MO12 Soil Survey News and Views

NRCS MLRA Soil Survey Region 12 Spring 2011

In this Issue...

MO Message

By Dave Hvizdak, MO-12 Team Leader

I hope everyone is enjoying the budget games being played out in Washington this spring. At least as a reprieve, the field season has begun and you can finally get out and play in the "dirt" again.

Since the last newsletter, retirements have begun to change the face of soil survey in the Northeast. Earlier this year, NRCS Pennsylvania State Soil Scientist Ed White retired, but evidently missed the job so much, he agreed to come back temporarily as a part-time State Soil Scientist. This April, MO-12 Senior Regional Soil Scientist (SRSS) Steve Fischer decided he had better things to do and also retired. The experience of both of these soil scientists will be missed and hard to replace. But with retirements, come opportunities. Shawn Finn has been selected as the new SRSS allowing for a smooth transition for soil correlation in the Northeast. Once the budget issues get settled, and if there is no hiring freeze, Shawn's soil data quality specialist (SDQS) position will be advertised—I hope some of you well-qualified soil scientists will seriously consider applying when the time comes.

This year we have two lofty goals to accomplish—the completion of the initial and extensive revision soil surveys on non-Federal land in the Northeast and the Rapid Carbon Assessment. I wish you all the best in your efforts in completing these goals and would like to reassure you that we, at the MO, will do everything we can to help.

Ecological Site Inventory (ESI) is starting to gain momentum in the Northeast. David Clausnitzer, ESI Quality Assurance Specialist for MOs 12, 13, and 18, has begun the information and development phase by providing essential education through webinars and by working closely with his counterparts across the country in developing criteria on how the work will be done. Take the time to learn as much as you can about ecological site descriptions; I guarantee you will be involved in developing ESDs on the project planning level, collecting data, and correlating with soil survey map units and soil components. It will cause us to develop a whole new perspective on soil surveys.

By the end of this fiscal year, Kristie Wiley, MO-12 Editor, will have completed the English edit of the last traditional soil survey manuscript (as far as we know). This will essentially mark the end of an era for Soil Survey, although editing of other material will take on a greater emphasis. Also, we will begin diving into the realm of content management. More on all this will be brought out as the year progresses.

For now, enjoy the fine articles submitted in this issue of ***MO12 Soil Survey News and Views***.

Ecological Sites and Soil Survey

By David Clausnitzer, Ecological Site QA Specialist, MOs 12, 13, and 18

Natural Resources Conservation Service (NRCS) has been developing Ecological Site Descriptions (ESDs) for a number of years now. Western states have developed many ESDs, mostly on rangelands. NRCS Chief Dave White has issued a directive to accelerate completion of ESDs nationally. New personnel have been hired and recently, you may have been hearing more about ESDs.

What are ESDs?

ESDs are descriptive reports developed through activities collectively termed Ecological Site Inventory (ESI). They are a part of the hierarchical NRCS land classification system that includes land resource regions (LRRs), major land resource areas (MLRAs), and soil surveys. ESDs are developed on the same scale as soil surveys, making them suitable for their intended purpose as land management and planning tools. ESDs are not maps of existing vegetation. They are classifications containing information about the multiple types of natural and disturbed vegetation that typically occur within a specific environment in response to management activities and disturbances. An environment that produces a distinct ecological site is defined primarily by a soil series phase, or more typically a group of similar series and their phases, in conjunction with additional climate and landscape factors. Because ESDs are correlated with soil map unit components, ESD maps can be produced from soil maps.

