made the accomplishments possible. The partnerships of the U.S. Soil Survey and the National Cooperative Soil Survey have provided the science and the dialog that have transferred technology into action to protect our natural resources.

The 2010 planner can be ordered from NRCS Landcare Publications (<http://landcare.sc.egov.usda.gov/>); call 888-LANDCARE (888-526-3227), or email landcare@usda.gov. ■

Determination of Particle-Size Distribution for Gypseous Soils

From Soil Survey Division, "Weekly Update," September 14, 2009.

Current soil survey projects in Texas, New Mexico, and other areas in the West with gypseous soils have increased the interest in understanding the morphology, properties, interpretations, and classification of such soils. Many areas of gypseous soils are under development pressure, so it is becoming more and more important to understand the behavior of these soils. Gypsum is calcium sulfate dihydrate. Soils with a gypsum content greater than 40% are termed "gypseous." A Gypseous Soils Task Force was organized within the National Cooperative Soil Survey to consider these issues. The Laboratory Methods and Analysis Working Group is a component of the task force that focuses on developing methods to measure particle size, gypsum content, and related physical and chemical properties.

Highlighted is a new method, developed at the National Soil Survey Laboratory, National Soil Survey Center, to determine the particle-size distribution (PSD) in gypseous soils. For technical reasons, the standard or older method to determine PSD requires water soluble salts, such as gypsum, first be removed. The final result is a gypsum-free PSD for the water insoluble siliceous fraction only. For gypseous soils, the standard PSD is therefore not necessarily related to hand texture, which points to a need for a method that does not require removing salts.

The new method developed for soils with high salts takes place in three steps. First step: Clay is determined via the standard method, resulting in a clay percentage on

the siliceous fraction. Because the literature suggests that water soluble minerals like gypsum should not be found as clay-size particles, clay percentages on the siliceous material are recalculated based on initial sample mass (siliceous + salts). Second step: The soil is suspended in a solution that is 70% ethanol and 30% water, a polar medium in which gypsum is insoluble; the slurry is then sonicated by ultrasonic transduction to disperse weakly bound aggregates, wet sieved, then air dried to obtain the sand percentage. Third step: The silt is calculated by subtracting sand (second step) and clay from (first step) from 100. The product is a texture (sand, silt clay).

The effectiveness of dispersion via ultrasonic transduction was evaluated by microscopic inspection. After ultrasonic transduction, neither aggregates nor broken crystals were observed. The effectiveness of the overall approach was evaluated by comparison of laboratory and field textures. Compared with the standard method, this three-step approach yields better agreement between laboratory and field textures. ■

Soil Survey Division Long-Range Training Plan

By Marc Crouch, Training Coordinator, National Soil Survey Center (NCSS), NRCS, Lincoln, Nebraska.

In 2006, a Training Strategic Plan was prepared to guide the Soil Survey Division training development and delivery effort. All existing courses were either redesigned or updated, a new course was added, NCSS Training Web pages were added to soils.usda.gov, a major effort to develop OJT modules was initiated, and many other initiatives were completed or in progress. You can review the status and results of the 2006 initiatives by accessing the file Results_of_2006_Training_Strategic_Plan_Initiatives.pdf on the NCSS Training Web pages (<http://soils.usda.gov/education/training/>).

In September, a volunteer group of soil scientists and GIS specialists representing all segments of the Soil Survey Program met twice via teleconferences to develop a new Soil Survey Division Training Long-Range Plan. The goals and objectives remained essentially the same. New Initiatives were added, and appropriate 2006 initiatives continued to help guide our training development and delivery efforts for the next several years. You can view this plan by accessing the file Soil_Survey_Division_Training_Long-Range_Plan_(October_2009).pdf on the NCSS Training Web pages (<http://soils.usda.gov/education/training/>). Your comments and suggestions regarding training initiatives are always welcome. Contact marc.crouch@lin.usda.gov. ■

United States Hosts International Conference on Human-Impacted Soils

From Soil Survey Division, "Weekly Update," September 28, 2009.

During the week of September 21-25, the 5th International Conference of the Urban Soils Working Group of the International Union of Soil Sciences was held in New York City. The group is known as SUITMA, which stands for Soils of Urban, Industrial, Traffic, Mining, and Military Areas. Previous conferences have been held in Germany, France, Egypt, and China. Sponsors for this year's conference were the NRCS (both the Soil Survey Division and New York NRCS), the New York City Soil and Water Conservation District, and the Queens College School of Earth and Environmental Sciences.

Increasing urbanization is a worldwide phenomenon. According to the United Nations Population Division, one-half of the world's population now lives in cities and

towns, and by 2030 this will reach 60 percent. Currently, there are 20 mega-cities with more than 10 million inhabitants, many in developing countries. An understanding of how this urbanization has impacted soils and the people who depend on them has important implications for a large segment of the world's population. Methods of characterization, classification, and mapping of disturbed soils are required to keep soil science relevant in a changing world.

