



United States Department of Agriculture

**PLAN To MAINTAIN
The SOIL SURVEY AND
TECHNICAL SOIL SERVICES
Of
ILLINOIS**

**(MLRA's 95B, 97, 98, 105, 108A, 108B, 110, 113,
114B, 115A, 115B, 115C, 120, 131, 134)**

May 2014

Natural Resources Conservation Service

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AGENDA

**2014 ILLINOIS COOPERATIVE SOIL SURVEY
WORK PLANNING CONFERENCE**

Thursday, May 8, 2014

**USDA-NRCS State Office
2118 West Park Court
Champaign, Illinois
Agenda**

- **Convene 9:30 am (CST)**
- **Opening Remarks**
- **Status Reports by Cooperators**
 - **Natural Resources Conservation Service**
 - **United States Forest Service**
 - **University of Illinois**
 - **Illinois Department of Agriculture**
 - **Illinois State Geological Survey**
 - **UI Cooperative Extension Service**
 - **Illinois Department of Transportation**
 - **Association of Illinois Soil and Water Conservation Districts**
 - **Illinois Soil Classifiers Association**
- **Other Reports**
 - **Agency Reports**
 - **MLRA Regional Offices**
 - **Other Contributors**
- **Discussion**
- **Lunch 11:30 AM**
- **Reconvene 12:30 PM**
- **Other Reports-- (continued)--**
 - **MLRA SSO Leaders**
 - **Resource Soil Scientists**
 - **Illinois State Office Soils Staff**
- **Closing Remarks**
- **Adjourn 2:30 PM**

**Ivan Dozier, NRCS
State Conservationist**

Plan to Maintain the Soil Survey of Illinois

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 - National Calculation of Primary Interpretations
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- Resource Soil Scientists and State Administrative Areas
- MLRAs and names

BACKGROUND

The soil survey program in Illinois is a cooperative endeavor of federal, state, and local government. Nine cooperators have signed the Illinois Cooperative Soil Survey memorandum of understanding in the past.

The Plan to Maintain the Soil Survey of Illinois outlines the strategy for the soil survey progress of Illinois, delivery of data and products, and delivery of Technical Soil Services. The plan evolved from annual updates to the December 1991 long range plan, and now summarizes the workload and framework within which the soil survey will function to carry out the NRCS Mission and assist users in Illinois.

The Plan to Maintain the Soil Survey of Illinois is showcased to partners and interested parties in an effort to maintain the spirit of the original MOU which expired in 1997. Illinois recognizes the importance of the cooperative partnership necessary to meet the goals of soil survey and data delivery in Illinois.

Partners:

[Association of Illinois Soil and Water Conservation Districts](#)

[Illinois Department of Agriculture](#)

[Illinois Soil Classifiers Association](#)

[Illinois State Geological Survey](#)

[Illinois Department of Transportation](#)

[University of Illinois, College of Agricultural, Consumer and Environmental Sciences \(ACES\)](#)

[University of Illinois Extension Service](#)

[University of Illinois Ag Experiment Station](#)

[USDA Forest Service](#)

[USDA Natural Resources Conservation Service](#)

County Boards of Commissioners are key partners in most projects. In addition, Soil and Water Conservation Districts, RC&D Councils, and Regional Planning Commissions cooperate in some projects. Several Cooperative Agreements have been honored over many years of soil survey mapping and updates; resulting in one of the most successful soil survey programs in the country.

Objective: The objective of the Illinois Cooperative Soil Survey is to provide a soil survey of the state that is complete, current, and meets the needs of the users.

Update and maintenance Phase: An update/maintenance program was initiated in 1990 to bring the patchwork of county soil surveys to a common, state-of-the-art standard. The “MLRA concept” was adopted and five MLRA soil survey project offices were established to begin the work of updating and digitizing the soil survey of Illinois. All 102 counties have been digitized and are SSURGO certified. Seventy-five of the counties were updated and re-correlated before they were digitized (see status map). The other 27 counties were digitized without an update or re-correlation effort and are considered “pseudo-SSURGO” projects. In addition to increased data from more observations, the data and maps were improved through the introduction of new technologies and methods.

Soil Survey Correlation Dates
Gradation 1940s Red to 2000s Green

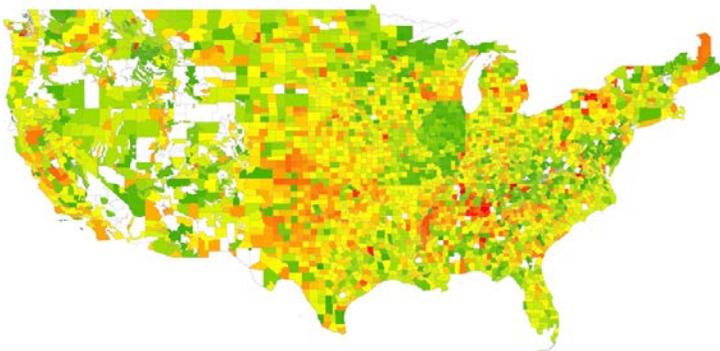


Figure 1: More recent correlation dates are in green.

Alignment to USDA, NRCS, and SSD Strategic Plans

USDA Strategic Plan: (<http://www.ocfo.usda.gov/usdasp/sp2010/sp2010.pdf>)

Assist rural communities to create prosperity so they are self-sustaining, re-populating, and economically thriving (Goal 1);

Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources (Goal 2);

Help America promote agricultural production and biotechnology exports as America works to increase food security (Goal 3); and

Ensure that all of America's children have access to safe, nutritious, and balanced meals (Goal 4).

NRCS Strategic Plan: (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1045272.pdf)

- *Get More Conservation on the Ground*
- *Increase Organizational Effectiveness and Efficiency*
- *Create a Climate Where Private Land Conservation Will Thrive*

The Mission of the Soil Science Division, Natural Resources Conservation Service

- *Provide leadership and service to produce and deliver scientifically-based soil information to help society to understand, value, and wisely manage global resources.*

NSSH Part 600 (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcs142p2_054212)

These four functions are the core mission areas of the Soil Survey Division:

(http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_020393.pdf)

- *Make an inventory of the soil resources of the United States;*
- *Keep the soil survey relevant to ever-changing needs;*
- *Interpret the information and make it available in a useful form; and*
- *Promote the soil survey and provide technical assistance in its use for a wide range of community planning and resource development issues related to non-farm and farm uses.*

Soil Science Division - Responsibilities.

- **National Soil Survey Center** - national standards, database, training, interpretations, research, and analysis.
- **Geospatial Research Unit** (formerly National Geospatial Development Center)
- **Soil Quality Team** - information for research and practical technologies.
- **World Soil Resources** - global soil information and education.
- **National Geospatial Center of Excellence** - responsibilities.
- **State Soil Survey Offices** - responsibilities for NRCS State Offices.
- **Soil Survey Regional Offices** - responsibilities of SSR Offices.

Balance and Cooperation

A soil survey program that is balanced across all mission functions requires soil scientists who are technically competent in new technologies and their discipline, understand how soil science and soil survey are relevant to public policy, and are able to communicate effectively with both urban and rural audiences. To accomplish this, the Soil Survey Division Strategic Plan specifies the following in regards to training and education:

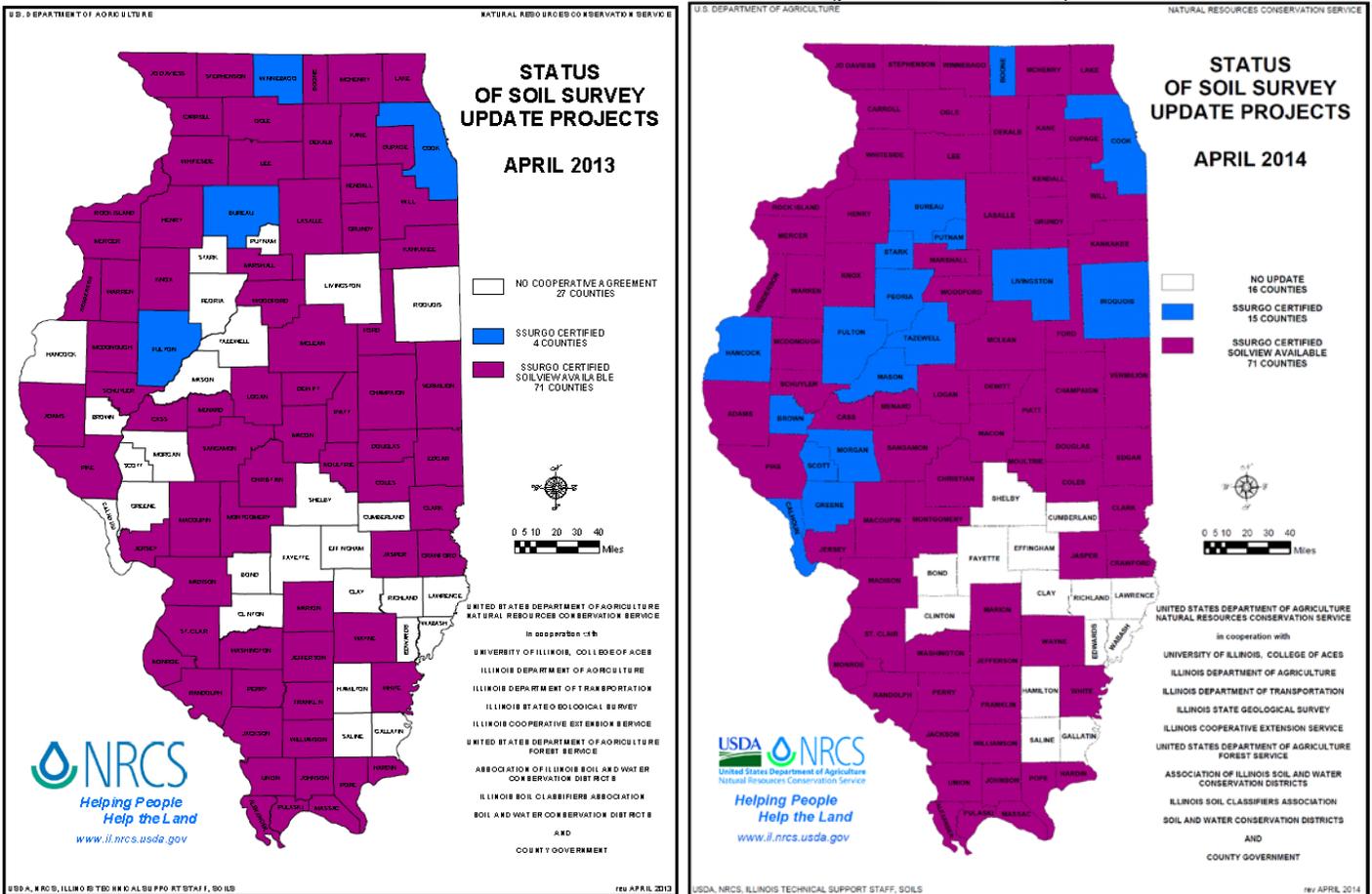
- **Work with NCSS partners to identify knowledge, skills, and abilities necessary for future soil scientists.**
- Enhance course content, develop new courses where necessary, and provide training that includes emphasis on interpretations, new technologies, USDA programs, law and public policy, and other aspects of a well-balanced soil survey program.
- Promote a graduate studies program and establish continuing education credit for the soil science institute curriculum and all other Soil Survey Division courses