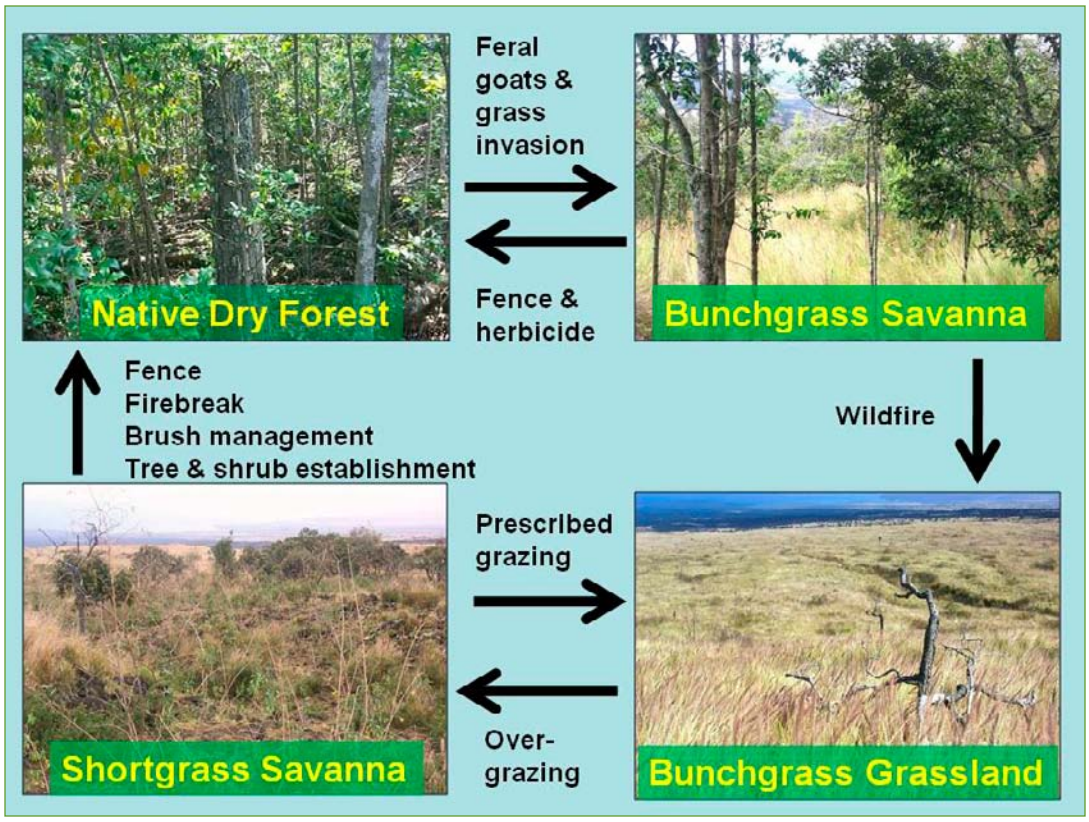
ESDs contain information on physiography, climate, water features, soils, plant communities, vegetation dynamics, and management. Supporting information includes associated and similar ecological sites, type locations, relationships to other vegetation classifications, and references.

The heart of an ESD is a state and transition diagram (see figure on page 3) consisting of boxes representing the different states, plant community phases, and transitions between them, which typically occur within an ecological site. A state is a plant community or suite of related plant communities and associated dynamic soil properties that is relatively persistent and resilient. A community phase is a distinctive plant community and associated dynamic soil property levels that can occur over time within a state. Transitions between community phases occur in response to relatively minor disturbances and are easily reversible. Transitions between states occur in response to major disturbances and are reversible only with considerable management inputs.

How are ESDs developed?

A draft list of ecological sites is made using existing classifications, soil maps, GIS analyses, historical accounts, advice from colleagues and partners, one's own knowledge, and reconnaissance. The draft list will include brief descriptions of plant species, density, and stature along with environmental factors that may produce each ecological site, such as soil characteristics, aspect, and climate factors.

From the draft ESD list, projects are developed to plan field data collection on site attributes. Using standard protocols and data sheets, information is collected on soil surface characteristics and plant species, amounts, and production at sites representing all the typical plant communities occurring within the ecological site. Soils are described or verified and GPS points and photographs are taken. Additional information is obtained from colleagues, reports, and other sources. Management interpretations for land uses of the ecological site are developed, often with the help of technical specialists or soil conservationists. The assembled information is entered in the ESIS website, where it can be used to develop reports, and some information is entered in NASIS.



Vegetation states and transitions occurring within an ecological site that would be shown on a state and transition diagram. This example is from Hawaii.

A state and transition diagram is developed by asking the question, what are current and historic land uses and disturbances on the landscape that cause changes in the vegetation? Fire, cropping and abandonment, logging, pests, and grazing are typical factors that cause transitions among states and plant community phases.

The final step before completing the ESD is to correlate the ecological site with the soils upon which it occurs. ESDs are correlated to soil components, typically at the soil series phase level. An ecological site may be correlated with multiple map unit components, but a single component may not be correlated with more than one ecological site.