Nearly 150 soil scientists and other professionals from 17 countries attended the New York City conference. Topics discussed at the conference included urban hydrology, black carbon, soil carbon and land use, accumulation and movement of soil pollutants (chemical and biological), ecological restoration, history of human manipulation of Manhattan soils, and mapping urban soils. Richard Shaw, NRCS Soil Survey project leader in New York City, discussed the unique challenges of mapping, classifying, and interpreting soils in New York City. Field trips around the city gave participants hands-on appreciation for the amount of manipulation the soils in the city have had and how they have been utilized.

The conference highlighted the importance of the study of urban and human-altered soils. A better understanding of the properties, functioning, impacts, and evolution of human-impacted soils is needed to support their sustainable management and ensure that their potential and limitations are considered in the decision-making process for urban land management.

This type of collaboration will increase understanding of the likelihood and impacts of events, such as urban flooding, and will identify the potential for gardens to produce fresh vegetables to feed the growing urban population. ■

National Soil Survey Center Invited to Continuing Professional Development Workshop

From Soil Survey Division, "Weekly Update," October 5, 2009.

The National Soil Survey Center (NSSC) has been invited by The American Society of Agricultural and Biological Engineers (ASABE) to provide a CPD (Continuing Professional Development) workshop to its membership at the upcoming International Conference, June 2010, in Pittsburgh, PA.

This invitation marks the achievement of an important milestone by the NSSC, which developed an outreach plan designed to "spread the word" about the value of soil survey information to a broader customer base, such as engineers, architects, and community planners. Initiated in 2007, the plan has the goal of making soil information and data valued by a community outside of agriculture, indicating not only the value of good land use decisions but also the need for soils to be part of ongoing accreditation and professional development required by various organizations. Making inroads into established curriculum was hard to accomplish, and it took a lot of time and effort to convince various organizations that soil information needs to be part of their ongoing learning program and is a good fit into recertification requirements.

By using the opportunity to exhibit at professional conferences, NSSC staff took what was once a stagnant exhibit and expanded it into a mini classroom that provided hands-on learning opportunities about the agency's Web-based soils applications and products. More times than not, this experience resulted in surprise and enthusiasm for what we have to offer and ultimately sold many on the value of our products. The exhibit helped to realize our long-term goal of becoming part of the educational process for many nontraditional science-based professionals, ultimately contributing to good land use decisions by making a broader customer base. ■



Web Soil Survey Exhibit

By Linda Greene, National Soil Survey Center, NRCS, Lincoln, Nebraska.

The extremely popular Web Soil Survey exhibit just got better with updated panels that more accurately reflect the Web Soil Survey and what it provides our customers. To schedule an exhibition, contact Christopher Radley at 515-289-0325 X 101 or Christopher.Radley@ia.usda.gov ■

The Romeo and Joliet Series

By Stanley P. Anderson, Editor, National Soil Survey Center, Natural Resources Conservation Service, Lincoln, Nebraska.

Both of these series were established in Will County, Illinois, the Romeo series in 1912 and the Joliet series in 1951. The Romeo series was named after what is now Romeoville, Illinois, and the Joliet series was named after what is now Joliet, Illinois. The two series share the same taxonomic classification (figs. 1 and 2). The Romeo soils are very shallow, and the Joliet soils are shallow. According to Bob McLeese, Illinois State Soil Scientist, the two series have never been mapped in complex with one another, at least not in Illinois.

The history of the names of the places after which the two series are named is described in *Legends of America*, "Romeo and Juliet of the Illinois Plains: Romeoville and Joliet" (<http://www.legendsofamerica.com/IL-RomeoJoliet.html>):

Romeoville, Illinois, some 30 miles southwest of Chicago, was first called Romeo when nearby Joliet was still called "Juliet." At this time, the settlement was a twin and rival community of Juliet, unlike the romantic pair of Shakespeare's era. Founded in the 1830's, the area was home to abundant farmlands and stone quarries. A post office was established on October 29, 1833.

In 1845, the city of Juliet's name was changed to Joliet to honor the famous explorer Louis Jolliet. When this happened, Romeo acknowledged the busted romance by becoming "Romeoville."