STATUS OF SOIL SURVEYS

Current Status of County Soil Surveys: The status of soil surveys in Illinois 2013 to 2014 is presented in **Figure 2** and **Figure 3** “Status of Illinois Update Counties” map.

Soil survey reports have been published for all 102 counties. Eleven (11) are University of Illinois publications and 91 are SCS/NRCS publications. Four (4) reports were published in the 1950’s, 9 in the 1960’s, 23 in the 1970’s, 23 in the 1980’s, 32 in the 1990’s, and 11 since 2000. The source for the latest, most up to date soil survey information is the [Web Soil Survey: http://websoilsurvey.nrcs.usda.gov/app/](http://websoilsurvey.nrcs.usda.gov/app/). Large data sets are available from the [Geospatial Data Gateway http://datagateway.nrcs.usda.gov/](http://datagateway.nrcs.usda.gov/). Over 170 Published Soil Surveys for Illinois are archived on the web at: [Soil Surveys by State: http://www.nrcs.usda.gov/wps/portal/nrcs/soilsurvey/soils/survey/state](http://www.nrcs.usda.gov/wps/portal/nrcs/soilsurvey/soils/survey/state).

Seventy-five counties have a SSURGO certified data base via a Soil Survey Update Project. Twenty-seven counties have been SSURGO certified via the SSURGO initiative (pseudo-SSURGO).



Figures 2 and 3: Status of Illinois Update Counties 2013, 2014.

“pseudo” SSURGO

Description: Twenty-seven counties in Illinois have not been updated over that last 15-20 years of update activities in Illinois. Evaluations have been completed on all 27 counties. These counties have minimal data sets and have not been reviewed and updated to the standards of Illinois Update counties. These 27 pseudo counties will be updated with base property data from updated map units and the NSSL lab database. In an effort to bring the completeness and consistency of the data up to a standard for Illinois, data of adjoining update counties will be linked to the map units of these counties where it can be done without extensive revision or field work. With the additional review, spatial and tabular data from adjacent counties may be updated as well.

PROGRESS:

Springfield MLRA Office: Pseudo SSURGO update complete for eleven counties. Calhoun, Hancock, Greene, Scott, Morgan, Brown,
 Aurora MLRA Office: Update completed on two counties. Livingston and Iroquois

These projects are complete with the exception of soil map units that will need further field work to better identify the distribution. Most map units have been linked to updated soil data map units –linking them to updated data and conforming to MLRA mapping conventions.

The SoilView CD has been delivered to 71 counties. SoilView pre-dated Web Soil Survey and was delivered for most of the Update Surveys of the 1990's through about 2006. It was innovative and ahead of its time in format as delivery mechanism for digital soils data and maps. Web Soil Survey and products available through the Geospatial Datagateway, now make the SoilView CD nearly obsolete. **TRENDING AWAY**

Evaluations: In 1990 and 1991 soil survey evaluations were completed for each of Illinois' 102 counties. These evaluations were done in order to document the need for updating the survey and to estimate the staff years and costs required to update and digitize. The evaluations were revised in 1996. Of the 27 counties that have not signed an "update agreement" 19 require minimal field work (.1 to .4 staff years) and 8 require significant field work (.5 to 3.8 staff years). The workload in these 27 counties was re-evaluated in 2009 in order to begin work on the "pseudo-SSURGO" updates. In 2011 and 2012, map units from 13 legends were linked to updated data from adjacent counties that had gone through the full update process. Some field work was done, and future projects were recorded for those map units that needed more field observations.

Re-Organization, SDJR, and Soil Survey Maintenance: In late 2012 and into 2013, the soil survey division re-organized. MLRA offices were re-aligned from oversight by the state to MLRA Regional Offices. Illinois' data is now maintained through 5 MOs (6, 7, 10, 11, and 12) that divide the data on boundaries relative to the MLRA boundaries. There are 3 MLRA offices located in Illinois and they are still responsible for most of the state Aurora, Springfield, and Carbondale). The MLRA office in Onalaska, Wisconsin, now services MLRA 105 in Illinois, The MLRA office in Juneau, WI services MLRA 95B, The MLRA office in Owensboro, KY services MLRA 120A, and the MLRA in Milan, TN services 131A and 134. (MLRA Office Regions: Figures 4 and 5).