Who develops ESDs?

Although Soil Survey Division has primary responsibility for developing ESDs, it is a cooperative effort with Ecological Sciences Division. There are three levels of ESI staff: national, regional, and MLRA. Quality assurance (QA) specialists are roughly equivalent to senior regional soil scientists or soil data quality specialists, but are responsible for areas encompassing two or three MLRA soil survey regional offices (MOs). Quality control (QC) specialists are equivalent to soil survey project leaders, although they do not have teams of NRCS staff working under them. QC specialists cover single or multiple MLRAs, regardless of state boundaries, and do most of the data collection and writing.

Areas that do not yet have coverage by an ESI QC specialist can develop ESDs, but time and resource constraints make this a slow process. ESDs in some states have been developed by teams of soil scientists, grazing and forestry specialists, and outside partners.

How is Soil Survey involved?

Soil Survey personnel have information and skills essential to developing ESDs. They can assist ESI specialists with drafting ecological sites, selecting sampling locations, and correlating ecological sites with soils. Because ESI specialists are often botanists or ecologists, they may need advice about landscapes and soils or direct field assistance describing soils at sampling sites.

My personal experience has shown me that the additional vegetation information provided by ESD development can provide new insights to soil scientists, and the process of correlating soils with vegetation provides an additional level of quality control resulting in improved soil maps. After getting acquainted with each other's work, soil scientists and ESI specialists find the joint process of developing ESDs to be interesting and worthwhile.

Examples of ESDs can be found at http://esis.sc.egov.usda.gov/Welcome/pgReportLocation.aspx?type=ESD . For more information, contact David Clausnitzer in Amherst, MA, at 413-253-4353 or david.clausnitzer@ma.usda.gov.

Rapid Carbon Assessment Update

By Maggie Payne, Soil Scientist, Rhode Island

The 2011 sampling season for the Rapid Carbon Assessment (RaCA) Project is ramping up in the Northeast region. This nationwide project began last summer and aims to sample 380 sites in the Northeast and over 6,000 sites nationally for carbon in order to create a soil carbon distribution database and determine land use effects on soil carbon. Sampling began in the fall as Maggie Payne and Rob Tunstead, the Rapid Carbon Assessment leaders for MO-12, visited most MLRA offices to provide training on sampling methods. At the last tally at the end of March, MO-12 is 20 percent complete with field sampling and approximately 10 percent complete with lab analysis.

Over the winter, we have had some staff turnover and transfers, losing Rob to MO-13 and losing additional trained carbon samplers to various parts of the country. However, we have gained some new soil scientists to assist with our efforts in the Northeast and all have been working on getting site permissions over the winter. As the weather warms up, we hope to quickly get through the remainder of our field sampling to meet the September 30 deadline.

All samples are being sent to the University of Rhode Island (URI) where Dr. Mark Stolt has been kind enough to lend some space in the URI pedology lab for setting up the visible and near infrared (VNIR) spectrometer that is used to scan samples for estimations

The VNIR spectrometer set up with the contact probe for scanning moist soil samples. As a part of this project, we are collecting scan data on moist soils so that in the future this instrument could be brought to the field for instant readings on a pit face.

Sieved and air-dried samples are also scanned with the VNIR spectrometer. This tray shows the samples by horizon for the five pedons in one site.

of carbon percentage. All samples are weighed for bulk density, air-dried, and sieved to remove coarse fragments. Samples are then scanned with the VNIR spectrometer, and subsamples are oven-dried to determine moisture content that helps to figure into the bulk density measurements. Dr. Stolt has applied for funds to hire student help in the lab over the next year to assist in completing this lab analysis. After analysis, selected samples are sent to the National Soil Survey Center to be archived or analyzed. The remainder of the samples is being archived in Amherst, Massachusetts. Datasheets from the field, as well as bulk density and VNIR data, is entered into a workbook that will be uploaded to NASIS. It is anticipated that this data will be made available through NASIS for future analysis and projects.

For questions on the MO-12 Rapid Carbon Assessment, contact Maggie Payne at maggie.payne@ri.usda.gov.