The village of Romeoville is less than 10 miles north of the city of Joliet. ■

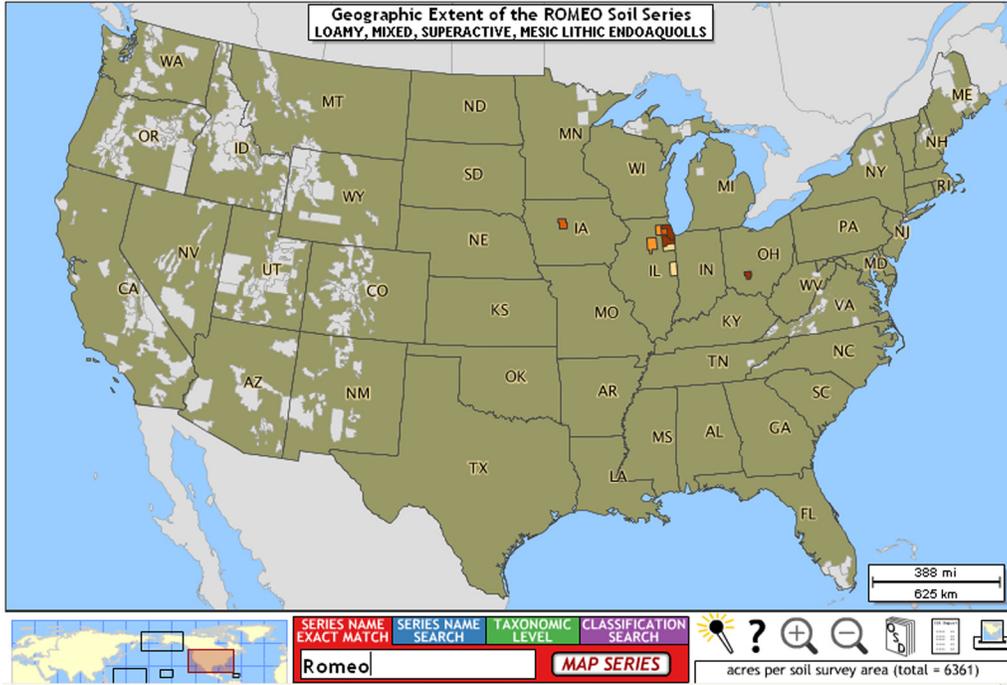


Figure 1.—The geographic extent and taxonomic classification of the Romeo series.

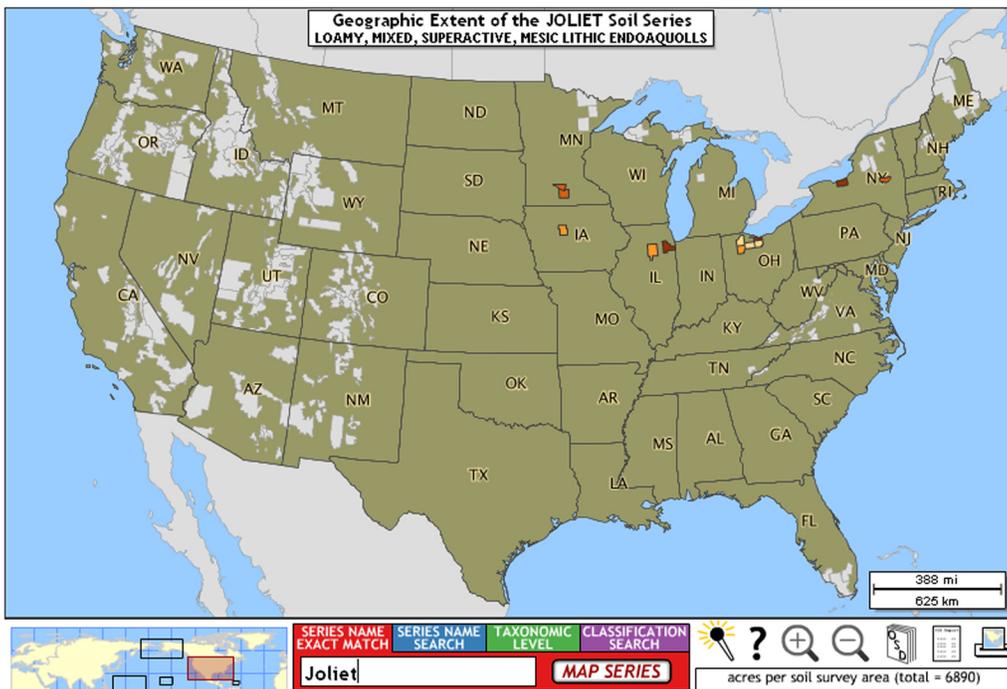


Figure 2.—The geographic extent and taxonomic classification of the Joliet series.

Language Matters

By Pattie West, Editor, Region 10 MLRA Office, NRCS, St. Paul, Minnesota.

There is much confusion, apparently, about the proper use of the first person pronoun when used in conjunction with the name of another person (or with another pronoun):

“John and me” vs. “John and I”

“John and I” is appropriate when this phrase is the subject of the sentence:

John and I went to the store.

John and I are both idiots.

Although some people might say “John and me went to the store” or “Me and John went to the store,” these usages are incorrect. (The many times over the years that you were corrected for saying this sort of thing is one of the main reasons why you have so much trouble with this whole issue now. You misunderstood the corrections to mean that “John and me” is never correct.)

“John and me” should be used when the phrase is the object of a preposition. (Here are some examples of prepositions: of, for, to, from, between, in, on, by.)

This book belongs to John and me.

Billy got his virus from John and me.

Just between you and me, Billy is an idiot.

She cooked breakfast for John and me.

These examples are all correct.

Here’s an easy way to check before you actually say or write the wrong thing. Leave out the other person’s name, and see what sounds right.

“This book belongs to I.” (That’s not right! So “This book belongs to John and I” is also not correct.)

Billy got his virus from I.

This story was written by I.

She cooked breakfast for I.

Come on! That’s just silly. And guess what? So is “She cooked breakfast for John and I.” ■

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