Figure 4. MLRA Office Regions

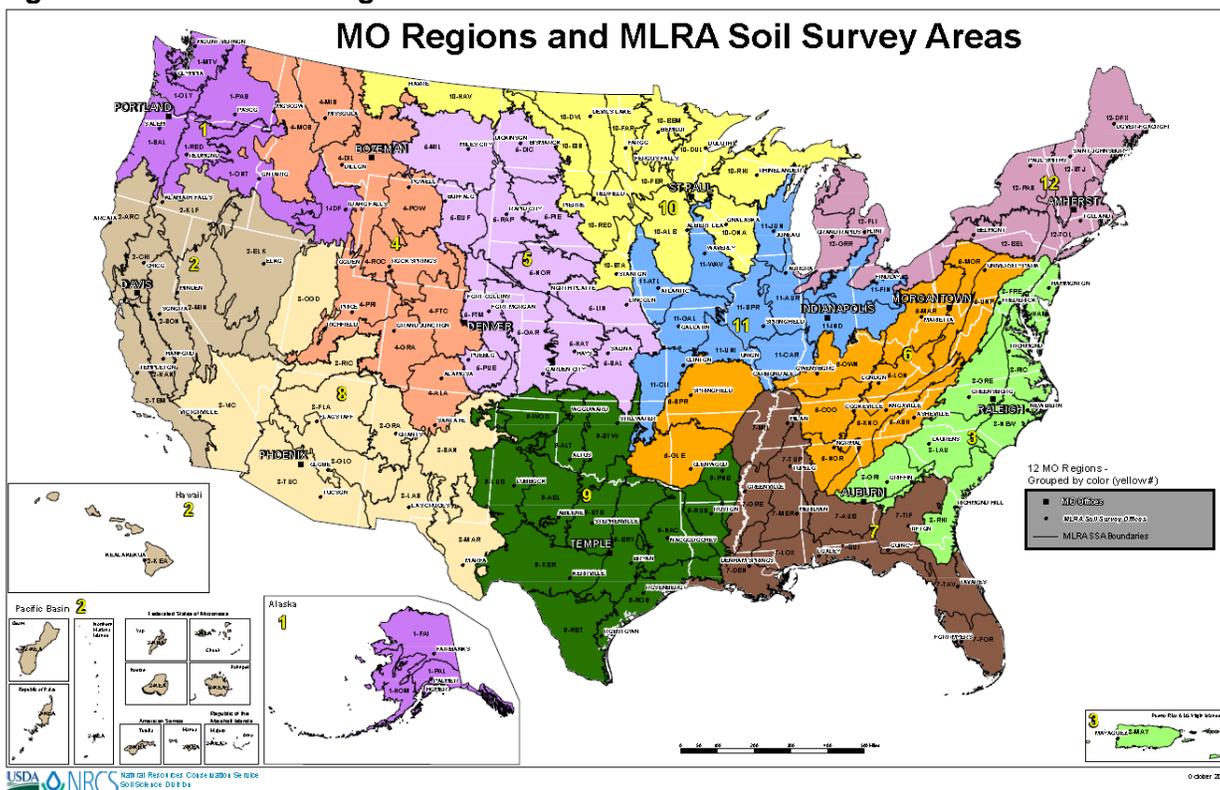
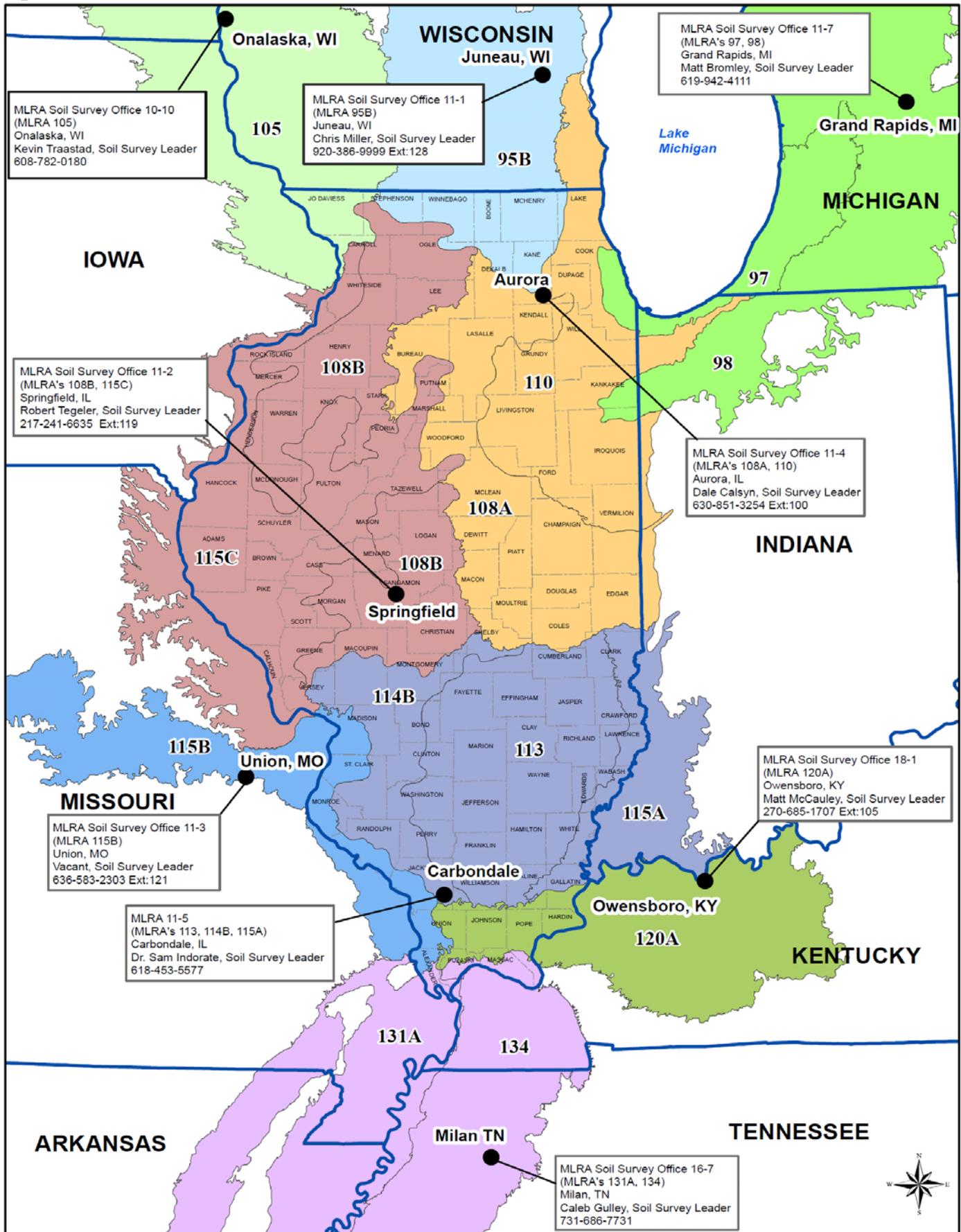


Figure 5. MLRA Boundaries and the Offices that serve Illinois



Operation and Management of Soil Survey activities

- The Soil Survey Leader “manages” a project
- The MLRA office collects and populates the local database and is responsible for quality control
- The Regional MLRA Office (MO) reviews the data and is responsible for quality assurance

The State Soil Scientist “publishes” a legend and uploads the data to the National Database at the Soil Data Warehouse ANNUALLY.

MLRA Projects--MLRA soil survey update activities are now conducted as a series of projects developed and prioritized to address update needs which are approved by the MLRA SSO management team and concurred by the MO board of advisors. Projects are developed in the context of the entire MLRA with the goal of developing a seamless national product. The projects currently approved are listed below by Soil Survey Office. The Soil Data Join Re-correlation (SDJR) is the focus of the Soil Survey Division for FY 2014 and has superseded several planned projects. The initiative provides guidance on the population of the NASIS database, outlines specific blanks to fill in, and calculations to use. The initial plan calls for as many of the large acreage map units to be brought up to a common standard nationwide in addition to the re-correlation of map unit names and numbers to common names and numbers across county and state boundaries. The end products will be more consistent maps, legends, and interpretations across county boundaries and state boundaries.

Soil Data Join Re-correlation (SDJR) Priority effort to provide seamless soil survey information in the next **three** years.

- Correlation and data enhancement using legacy soils data to provide seamless soils data
- Support the development of seamless soils data for use with CDSI, USDA Farm Bill Programs, and added value SSURGO products
- One data mapunit or consistent properties correlated to geographically consistent map units
- Dissolve the perceived data faults in interpretations visible in geospatial presentation of soil survey information
- Improve the database
- Identify priority update needs
- Scan pedon descriptions
- Enter pedon descriptions into pedon PC
- Check accuracy of UTM location of Taxonomic Unit Descriptions (vs SSURGO data)
- Develop/update/revise NASIS reports
- Revise/update guides for NASIS data development and population
- Link existing pedon descriptions in NASIS to appropriate map units
- Develop/revise MLRA Legend Area Overlap in NASIS
- Review NASIS data
- Develop Ecological Site Descriptions
- Evaluate the map units within the MLRA
- Use existing information to update map unit composition and soil properties migrating individual survey area map unit concepts into an MLRA soil survey area map unit concept
- Document future MLRA projects
- High DMU count map units (This basically means those map units mapped in multiple counties)
- High total map unit acres (Typically map units that affects the most customers)
- Benchmark soils (If evaluated first, can be used to provide information for smaller areas later (151 Benchmark soils with > 1M acres each)
- The update of data in the NASIS database continues; keeping in mind to populate critical soil properties that are needed for the calculation of interpretations. These include, but are not limited to Sand, Silt, Clay, Sand Fractions, fragment content, Bulk density, Available Water Capacity, soil structure, the depth to a restrictive feature, and the water table depth by month.

FUNDING

NRCS has provided more than \$48 million in funding for the cooperative soil survey effort since 1972.

[Illinois Department of Agriculture \(IDOA\) http://www.agr.state.il.us/](http://www.agr.state.il.us/) serves as the soil survey liaison to the Illinois General Assembly and allocates soil survey funds as appropriated. Since 1980 the State of Illinois has appropriated more than \$12 million for soil survey activities.

[County Boards of Commissioner http://ilcounty.org/](http://ilcounty.org/) provides the local level support needed to initiate and complete soil survey projects. More than \$13 million of local monies have gone to support soil survey projects throughout the state since 1972.

FY 72	515,434	34 positions
FY 80	1,401,932	58 positions
FY 88	2,970,760	84 positions
FY 90	2,624,320	67 positions
FY 00	2,472,000	41 positions
FY 05	2,620,793	45 positions
FY 10	1,597,278	29 positions
FY 12	982,000	29 positions
FY 13	210,400 (est) +?	1+ position
FY 14		29 Technical Soils, GIS, and ESD positions from new funding and supervisory structure

STAFFING

The National Soil Survey restructuring initiative began in 2007. The national plan supports three MLRA Soil Survey offices in Illinois. They are located in Aurora, Carbondale and Springfield. The Charleston and Rock Falls offices were closed in 2009. Six additional MLRA offices from adjacent states cover parts of Illinois by assigned MLRAs (see figure 4). The management and funding of these offices is turned over to the National Soil Survey Division and Regional Directors (formerly the MO leaders). Indianapolis will manage all three MLRA offices in Illinois.

Current Staffing

The MLRA soil survey staffs in Illinois, dedicated to soil survey updates and maintenance activities, are currently located in three MLRA soil survey offices as follows:

Carbondale	5 soil scientists	1 GIS specialist	
Aurora	3 soil scientists		
Springfield	6 soil scientists	1 GIS specialist →	1 ESD Specialist
	-----	-----	-----
	14 soil scientists	1 GIS specialist	1 ESD Specialist

There is one student trainee in Aurora scheduled to return in FY 2014.

The NRCS state office staff includes:

- 1 State Soil Scientist (Collman),
- 1 Resource Inventory Specialist (NRI and GIS) (Prescott),
- 1 Resource Analyst (GIS, GPS, and Technical Equipment) (BonJean),
- 1 Cartographer (Maps and Technical Equipment) (Withers),
- 1 State Geologist/RSS/Soil Health P.O.C. (Windhorn),
- 1 Office Automation Assistant (Jeanie—who also provides support to Ecological Sciences and Engineering staff).