Soil Scientists from 12 States Participate in Digital Soil Mapping Course

By Jessica Philippe, Soil Scientist, Vermont

Recently, fourteen soil scientists from NRCS and US Forest Service (USFS) participated in a two-week NRCS pilot training program on digital soil mapping (DSM). The fourteen soil scientists came from twelve states: Alaska, Colorado, Hawaii, Idaho, Kansas, Missouri, New Hampshire, New York, North Dakota, Oklahoma, West Virginia, and Wyoming.

The program contained two sessions. The first week (February 29 to March 4), consisted of "DSM I: Fundamentals," an online course run by Professor Phillip Owens at Purdue University. The lectures and exercises covered an introduction to DSM, soil-landscape relationships, data models, data exploration and processing, map classification, rule-based models, accuracy assessment, and project management. The participants were exposed to multiple DSM software tools, including SAGA, SoLIM, SIE, and ArcSIE. Besides Professor Owens, the DSM I cadre also includes Hans Edwin Winzeler, Mike Muenich, and Michele Duarte de Menezes, all from Purdue; and Zamir Libohova from the National Soil Survey Center.

In the second week (March 7 to 11), the participants attended a traditional classroom workshop at the MO-12 office in Amherst, Massachusetts. The workshop was titled "DSM II: Processes with ArcSIE" and focused on knowledge-based raster soil mapping and its implementation with ArcSIE. In the lectures, basic concepts and methodology of knowledge-based raster soil mapping, including the rule-based and case-based methods implemented by ArcSIE, were given thorough descriptions and explanations. The terrain analysis tools in ArcSIE for prepar-

DSM-II participants work to create a soil inference model with their local data.

ing environmental data and the post-processing tools for producing SSURGO maps were covered in detail. A successful case study from Essex County, Vermont was presented. The participants were required to use data from their own mapping areas to experiment with the ArcSIE process.

The DSM II cadre includes Robert Long and Jessica Philippe from the MLRA Soil Survey 12-5 office in St. Johnsbury, Vermont; Fred Young from the NRCS Missouri State Office; Tom D'Avello from the NRCS Geospatial Research Unit in Morgantown, West Virginia; and Xun Shi, Associate Professor at Dartmouth College and developer of ArcSIE.

The program was coordinated by Marc Crouch and Tom D'Avello.

An Urban Soils Field Trip

By Marissa Theve, Soil Scientist, Connecticut and Debbie Surabian, Soil Scientist and MLRA Soil Survey Area 12-6 Office Leader

On February 28, 2011, New Jersey NRCS Resource Soil Scientist Fred Schoenagel, Connecticut NRCS Soil Scientist Marissa Theve, and NRCS MLRA Soil Survey Area 12-6 Office Leader Debbie Surabian began their week-long urban soils field review by investigating a site in Jersey City, New Jersey. This visit was part of the documentation collection for the initial Soil Survey of Hudson County, New Jersey. Joining the soil scientists for their first soil field experience was Professor Duzgoren-Aydin's class of geosciences students from New Jersey City University (NJCU) in Jersey City, New Jersey. This event was part of a new initiative for the university's geosciences department to begin a more comprehensive soils program that will prepare students for jobs at the Natural Resources Conservation Service upon graduation. During the review, the students were enthusiastic despite the windy and wet conditions and compacted fill materials. The pit described was located in a capped-filled coastal public park underlain by dredged materials. The soil contained artifacts including bricks, concrete, and broken glass, as well as the token platy structure often seen in human transported materials. In spite of these obstacles, the group of undergraduates appeared eager to learn about and even handle these urban soils. The class learned how to fill out pedon description sheets using the Field Book to Describing Soils and Munsell color book. They learned about structure and rupture resistance and how to take a field pH reading using the Cornell pH kits—they even textured soil with the protection of nitrile gloves. Most importantly, the students learned about basic soil forming factors and how to read the landscape.

(continued on page 7)

After field descriptions, the discussion continued in the afternoon on campus with an informal conversation with the soil scientists. The students and professors mainly inquired about NRCS jobs and education requirements needed to be hired by NRCS (part of the purpose of this outreach event was to encourage NRCS employment). This session was followed by an enlightening presentation about the geology and soils of Northern New Jersey from Fred Schoenagel. Finally, the students ended their day with a soil texturing session using natural New Jersey organic and mineral soils. Nearly everyone enjoyed the learning experience and the mess. NJCU professors Duzgoren-Aydin and William Montgomery hope to begin a 3-credit environmental soils class next semester that would qualify participating NJCU students to be NRCS soil conservationists. Overall, it was a refreshing experience to work with such enthusiastic people and spread knowledge of natural and anthropogenic soils to an urban university audience.

Soil scientists and New Jersey City University students dig a soil pit on a filled coastal park in New Jersey City.

Summary Report for GPR Work on Missisquoi Bay

By Thom Villars, Soil Resource Specialist, Vermont

February 22 to 24, Jim Doolittle, Ground-penetrating radar (GPR) operator from the NRCS National Soil Survey Center (NSSC); Thom Villars, Soil Resource Specialist on the Vermont NRCS Soil Resource Staff; and Joe Bertrand of the U.S. Fish and Wildlife Service's Missisquoi National Wildlife Refuge used a mobile GPR platform to complete more than 51.3 km (32 miles) of continuous, geo-referenced GPR data recordings across an ice-covered portion of Missisquoi Bay (a northern bay of Lake Champlain) in northwestern Vermont. On one of the days, Roger DeKett, Soil Scientist with the MLRA Soil Survey Area 12-5 office in St. Johnsbury, Vermont, helped with GPR traverses conducted on foot to fill in gaps in the data coverage.

The location of GPR traverse lines completed over the southeast portion of Missisquoi Bay in northwestern Vermont.

One goal of this investigation is to develop field methods and procedures for the rapid identification, classification, and delineation of subaqueous soils and landscapes. The collected radar data will be used to identify differences in substrates and distinguish different subaqueous landscape units based on bathymetry, slope, landscape shape, sedi-

Yamaha Rhino tracked vehicle used for motorized GPR survey on frozen lake surface. The GPR antenna was dragged behind on a wooden sled. The ice was up to 24 inches thick.

Roger DeKett pulls the 200 MHz GPR antenna while Jim Doolittle monitors data collection during an on-foot GPR traverse on Missisquoi Bay, Vermont.

ment type, and geographical location. A team of research soil scientists at the NSSC will use the GPR data and terrain analysis techniques to identify subaqueous landscape units and partition the submersed areas into more homogenous subaqueous soil map units.

The identification and mapping of subaqueous soils is motivated by management issues such as the inventory and restoration of submersed aquatic vegetation, organisms and habitats, improvement of water quality, and assessment of carbon sequestration potentials. In the greater Lake Champlain watershed, local, state, and federal agencies are concerned with the rapid increase in sedimentation rates and nutrient inputs caused by changes in land use.

Maine Soil Survey Update

By Tony Jenkins, State Soil Scientist, Maine

Rapid carbon bog sampling is progressing in MLRAs 143 and 144B. During March and April, Maine soil scientists, led by our resource soil scientists, sampled about eight sites across the state. Access is among the many difficulties that bogs, fens, and swamps present; and a layer of ice affords the ability to traverse these treacherous areas. The soils are Terric and Typic Saprists and Fibrists, with scrubby to well developed hydrophytic forests. My thanks go out to the following hearty soil scientists: Carl Bickford, Nick Butler, Greg Granger, and Dave Wilkinson.

Initial soil survey in Maine is nearing completion with a final correlation and SSURGO upload success within reach for this fiscal year. MLRA Soil Survey Area 12-7 Office Leader Mary Jo Kimble has spearheaded this major undertaking into the final NASIS stages, with spatial data management work being led by Lindsay Hodgman and Nick Butler. I am very proud of the diligent work that many soil scientists have done to get us in sight of the finish line on this massive project.

(L-R) Greg Granger, Carl Bickford, and Dave Wilkinson.

Plymouth County, MA Soil Survey Last Acre Ceremony

By Jim Turenne, State Soil Scientist, Rhode Island

Approximately 40 people attended the Last Acre Ceremony at the UMASS Cranberry Experiment Station in Wareham, Massachusetts last November. The ceremony was hosted by the Plymouth County Conservation District and the Pilgrim RC&D Council. In attendance for the ceremony were all of the soil mappers who worked on the survey (except Bill Taylor, retired NRCS Soil Scientist); Christine Clark, NRCS Massachusetts State Conservationist; Cecil Curran, retired NRCS State Conservationist; Dave Hvizdak, NRCS Massachusetts State Soil Scientist; Bruce Thompson, retired NRCS State Soil Scientist; along with members of the Plymouth County Conservation District, soil survey users, and NRCS staff. Pete Fletcher, who was the original party leader for the survey, was the Master of Ceremonies. Pete provided an overview of the history of the survey and talked about the importance of soil surveys.