Area staffs include Five resource soil scientists and three GIS specialists located throughout the state to provide technical soil services and GIS support.

Stan Sipp, a WAE and Tom Rhanor, a Pathways student, are not back in FY 2014. Jen Wollenweber, soil scientist in the Aurora MLRA accepted a Resource Soil Scientist Position in Minnesota. The re-organization of the Soil Survey Division will also leave the Assistant State Soil Scientist position unfilled.

With the re-organization, Illinois has been given access to and received assistance from Regional offices and MLRA offices other than MO 11.

Diagram 1 shows the structure as it was in FY 2013. The initiation of reorganization occurred in FY 2013. Positions highlighted in orange are not supported in the national SSD reorganization plan. Positions highlighted in Tan were supported by SSD re-organization plan.

Diagram 2 shows current FY 2014 Structure and personnel. Positions highlighted in green indicate personnel eligible for retirement. Blue indicates a GIS position funded as part of a multi-state region.

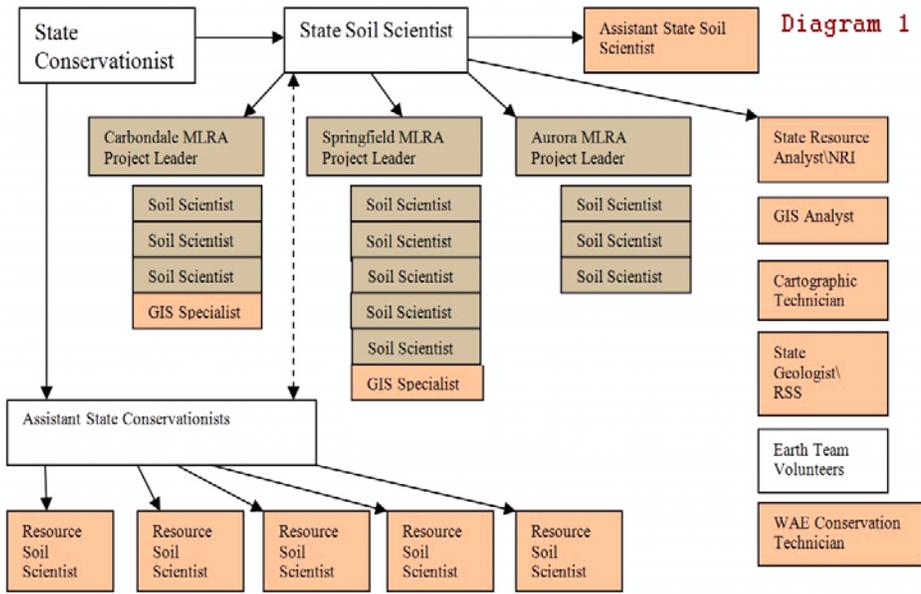


Diagram 1

Soil Survey Reorganization removed the supervision of the MLRA offices from the State Soil Scientist and does not support the position of Assistant State Soil Scientist, whose dominant role has been technical support to the State Soil Scientist, MLRA Soil Staff, and liaison between the Resource Soil Scientists and the data they use. The State Soil Scientist no longer manages the soil survey offices or provides the technical supervision. The State Soil Scientist's role is that of caretaker of the state data, to provide liaison duties between the State Conservationist, the Assistant State Conservationists, the Resource Soil Scientists, the MLRA offices, the MO Regional Directors, and the Cooperators of the state; and to be part of the Soil Survey and ESD management teams. The State Soil Scientist is also responsible for the requests for Technical Soil Services from Partners, the MLRA office soil scientists, the maintenance of the Cooperative Soil Survey, the Plan to Maintain the Soil Survey of Illinois, and the delivery of soils information to users, which includes input for the organization and delivery of wetland information and soil health education. Training needs and equipment needs relative to soils for Resource Soil Scientists, MLRA Soil Scientists', and Field Office Personnel are also important tasks the State Soil Scientist advises on.

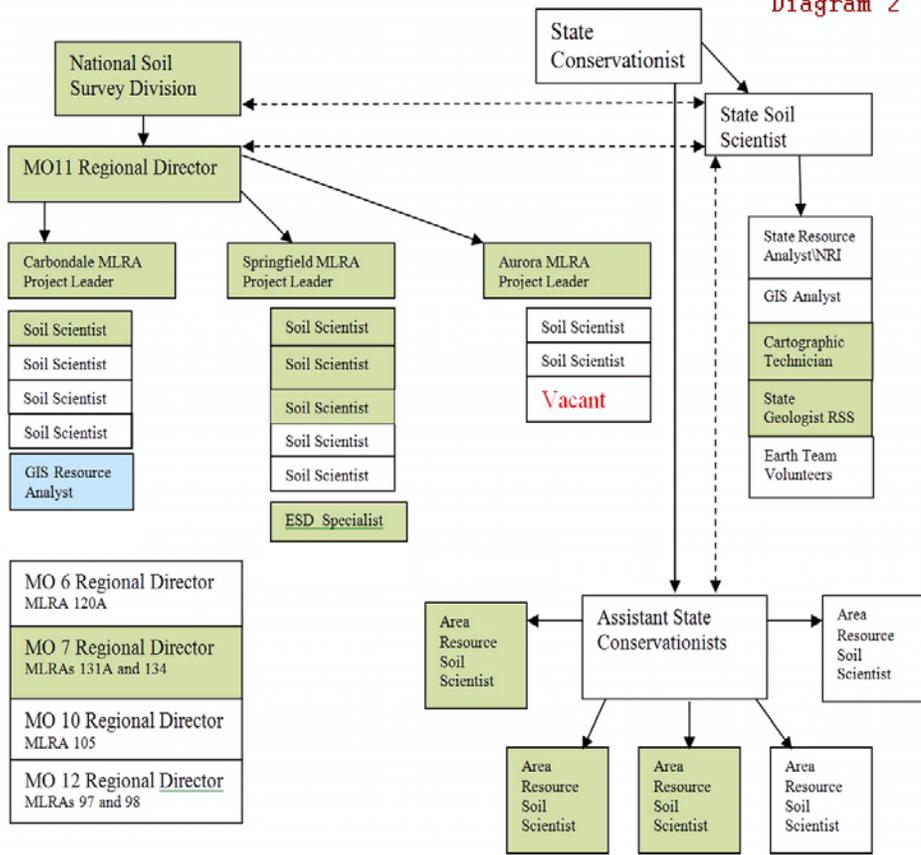


Diagram 2

WORKLOAD

State Office Staff

State Soil Scientist:

State Soil Scientists: Leadership in the Soil Survey Division [http://efotg.sc.egov.usda.gov/](http://efotg.sc.egov.usda.gov/http://efotg.sc.egov.usda.gov/references/public/IL/State%20Soils%20Scientists%20Leadership%20in%20the%20Soil%20Science%20Division.pdf)
<http://efotg.sc.egov.usda.gov/references/public/IL/State Soils Scientists Leadership in the Soil Science Division.pdf>

TSS, Management Team Member, Liaison, Tech Review, Admin

- Source of statewide soils data and explanation, query and map development, including WSS assistance
- Maintenance of the NRCS Illinois soils website <http://www.il.nrcs.usda.gov/technical/soils/index.html>
- Maintenance of eFOTG Section 2 soils information
- Liaison between soil partners (Cooperative Soil Survey), Illinois NRCS, Soil Survey Division, Regional MLRA offices, and Aurora, Carbondale, and Springfield MLRAs
- Supervision of State GIS staff and input on technical aspects and management of MLRA SS and RSS
- Maintain the “Plan to Maintain the Cooperative Soil Survey of Illinois” Includes long range plan, history, and training development
- Maintain the “Plan to Deliver Technical Soil Services in Illinois”
- Deliver a State GIS Plan
- Soil training
- Provide technical review of data submissions and changes
- Serve on the MLRA management team for approval of projects
- Participate in Leadership Team meetings and discussion
- Soil Business Area Analysis Group—National Technical Committee for soil equipment, software, and computer needs
- Provide technical review and input on technical publications for the state, including development of publications
- Coordinate Soils Information, Special Studies, and Data Delivery

Inventory, Organization, and House Cleaning

- Old survey reports
- Mylar Ortho negatives
- County original materials
- Other maps and sets of maps
- Equipment
- Scanning and Archiving
- Data books
- Soil Descriptions
- Training materials

GIS Staff

GIS\NRI specialist: GIS Leadership, Training, Processing, Maps

- National Resource inventory (NRI) leadership and coordination
- Farmland protection Policy Act (FPPA) documentation and reporting
- Watershed boundary stewardship
- GIS and LiDAR strategy, coordination, and planning
- LiDAR processing and support
- Ad-hoc requests for data and maps
- GIS support for toolkit, soil survey, programs, etc.
- Chocolate
- Support for wetlands digitizing
- Support for easement management
- Development of new GIS processes and algorithms

- Use LIDAR and LiDAR enhancements to evaluate and update spatial data
- Process raw LiDAR data using MARS software for 1 meter DEMs, soil wetness index, and 2 foot contours
- Use and refine LESS model for soil map unit revision and development
- Coordinate acquisition and distribution of “Big data”

GIS\Area Specialist

- Geodata Administration
- GIS and CST Training and Support
- GPS Training and Support
- Geospatial Analysis
- Supervising FSA Compliance Slide Scanning

GIS\Cartographer

- 70% - Maps - Interpretive/Status/Watershed
- 10% - Soil Business
- 10% - Processing data, Lidar, SSURGO StateWide data
- 10% - EM Mapping and Processing

State Geologist\RSS

- Provides statewide guidance for Soil Health. POC for Illinois and the national soil health program
- Provides geologic site-assessment WRP evaluations
- In charge of the RAP-M statewide watershed erosion and sedimentation inventories
- Serves as training instructor for Hydric Soils and Intro to Soils. Assist with other NRCS training
- Soils and geology outreach to many, many groups and individuals within the agency, state, etc
- Directs or assists with soils field projects, such as with Jim Doolittle and other soil scientists
- Coordinates of the EM and VERIS geophysical tools and their application in Illinois
- Provides Local/community outreach for soil judging, envirothons, field days with NRCS/SWCD, statewide presentations for ISGS, DNR, USGS, U of I, ISU etc.
- Provides onsite soil/geology investigations for animal waste systems. Also for pond sites
- Serves as Liaison to the IGMAC, ISGS, USGS and others involved directly with surficial geology mapping

Area Resource Soil Scientists

Program Support

Provide or review soil information and interpretations for CRP, CSP, GRP, EQIP, EWP, WRP and other programs as needed. This includes farmland classification (prime, unique, etc.) and Highly Erodible Land (HEL) determinations, status reviews, and field reviews. Interprets soil data and makes determinations during the program signup and application periods. Soil and geologic evaluations

RSS Wetlands

Provide leadership for Area and Field Office responsibilities in the wetland conservation provisions of the Farm Bill. Provide technical expertise in wetland inventories, determinations, minimal effect exemptions, appeals, wetland reserve program (WRP) and quality control. Delineate wetlands following procedures outlined in the Wetland Memorandum of Agreement (MOA). Provide training on wetland issues, wetland determination, and wetland restoration for NRCS and partner employees. Provide soil expertise during program and technical appeals and National Appeals Division (NAD) Hearings. Provide leadership with compliance slide scanning guidelines and strategy.

RSS Training and Delivery of Soils Information

Serve on statewide training cadres for Hydric Soils, wetland inventories and determinations, Introduction to Soil Survey, OJT, RUSLE2 training, Soils in Conservation Application, and certain public health issues. Provide leadership and assistance in the use of soil information and soil interpretations to technical specialists, Field Office personnel, partnership employees, and the public.

Assist users with Customer Service Toolkit, Soil Data Viewer, Web Soil Survey, MS Access soil databases and other soil report and analysis tools. Serve on multidisciplinary teams with technical specialists from other disciplines to utilize soil survey information for new and challenging needs.

Maintain partnerships, lead, organize, and provide training in soil science to employees, volunteers, teachers and students in support of Soils "Outreach" – Local and State Envirothons, Farm Progress Show, SWCD Field Days, U of I Field Days, School Conservation Field Days, High School FFA and Collegiate Land Judging Contests, Conservation Planning Course, Assist with U of I, Vo-Ag brochures, etc. Coordinate the Scientist at the Field Museum in Chicago, which are volunteers who interact with visitors in the Underground Adventure (soils) Exhibit, Presentations at seminars for soil health, soil productivity, drainage water management, organic matter, septic systems, and nature of disturbed soils. Makes soil displays and monoliths and creates formal presentations in the form of technical publications, fact sheets, correspondence, articles, and effective presentations to internal and external user groups to address local, regional, and statewide soil issues.

Serve as team members for field office quality assurance reviews and program appraisals. Review field office use of soils information (source data) in the application of conservation practices and programs. Recommends necessary changes to policies, guidelines, organizational structure, or field office procedures. Assist in the maintenance and review of all soil information in FOTG.

RSS National Resources Inventory (NRI)

Provide leadership and assistance to the Natural Resources Inventory (NRI) process; including Area coordination, data collection, and assistance to grassland specialists in sampling point verification of soil type and in data acquisition for the pastureland NRI.

RSS Farmland Protection Policy Act (FPPA), Farm and Ranchland Protection Program (FRPP), and Land Evaluation and Site Assessment (LESA), and other open space protection policies. Develop or review land evaluation groupings (LE) and works with local, regional, and state government officials in the development of site assessment (SA) scoring categories.

RSS Conduct, assist, and provide leadership with special projects and committees while maintaining partnerships in support of NRCS Mission

Collect soil samples for laboratory characterization. Conducts and assists with field studies dealing with specific soil properties to improve interpretations. Serves as soil survey liaison by maintaining relationships with MLRA offices, soil survey user groups and federal, state and local agencies to help coordinate and integrate agency programs related to use and application of soil survey information.

- High intensity soil surveys (Order1)
- Natural resource inventories
- Soil Health initiatives
- Multi-discipline natural resource studies
- Soil Sampling and data collection for Conservation Innovation Grant on cover crops
- TIERRA project Target Investigation of Earth Resources Related to Agriculture
- Select sites and soil map units with grassland specialists to collect forage yield data for ESDs and Forage Suitability Groups
- Coordinate with the State Archeologist in conducting site/soil investigations for cultural resource reviews
- VERIS and EM field studies locally and regionally National Soil Survey Center personnel
- MLRA field studies, such as measuring of saturated hydraulic conductivity (Ksat) on several sites using the Amoozemeter and investigation of parent materials and correlation
- Rapid Carbon Assessment
- Evaluate SSURGO certified projects (spatial data, attribute data) for maintenance needs and recertification
- Review of mining permits related to coal mine reclamation
- Map reclaimed mine land in older surveys for CRP and other requests
- Prescribed Burn assistance
- EWP Coordinator

- Serve on the State of Illinois Department of Public Health Advisory Commission on Private Sewage Disposal
- Serve on the NRCS State Technical Committee and Area Training Committee
- Revised and update the soils portion of the Kane County Subdivision Ordinance
- Provide on-site technical assistance to agency personnel, units of government, and individuals on the interpretation and application of soil survey information related to specific soil, water, air, plant, and animal resource concerns.
- Evaluate soil properties and predict response to conservation practices, wetland restorations, and other land management uses. Provide Soils/Engineering investigations to support the design and installation of conservation structures and structural engineering practices as required in NEM policy
- Utilize GIS, EM, and GPS technology and trains others in its appropriate use in the field. GIS training includes the use of SSURGO digital soil surveys and Soil Data Viewer.
- Advise and serve State Soil Scientist in coordinating NRI, FPPA, LESA, GIS, remote sensing, GPS, slide scanning, and cartography activities in the Area. Make, provide, interpret thematic maps for inventories, special studies, planning, etc.

State Projects and Activities

LIDAR - We have begun loading LiDAR data and products to the new storage space in the SO. So far, I've copied 17 counties worth of data, totaling about 3.5 terabytes. We've also set up storage space for compliance slides, but have not begun copying to it.

Logan County LiDAR was flown the week of November 25, 2013. NRCS (IL and SSRAD) paid for about 90% of the \$260,000 acquisition cost. Preliminary products will be delivered by January 21 for QA/QC. Final products will be delivered by March 31. Products will be used to develop elevation, slope and contour maps to support planning for drainage water management and other conservation practices.

Watershed Boundary Edits - 12 digit watershed boundary edits. With LiDAR, we can considerably refine watershed boundaries. But the hands-on editing work and QA/QC required will need considerable time commitments. I need to explore the possibilities of using student help with ISWS and USGS. It may be possible to arrange internships and/or cooperative projects to make this happen.

Land Evaluation and Site Assessment (LESA)

Farmland Protection Policy Act – Tim Prescott, Resource Inventory Specialist, completes the Farmland Conversion Impact Rating (AD 1006 and CPA 106) forms submitted to NRCS. During the FY11 year there were 20 forms completed. These were for projects, receiving some federal funding, that proposed converting 571 acres to a permanent non-agricultural use, of which 341 acres were identified as prime and unique farmland and 83 acres as statewide important farmland. Illinois has 37 counties that have LESA systems approved by the State Conservationist.

Prescott has reviewed data sets for the proposed "Illiana corridor" between I-55, I-57, and I-64, a multistate highway project.

Macon County, Illinois renewed their county LESA.

Natural Resources Inventory (NRI)

National NRI imagery acquisition and delivery by APFO has gotten behind schedule for collection of 2013 data in FY 2014. The projected deadline will be mid-August. In previous years, the local sample has been released for collection in full counties. For this collection cycle, the Remote Sensing Lab in Ft. Worth will release the sample locations for local data collection as they finish them. As a result, IL data collectors will receive a trickle of samples, rather than a full county. **2014 NRI Grazing Land On-Site Data Collection May-July in Illinois**

Soil Monitoring Network

Soil Monitoring Network is a long term study sampling current NRI points to detect changes in terrestrial carbon stocks across the country. We have a great start on the Soil Monitoring Network and are not giving up but budget is limiting this national project.

National Calculation of Primary Soil Interpretations

NASIS calculations have been developed to provide uniformity and consistency in the population of various soil factors and to assist soil survey staff in efficient population of the soils database. Calculations are written using scientific peer reviewed and published criteria and developed to be applicable nationwide. If determined suitable for publication by the State Conservationist, then we will proceed with publishing the soil survey information to the Web Soil Survey and the electronic Field Office Technical Guide (eFOTG). T factor, Kf, Kw, hydrologic soil group, and others typically have been populated manually in the database, but these calculations will produce more consistency. T factors have now successfully been calculated for most Illinois soils; still evaluating some soils that do not calculate well, such as paleosols, soils with dense till or sandy substrata, soils with abrupt textural changes, and organic soils. Soil property data is still being evaluated to ensure consistency. The calculation for Hydrologic Soil Group works well and nearly all Illinois soils have been calculated. Kf and Kw will have some issues if calculated at this time, based on slight inconsistencies in the property data. Calculations for Corrosion Concrete and Corrosion Steel are also being evaluated.