(Standing L-R) Rob Tunstead, Dave Hvizdak, Debbie Surabian, Don Parizek, Meredith Ashworth, and Christine Clark.
(Kneeling L-R) Bruce Thompson, Pete Fletcher, Kathy Price, Tom Peragallo, Jim Turenne, and Brian Parks.

The Plymouth County Soil Survey extensive revision began in 1989 when an assessment of the published 1969 survey showed the need for the update/remap. The survey spanned the rapid advances in technology and employed the high-tech tools such as high resolution CIR imagery, remote sensing techniques such as ground-penetrating radar, GPS for geo-locating all field notes and study sites, and the Internet for providing information about the survey (www.nesoil.com).

The final hole was dug in a Mashpee, Sandy, isotic, mesic Typic Endoaquods, a series established in Plymouth County to replace the Pipestone series. Participants were shown how a soil scientist maps soils and interprets the morphology to make interpretations. Following the ceremony, a luncheon was provided to celebrate the end of the survey and also to say goodbye to Rob Tunstead who was leaving Massachusetts for New Jersey. Rob was presented with a silver spade for his excellence in soil survey for the county.

Rob receives a silver spade for his excellence in Soil Survey.

Additional photos are available at https://picasaweb.google.com/JimTurenne/Plymouth.

What's the Difference

1969 Plymouth

- Scale 1:15,840 (MSD~2.5)
- Gloucester Soil acreage = 35,550
- Field work 1950-1963
- Pre-taxonomy, soils described to shallow depths (30" in some)
- Sb = Sanded muck / bog
- Urban areas unclassified
- 28 series recognized
- 106 mapunits
- No coastal/tidal marsh soils

2010 Plymouth

- Scale 1:12,000 (MSD~0.5)
- Gloucester Soil Acres = 2,875
- Field work 1989-2009
- Soil Series names on cranberry beds
- Urban areas classified as high as possible to series
- 6 New Soil Series, 9 Dropped, 52 series in all. Classified to 65 inches.
- Georeferenced sites
- 231 mapunits
- Tidal series, dune soils, and beach units established.

A comparison of the changes between the 1969 Plymouth County Soil Survey and the 2010 survey.

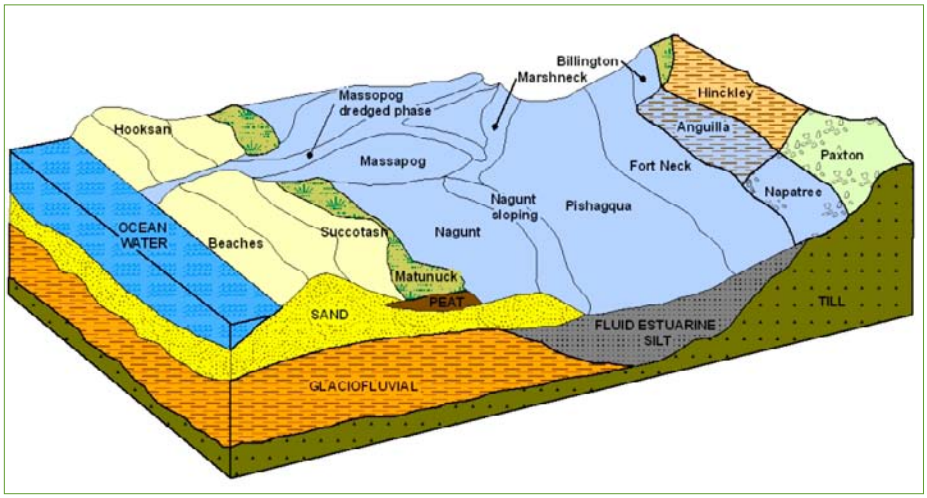
To view a presentation of the Plymouth County Soil Survey please visit:

http://nesoil.com/Plymouth_Final_Acre.pdf.