Status: This year, the calculation of T, K, WEI, WEG, HSG, Corrosion Concrete and Corrosion Steel are scheduled to be done globally. After reviewing several data sets and map units across the state, the calculation of these interpretations is not considered to be in the best interest of the users of the data and Illinois has formally requested that the calculation not be done prior to SDJR.

NRCS/University of Illinois Mine Land Reclamation Study

This ongoing project will determine bulk densities, compaction with and without land treatment, root zone characteristics and future soil property changes in areas of Prime Farmland that were surface mined for coal and have now been reclaimed. Soil Quality is a big issue on these sites for the local people and those involved with releasing or holding pre-mining bond money.

Status: 2013 sampling was cancelled due to weather and other issues. Sampling will continue in 2014.

4-2013 Field investigation conducted by Jim Doolittle, NRCS Research Soil Scientist; Roger Windhorn, NRCS Geologist; Dan Withers NRCS Cartographic Technician; and Kim Smail, NRCS District Conservationist-Fulton Co. Several mine reclaimed areas were sampled via Electromagnetic Induction (EMI). The purpose of these investigations is to gain a better understanding of the variability of reclaimed land that will enable the District Conservationist to provide land management guidance to landowners/producers. Assistance was provided by the Springfield, Illinois MLRA.

4-2014 Follow up investigations are scheduled for April/May 2014. Fulton, Jo Daviess. Assistance from MLRA staffs of the Onalaska, Wisconsin MLRA.

STATSGO Revise/update

MLRA map Revise/update

Develop/publish general soil maps (with block diagrams) for MLRA and field office display

Benchmark Soils: Classification/Correlation

Update OSD's (describe to 80", GPS, historical folder, classification data)

Update representative pedons DMU identification spreadsheets

Review Correlation Documents

Revised Soil Properties "Hit List"

Collect "fundamental data" for OSD's

Develop representative DMU's using fundamental data

Spatial Distribution analysis of benchmark soil series and DMU's (spatial inconsistencies/discontinuities)

Develop Block Diagrams for important/representative suites of soils

Characterization Data

Determine data needs for Illinois OSD's and Benchmark Series

Organize and analyze lab data

Update NSSL data location information

General Soil Map Project

Description: Illinois NRCS is in the process of updating the Soils of Illinois map that has been used for a number of years. Since the state has now been completely re-mapped and maps digitized, we now have the opportunity to use GIS to sort features, such as parent materials, and to correlate soils across county lines.

Status: A series of maps have been produced, which are listed at the end of this summary. All of these initially had a 50-acre filter applied, which resulted in much detail on the maps. It was decided that at the 1:500,000 scale these maps contained too much detail. A selected set of three maps were re-done using 640-acre and 2,500-acre filters. These were reviewed and conditionally determined that the 2,500-acre filter produced the proper detail on the final map. The maps were then scrutinized to determine what soil correlations could be used for each parent material designation. We are in the process of finalizing this correlation process right now. Once this determination has been made for each map, a revised set of all the maps will be produced using the 2,500-acre filter. This map set will be considered a "draft" and will be available for review and comment. Once the "draft" has been finalized, a completed Soils of Illinois map will be produced. It will be posted on our web site and hard copies might be available, depending on funding.

Interpretations

Conservation Tree and Shrub Groups

A guide related to soil properties and trees and shrubs to plant. Used as a guide for the establishment of plants listed for certain soil groups. Plan to update the statewide list by June 30, 2012.

Status: A guide is developed, but knowledge gained through the ESD process indicates that CTSG interpretations and productivity information related to specific species needs to be adjusted for landform/landscape relationships for some soils.

Soil Groups for Plants

Based on soil properties known to affect the growth of most plants. Places soils into plant groups with subgroups similar to CTSG and pasture suitability groups for all plants. This interpretation is under development as part of the development of CTSG groups and ESDs.

Status: This interpretation is similar to Forage suitability groups and CTSGs in that it looks at properties of the soils, but also incorporates estimated plant available water in an attempt to identify the ecological types of the soils in addition. Specific to Illinois and perhaps adjacent Midwest states. Currently only in Excel.

Plant Groups for Soils

Based on plant properties and limitations populated in the USDA plants database with other data added from other sources. Places plants into like 'PLANT' Groups similar to soil groups for plants. Based on plant properties and limitations populated in the USDA plants database with other data added from other sources. Stan Sipp has reviewed information in the plants database for Illinois species of trees and shrubs and made edits based on current knowledge and sources.

Status: This database needs reviewed and also coordinated with the ILPIN listing. I have some narratives for each of the plants listed for Illinois IF they have sufficient soils information in the database. Plants database may have some issues and definitely could use some more soil related columns to link back to NASIS, soil characterization, or PEDON.

Soil Productivity Index

Current productivity index values are developed by the University of

Illinois. <http://soilproductivity.nres.uiuc.edu/>; SDJR is removing yield data from NASIS database to facilitate

seamless joins with other states. The National Commodity Crop Productivity Index (NCCPI, version 2) for agricultural crops, including organic farming systems is being evaluated and a comparison was made back to the University of Illinois indices.

Status: Soil productivity index and crop yield indices have been adjusted for slope, erosion and mapped flooding frequency. National crop commodity index has been mapped for comparison. Additionally, Adjusted PI based on University of Illinois has been put on the same scale as NCCPI for comparison maps. Comparison is similar to Model used by University of Illinois. Some soil groups ie. Sandy and gravelly soils in particular, are not handled the same way in the different models.

Status: University of Illinois Base PI and Yield indices and NRCS Adjusted PI and Yield indices have been posted on the Illinois eFOTG, section 2. Additionally, Base indices and the adjusted indices have been coded into NASIS for an internal NASIS Report. Next step is to re-code for a WSS report available to the public.
<http://efotg.sc.egov.usda.gov/>

http://efotg.sc.egov.usda.gov/references/public/IL/Calculating_productivity_and_yield_indices_in_Illinois_with_adjustment_factors_for_crop_productivity.pdf This link directs you to download the documentation and maps of the Productivity adjustments based on University of Illinois base values and Illinois NRCS slope, aeration, and flooding adjustments.

http://efotg.sc.egov.usda.gov/references/public/IL/NRCSEstimated_MapUnit_ProductivityIndex_and_Yield_Spreadsheet_by_MapUnit_2013.xlsx This link directs you to a spreadsheet for download that has all NRCS adjusted yield indices in one worksheet and all base indices from the latest University of Illinois revision.

A NASIS report has been developed and a report to deliver yield information to the Web Soil Survey is in process. A URL Report is also in process.

Soil Forest Site Index

Using a similar coding process, University of Illinois Bulletin 810 site index values are coded for NASIS reports and eventually WSS reports.

Stan Sipp has reviewed site index point data from several sources. He has compared University of Illinois bulletin 810 data and the formulas used to derive the data. We are attempting to update the site index information that is provided and will be working with University of Illinois and others to update the out of date site index information in our interpretation tables in the NASIS database.

Status: Interpretive maps have been developed from site indices. This data is directly from Bulletin 810 from the University of Illinois. I intend to discuss with Ken Olson (UofI), what we have found in the review of data and in comparison to soils and PI values. Available measured site indices and species growth curves have been graphed and compared to indices delivered in Bulletin 810 and NRCS interpretation tables. Variability in landform and vegetative community stage significantly affects site index.

Could post on eFOTG. May also post proposed adjustments and discuss adjustments that the user might incorporate relative to landform.

Status: Soil site index for White oak, Northern red oak, White ash, Eastern White pine, Eastern Cotton, Pin oak, and Tulip poplar have site index values that can be included in the report.

Prime Farmland -- Planning to update the Illinois Prime and Important Farmlands publication

Rapid Carbon Assessment – Final Reports available at:

http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcs142p2_054164

- To evaluate differences in soil carbon associated with Ecosystems, Agricultural management systems, and Land uses

- To develop a scientifically based and statistically valid baseline inventory of soil carbon; Apply this data to improve existing decision support 128 sites were sampled in 67 counties in Illinois
- Pedon descriptions, data workbooks and management questionnaires were entered for all sites

The TIERRA Project (Target Investigation of Earth Resources Related to Agriculture) at Northeastern Illinois University is a USDA/National Institute of Food and Agriculture grant to Hispanic Serving Institutions to help students at higher learning institutions learn about USDA and to attract outstanding students and produce graduates capable of enhancing the Nation's food and agricultural scientific and professional work force. Mark Bramstedt, Resource Soil Scientist, serves as the NRCS liaison for this project.

A detailed summary from NEIU's website:

<http://www.reeis.usda.gov/web/crisprojectpages/222545.html>

Technical Soil Services provided by MLRA staff

MLRA staffs follow the same standard that Illinois has had for more than 20 years. MLRA staffs are to provide 15% of their time (about 270 hrs. each) to TSS as requested by State, Area Staff, or the State Soil Scientist. The following tables outline the reported TSS delivered for FY 2013 and 2014.

Table 1 - 2013 TSS Reported by MLRA offices SUMMARY

TYPE	Instances
Create custom maps, reports, data files, etc.	16
Develop or validate interpretations	10
National Resource Inventory (NRI)	82
Off-site wetland determination	51
On-site investigation, conservation practice dsgn or install	1
On-site investigation, geophysical	1
On-site investigation, nutrient management	1
On-site investigation, other(non-soil survey)	4
On-site investigation, other(non-soil survey)Off-site wetland determination	1
On-site investigation, reconsideration of wetland determine	2
On-site investigation, resource inventory	7
On-site investigation, wetland appeal	3
On-site investigation, wetland determination or delineation	115
On-site investigation, wetland determination or delineationOff-site wetland determination	1
On-site investigation, wetland determination or delineationOn-site investigation, reconsideration of wetland determine	1
Provide training to NRCS and partners	15
Public information articles, pamphlets, booklets, etc.	3
Quality Assurance Reviews	34
Soil judging contests, envirothons, etc.	10
Teaching, lectures, presentation, displays, posters	303
Technical consultation	9

Table 2 - 2014 TSS Reported by MLRA offices SUMMARY

TYPE	Instances
On-site investigation, reconsideration of wetland determine	1
On-site investigation, soil health management	1
On-site investigation, wetland determination or delineation	16

Provide training to NRCS and partners	1
Quality Assurance Reviews	5
Teaching, lectures, presentation, displays, posters	11
Technical consultation	4
Grand Total	39

SOIL SURVEY

AURORA MLRA OFFICE

Table 3: SDJR PROGRESS for FY 2013 by Office and User as of 04/15/2014

Project Name	Goaled
MLRA 108A - 7 LaSalle and Livingston Counties Subsets Perfect Join FY12-13	28163
SDJR - MLRA 108A - Catlin silt loam, 2 to 5 percent slopes	38282
SDJR - MLRA 108A - Catlin silt loam, 2 to 5 percent slopes, eroded	27307
SDJR - MLRA 108A - Clare silt loam, 2 to 5 percent slopes	3380
SDJR - MLRA 108A - Flanagan silt loam, 0 to 2 percent slopes	127714
SDJR - MLRA 108A - Saybrook silt loam, 2 to 5 percent slopes	3820
SDJR - MLRA 108A - Saybrook silt loam, 2 to 5 percent slopes, eroded	15176
SDJR - MLRA 108A - Saybrook silt loam, 5 to 10 percent slopes, eroded	5440
SDJR - MLRA 110 - Alvin fine sandy loam, 2 to 5 percent slopes	1044
SDJR - MLRA 110 - Ashkum silty clay loam, 0 to 2 percent slopes	92261
SDJR - MLRA 110 - Blount silt loam, Lake Michigan lobe, 0 to 2 percent slopes	11960
SDJR - MLRA 110 - Darroch silt loam, 0 to 2 percent slopes	5166
SDJR - MLRA 110 - Milford silty clay loam, 0 to 2 percent slopes	46297
SDJR - MLRA 110 - Swygert silty clay loam, 2 to 4 percent slopes, eroded	10111

Table 4: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
SDJR - MLRA 108A - Drummer silty clay loam, 0 to 2 percent slopes	176096
SDJR - MLRA 108A - Elburn silt loam, 0 to 2 percent slopes	40933
SDJR - MLRA 108A - Elpaso silty clay loam, 0 to 2 percent slopes	36100
SDJR - MLRA 108A - Raub silt loam, 0 to 2 percent slopes	18411
SDJR - MLRA 110 - Bryce silty clay, 0 to 2 percent slopes	57364
SDJR - MLRA 110 - Elliott silt loam, 0 to 2 percent slopes	41906
SDJR - MLRA 110 - Elliott silt loam, 2 to 4 percent slopes	20790
SDJR - MLRA 110 - Elliott silty clay loam, 2 to 4 percent slopes, eroded	18593
SDJR - MLRA 110 - Elliott silty clay loam, 4 to 6 percent slopes, eroded	711
SDJR - MLRA 110 - Pella clay loam, Glacial Lake Watseka, 0 to 2 percent slopes	13060
SDJR - MLRA 110 - Pella silty clay loam, 0 to 2 percent slopes	12220
SDJR - MLRA 110 - Selma loam, 0 to 2 percent slopes	21690
SDJR - MLRA 110 - Swygert silty clay loam, 0 to 2 percent slopes	17290
SDJR - MLRA 110 - Swygert silty clay loam, 4 to 6 percent slopes, eroded	1482

Detail to Assist in Completing the Initial Soil Mapping for the U.S. and for Training

Jennifer Wollenweber was in Minnesota summer 2013 for a mapping detail to gain both training and acceleration of mapping.

CARBONDALE MLRA OFFICE

Table 5: SDJR PROGRESS for FY 2013 by Office as of 04/15/2014

Project Name	Goaled
MLRA 113 - 6 Sodium Affected Soils/Periglacial Project	200000
SDJR - MLRA 113 - Cisne silt loam, 0 to 2 percent slopes	102771
SDJR - MLRA 113 - Wynoose silt loam, 0 to 2 percent slopes	51949

Table 6: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
MLRA 113, 114, 115B - Lenzburg, Schuline Minesoil Water Table Study	8980
MLRA 114B - 5 Sodium Distribution Project FY12, 13, 14	375489
MLRA 115A - Mined Land Reclamation Project FY14	1240
SDJR - MLRA 113 - Ava silt loam, 2 to 5 percent slopes	62176
SDJR - MLRA 113 - Ava silt loam, 2 to 5 percent slopes, eroded	7527
SDJR - MLRA 113 - Ava silt loam, 5 to 10 percent slopes, eroded	22439
SDJR - MLRA 113 - Bluford silt loam, 0 to 2 percent slopes	104592
SDJR - MLRA 113 - Bluford silt loam, 2 to 5 percent slopes	47666
SDJR - MLRA 113 - Bluford silt loam, 2 to 5 percent slopes, eroded	33776
SDJR - MLRA 113 - Cisne silt loam, bench, 0 to 2 percent slopes	1490
SDJR - MLRA 113 - Hoyleton silt loam, 0 to 2 percent slopes	45256
SDJR - MLRA 113 - Hoyleton silt loam, 2 to 5 percent slopes	17112
SDJR - MLRA 113 - Hoyleton silt loam, 2 to 5 percent slopes, eroded	9607
SDJR - MLRA 113 - Hoyleton silt loam, bench, 0 to 2 percent slopes	734
SDJR - MLRA 113 - Stoy silt loam, 0 to 2 percent slopes	8257
SDJR - MLRA 113 - Stoy silt loam, 2 to 5 percent slopes	11166
SDJR - MLRA 113 - Stoy silt loam, 2 to 5 percent slopes, eroded	1750
SDJR - MLRA 113 - Stoy silt loam, 5 to 10 percent slopes	56
SDJR - MLRA 113 - Stoy silt loam, 5 to 10 percent slopes, eroded	268
SDJR - MLRA 114B - Marine silt loam, 0 to 2 percent slopes	18623
SDJR - MLRA 114B - Marine silt loam, 2 to 5 percent slopes	13282
SDJR - MLRA 114B - Oconee silt loam, 0 to 2 percent slopes	17668
SDJR - MLRA 114B - Oconee silt loam, 2 to 5 percent slopes	13909

Digital Soil Mapping techniques Pilot study Selected landforms in Wabash, Lawrence, Richland, and Edwards counties in Illinois. These are four of the oldest soil surveys in Illinois and all are vintage 1950s and 1960s. All four counties join, and are surrounded by counties in Illinois and Indiana that are up to current SSURGO standards. The updating of these four counties will require both fieldwork and database work to bring them up to SSURGO standards. These counties are excellent candidates for Digital Soil Mapping, which is a major part of the next generation soil survey.

The remaining pseudo counties in this survey area will be updated as part of the Soil Survey Data Join Re-correlation and future projects identified during SDJR.

Surface Mine Soil Series Project (Illinois Army National Guard Sparta Training Area)

Description: To characterize 2 dominant surface-mine soils in southern Illinois and install pressure transducers to determine water table depths and drainage classes for these soils.

Status: We have completed all 16 of the soil investigations for the low water crossings. This is assistance to the Area Engineer, David Webber. We have been also been working with Tony Janus (ILANG) in the selection of soil pit sites and pressure transducer sites. We have described and sampled the four soil pits. Samples were sent to the National Soil Survey Laboratory in Lincoln Nebraska. We have installed water table monitoring instrumentation (pressure transducers) at the four pits. Results will be collected over a period of two years. We presently have no data on the water tables for the Schuline and Lenzburg soils and these results should help fill the data gaps.

Shawnee Hills Loess Catenas Project

Description: Watershed-based soil landscape studies are on-going in Illinois, Indiana, and Kentucky. The area of study is the Shawnee Hills region, located within MLRA 120 (Kentucky and Indiana Sandstone and Shale Hills and Valleys) and a small portion of MLRA115B (Central Mississippi Valley Wooded Hillslopes). These studies are linked by similar parent materials, land use characteristics, and common objectives. Together, they represent a mechanism for the examination of soil landscapes, water movement, and the nature of pedogenesis in a landscape setting. The emphases of these three studies include the documentation of key soil landscape relationships within the MLRA's.