Rhode Island Completes the First Example of a Coastal Zone Soil Survey

By Jim Turenne, State Soil Scientist, Rhode Island

Phase I of the Coastal Zone Soil Survey for Washington County, Rhode Island has been completed and the spatial/tabular data is now available on the Web Soil Survey/Soil Data Mart. This marks the first example of a seamless soil survey including the terrestrial soils, dunes, marshes, beaches, and the soils beneath shallow water (subaqueous soils). This pilot project, completed in 2010, was identified as a need for subaqueous soil mapping at the National Cooperative Soil Survey Planning Conference in Las Cruces, New Mexico.



A block diagram showing the coastal and subaqueous soil map units.

Most of the fieldwork and mapping was conducted between 2005 and 2009, after the Rhode Island NRCS identified the need for a seamless subaqueous soil survey to provide soils data for their "working waters" strategic plan. A partnership called the Mapping Partnership for Coastal Soils and Sediment (MapCoast) was formed to develop a mapping protocol and map the soil, bathymetry, and benthic geologic habitats, and to develop interpretations for the data. Working with MLRA Soil Survey Area 12-6 office in Tolland, Connecticut, the data was moved through the correlation process in 2010. In 2010, much time was

spent entering data into NASIS, conducting initial and final correlations, digitizing the soils, and remapping the coastal soils. Ten new subaqueous soil series and six new coastal soil series were established, and thirty-seven new soil map units were set up to complete phase I. Most of the work to get the data through the process was accomplished thanks to the extra efforts from Maggie Payne, Rhode Island Resource Soil Scientist; Debbie Surabian, Soil Scientist and MLRA Soil Survey Area 12-6 Office Leader; Donald Parizek, MLRA Soil Survey Area 12-6 Soil Scientist; and Steve Fisher, retired MO-12 Senior Regional Soil Scientist. In addition to the coastal zone soil survey, several other improvements were made to the RI600 spatial data, including joining with Massachusetts and Connecticut, correcting errors, and adding new special features. Phase II is slated for FY2011, which will cover the area from Point Judith to Greenwich Bay, Rhode Island. For more information visit: http://www.ri.nrcs.usda.gov/technical/RI_Soil_Survey_2011.html.

Farewell to Tom Burke

By Roger Dekett, Soil Scientist and MLRA Soil Survey Area 12-5 Office Leader in St. Johnsbury, Vermont

Please join us in bidding farewell to Tom Burke. Tom came to us after a long and illustrious stint in Lancaster, New Hampshire. During the last three years, he rounded out the MLRA Soil Survey Area 12-5 staff in St. Johnsbury, Vermont, where he shared his wealth of soil survey experience and love of fieldwork. He was also our go-to data guy and would often arrive at work early to navigate the PedonPC-NASIS-AnalysisPC path. He took great pleasure in arguing the interpretive value of a modal pedon (some say Frankensoil) derived from multiple soil descriptions as opposed to the single, representative pedon. Tom is now a Soil Survey Project Leader in Alamosa, CO.

New England Hydric Soil Technical Committee Fall Tour

By Jim Turenne, State Soil Scientist, Rhode Island

The New England Hydric Soil Technical Committee (NEHSTC) hosted its annual hydric soil tour on October 19 and 20 in southeast Massachusetts and Rhode Island. The topic focused on a study developed by Mark Stolt, University of Rhode Island Professor of Pedology and Soil-Environmental Science and Peter Fletcher, retired NRCS Soil Scientist, on determining soil organic carbon content (SOC) by field methods and a review of the study sites set up to monitor the TA-6 Mesic Spodic indicator.

The tour began at Peter Fletcher's house where participants were given 10 soil samples collected throughout New England and analyzed at the University of Rhode Island for SOC and texture. For each sample, the participant was asked to determine if the soil was organic, mineral, or a mucky modifier and estimate SOC content. Following the quiz, a review of the data and some field methods developed to aid in the determination was provided. Following the study, we headed out to review a catena of spodosols where the water table had been collected to determine if TA-6 worked for the site. A similar site on Cape Cod was then visited.

(continued on page 12)

Day 2 began at the University of Rhode Island where the same participants were given a new set of 10 samples and asked to repeat the determinations to see if they were able to improve on their field methods for estimating SOC. Next, we headed out to review two sites that are being monitored for TA-6 so it can be moved from a test indicator to "approved."

Members of the New England Hydric Soil Technical Committee during the 2010 hydric soil tour in RI.

Results:

Mesic spodic TA-6—Results from the tour revealed for the most part the TA-6 indicator, as written in version 7, worked well. Some field notes will be added to clarify the indicator, but overall it should work to define soil with spodic properties in MLRA 144A and 149B.

Field estimation of SOC—The need for this determination stems from years of hydric soil tours and Regulatory IV training sessions. Even during the advanced hydric soils training, it always becomes a point of "discussion"—is it organic, mucky modifier, or mineral? Numerous hydric soil indicators begin with the need to know the answer to this question. The results of this study, along with a mirror study conducted in the Mid-Atlantic region, will be published by the authors of the study. A chart to aid in the determination of SOC is being developed by Peter Fletcher and will be made available via the NEHSTC.

Some general results of the New England study are:

1. We tend to overestimate the SOC in mineral soils and underestimate SOC in organic soils.
2. Sapric material should have less than 25 percent SOC, Hemic up to 30 percent, and Fibric up to 40 percent.
3. Field determination of SOC can be learned, just as soil texture can be once you calibrate yourself.
4. Overall, the pre-training results showed 41 percent of the estimates were correct and 68 percent were correct after the training session (similar results in the Mid-Atlantic).
5. It is not easy to estimate SOC even for the highly experienced NEHSTC. When in doubt, run the sample in the lab!

Preparing for Web Soil Survey's Content Management System

By Kristie Wiley, MO-12 Editor

The content management system (CMS) is still in the early stages of the planning process. However, there are things we can do to prepare for the CMS. Start by reviewing your current content. Look at your websites, previous publications, and illustrations. Evaluate your content for relevancy and accuracy. After you have reviewed and evaluated your current content, decide what you want to deliver—sort between the information for internal use and public dissemination. Keep in mind; preparing content for online presentation will differ greatly than how we prepare content for printed distribution. More guidance will be provided as the CMS progresses.

MO12 Soil Survey News and Views is published by the Major Land Resource Area Soil Survey Regional Office 12 (MO-12) in Amherst, Massachusetts. MO-12 provides regional coordination, quality assurance, and assistance to state and MLRA soil survey area (MLRA-SSA) offices located in Connecticut, Massachusetts, Maine, New Hampshire, New York, Rhode Island, Vermont, and parts of New Jersey, Ohio, and Pennsylvania.

MO-12 Team Leader, Dave Hvizdak
dave.hvizdak@ma.usda.gov

MO-12 Senior Regional Soil Scientist, Shawn Finn
shawn.finn@ma.usda.gov

MO-12 Editor, Kristina Wiley
kristina.wiley@ma.usda.gov

The MLRA-SSA offices located in the MO-12 region include:

MLRA-SSA 12-1
States: OH, PA, and NY
Office Location: Mercer, PA
Office Leader: Alex Dado

MLRA-SSA 12-2
States: NY and PA
Office Location: Belmont, NY
Office Leader: Steve Antes

MLRA-SSA 12-3
States: NY and VT
Office Location: Plattsburgh, NY
Office Leader: Ted Trevail

MLRA-SSA 12-4
States: NY, PA, and NJ
Office Location: Binghamton, NY
Office Leader: Jerry Smith

MLRA-SSA 12-5
States: NY, NH, VT, MA, CT, and ME
Office Location: St. Johnsbury, VT
Office Leader: Roger DeKett

MLRA-SSA 12-6
States: NY, NJ, CT, MA, VT, NH, and RI
Office Location: Tolland, CT
Office Leader: Debbie Surabian

MLRA-SSA 12-7
State: ME and NH
Office Location: Presque Isle, ME
Office Leader: Mary Jo Kimble

MLRA-SSA 12-8
States: ME
Office Location: Dover-Foxcroft, ME
Office Leader: Bob Evon

Editor's Note:
Your ideas, suggestions, comments, and articles are welcome.

Articles may be sent via e-mail as either an MS Word attachment saved as text only, or pasted directly into your e-mail message.

Photographs should be e-mailed as a separate jpeg attachment. Please include a caption for each photo submitted.

Send items to:
kristina.wiley@ma.usda.gov

USDA-NRCS
MO-12 Soil Survey Office
451 West Street
Amherst, MA 01002