Objectives of the Illinois, Indiana, and Kentucky studies are:

Develop a model of soil distribution on selected benchmark landscapes;

Assess major factors controlling soil development, soil change and spatial variability;

Determine variables that serve as markers of soil type, pedogenesis, metapedogenesis, and water movement such as clay distribution, soil color/redox features, and geochemistry.

Cooperators include: USDA-NRCS (Illinois, Indiana, Kentucky and NSSL), Southern Illinois University, Purdue University, University of Kentucky, Illinois State Geological Survey, United States Geological Survey, Kentucky Geological Survey, and the US Forest Service. All participants are part of the National Cooperative Soil Survey and have a common interest in the future of soil science and the future of soil survey.

Status: Installation of equipment is nearly completed and data is being collected. More than 50 individuals have received hands on soil landscape training as part of the project.

Sodium Affected Soils Project (SAS)

Description: Determine possible impact of periglacial features on sodium affected soil distribution in south central Illinois

Status: Fall of 2008: participated in EM/Ground Penetrating Radar investigation in Montgomery Co. with Dr. Jim Doolittle. This investigation was in conjunction with a Carbondale MLRA project to investigate possible influence of periglacial features on SAS soils and the Springfield MLRA Sodium Distribution Project.

4-29-2010 – Wet conditions in the fall of 2009 as well as in the spring of 2010 limited field activities. Field sampling is scheduled for the fall of 2011. Viewed the sample areas in Montgomery Co. with staff members from the Carbondale MLRA Office; we also viewed the site of a sodium affected soil study conducted in the early 1960s, by the University of IL, and SCS (NRCS).

4-20-2011 – Acquired LiDAR for approximately 115 sq. miles covering part of the project area in Macoupin and Montgomery Counties. Will evaluate for use in predicting sodium affected areas. Possibly sample for lab analysis in Fall 2011. Assistance from the National Soil Survey Lab has been requested and approved for complete characterization and mineralization of selected sample sites. Participated in the Midwest Friends of the Pleistocene Trip in Clinton County in 2011 to present our hypothesis on the link between sodium affected soils (SAS) and patterned ground.

Compilation of Loess studies in Illinois on CD Carbondale MLRA Office compiled and organized all of the significant loess studies that have been conducted in Illinois and the midwest. This is available on CD to anyone requesting the information.

Image processing for Sodium Affected Soils SAS

Jon Bathgate's computer has ERDAS Imagine 9.3. He will be doing image analysis and LIDAR analysis of the SAS areas with Tim Prescott.

Status:

Darmstadt/Loess Thickness Study

Description: This study is being lead by Troy Fehrenbacher and Zach Webber. It started out as the Darmstadt Study, but has evolved into a study that starts with an understanding of the influence of loess thickness over the Sangamon Paleosol.

Status: This is now included in the Sodium Affected Soils Project.

SPRINGFIELD MLRA OFFICE

Table 7: SDJR PROGRESS for FY 2013 by Office as of 04/15/2014

Project Name	Goaled
SDJR - MLRA 108B - 1 - Assumption silt loam, 2 to 5 percent slopes	1056
SDJR - MLRA 108B - 2 - Assumption silt loam, 2 to 5 percent slopes, eroded	507
SDJR - MLRA 108B - 3 - Assumption silt loam, 5 to 10 percent slopes, eroded	8293
SDJR - MLRA 108B - 4 - Assumption silt loam, 10 to 18 percent slopes, eroded	3682
SDJR - MLRA 108B - 5 - Assumption silty clay loam, 10 to 18 percent slopes, severely eroded	457
SDJR - MLRA 108B - 6 - Ipava silt loam, 0 to 2 percent slopes	224251
SDJR - MLRA 108B - 7 - Ipava silt loam, 2 to 5 percent slopes	4472
SDJR - MLRA 108B - 8 - Denny silt loam, 0 to 2 percent slopes	2607
SDJR - MLRA 115C - 1 - Ipava silt loam, 2 to 5 percent slopes, eroded	6500
SDJR - MLRA 115C - 2 - Ipava silt loam, terrace, 0 to 2 percent slopes	58
SDJR - MLRA 115C - 3 - Timewell silt loam, 0 to 2 percent slopes	6160
SDJR - MLRA 115C - 4 - Timewell and Ipava soils, 0 to 2 percent slopes	8490
SDJR - MLRA 115C - 5 - Timewell and Ipava soils, 2 to 5 percent slopes	2144

Table 8: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
MLRA 115C - 2 Sangamon Geosol Project FY11, 12, 13	132000
MLRA 115C - 3 LiDAR Enhanced Soil Survey Project FY11, 12, 13	250
MLRA 115C - 4 Hickory Soils distribution Project FY 11-12	429635
SDJR - MLRA 108B - Rozetta silt loam, 10 to 18 percent slopes	44
SDJR - MLRA 108B - Hickory silt loam, 10 to 18 percent slopes, cool mesic	1357
SDJR - MLRA 108B - Ipava-Osco silt loams, 2 to 5 percent slopes	280
SDJR - MLRA 108B - Osco silt loam, 0 to 2 percent slopes	3752
SDJR - MLRA 108B - Osco silt loam, 10 to 18 percent slopes, eroded	374
SDJR - MLRA 108B - Osco silt loam, 2 to 5 percent slopes	150173
SDJR - MLRA 108B - Osco silt loam, 5 to 10 percent slopes, eroded	40369
SDJR - MLRA 108B - Osco silt loam, terrace, 0 to 2 percent slopes	39

SDJR - MLRA 108B - Osco silt loam, terrace, 2 to 5 percent slopes	74
SDJR - MLRA 108B - Osco silty clay loam, 5 to 10 percent slopes, severely eroded	1540
SDJR - MLRA 108B - Sable silt loam, 0 to 2 percent slopes, overwash	2955
SDJR - MLRA 108B - Sable silty clay loam, 0 to 2 percent slopes	179794
SDJR - MLRA 115C - Hickory silt loam, 18 to 35 percent slopes, cool mesic	48178
SDJR - MLRA 115C - Hickory silt loam, 35 to 60 percent slopes, cool mesic	19189
SDJR - MLRA 115C - Ipava-Sable complex, 0 to 2 percent slopes	979
SDJR - MLRA 115C - Keomah silt loam, 0 to 2 percent slopes	40159
SDJR - MLRA 115C - Keomah silt loam, 2 to 5 percent slopes	12145
SDJR - MLRA 115C - Keomah silt loam, 2 to 5 percent slopes, eroded	2929
SDJR - MLRA 115C - Keomah silt loam, terrace, 0 to 2 percent slopes	323
SDJR - MLRA 115C - Keomah silt loam, terrace, 2 to 5 percent slopes	171
SDJR - MLRA 115C - Rozetta silt loam, terrace, 5 to 10 percent slopes, eroded	749
SDJR - MLRA 115C - Rozetta silt loam, 0 to 2 percent slopes	5515
SDJR - MLRA 115C - Rozetta silt loam, 10 to 18 percent slopes, eroded	4243
SDJR - MLRA 115C - Rozetta silt loam, 2 to 5 percent slopes	97312
SDJR - MLRA 115C - Rozetta silt loam, 2 to 5 percent slopes, eroded	8316
SDJR - MLRA 115C - Rozetta silt loam, 5 to 10 percent slopes	17
SDJR - MLRA 115C - Rozetta silt loam, 5 to 10 percent slopes, eroded	41751
SDJR - MLRA 115C - Rozetta silt loam, terrace, 0 to 2 percent slopes	130
SDJR - MLRA 115C - Rozetta silt loam, terrace, 2 to 5 percent slopes	1173
SDJR - MLRA 115C - Rozetta silty clay loam, 10 to 18 percent slopes, severely eroded	258
SDJR - MLRA 115C - Rozetta silty clay loam, 2 to 5 percent slopes, severely eroded	47
SDJR - MLRA 115C - Rozetta silty clay loam, 5 to 10 percent slopes, severely eroded	5460
SDJR - MLRA 115C - Rozetta silty clay loam, terrace, 10 to 18 percent slopes, severely eroded	72
SDJR - MLRA 115C - Rozetta silty clay loam, terrace, 5 to 10 percent slopes, severely eroded	14
SDJR - MLRA 115C - Sable silty clay loam, terrace, 0 to 2 percent slopes	176

Sangamon Paleosol/Geosol Project

Description: This project will evaluate existing lab data and water table data on six soil series underlain by the Sangamon Geosol. Collect additional data where existing data is minimal. Resulting data will be used to refine selected soil properties in data mapunits in the NASIS database.

This project will continue into a second project with monitoring water table depths via data loggers at selected sites. Resulting data will be used to refine soil water properties where needed in the NASIS database.

Status: Began review of possible map units to investigate, obtained CRP layer for IL. Overlaid soils of interest on CRP layer to assist in determining possible sample sites. Pedon descriptions on file for soils of interest, at Springfield MLRA Office, have been entered in the Pedon PC program.

Will evaluate existing pedon descriptions and lab data for possible correlation with sites in CRP. Hope to select sites in CRP to provide easy access for sampling and water table monitoring. RTegeler 5-12-09

4-29-2010 Continue to enter pedon descriptions of soils formed in the geosol that were on file at the Rock Falls MLRA Office. Assumption, Atlas, Coatsburg, and Elco pedons have been entered into the Pedon PC program, for eventual export to the NASIS database. We are in the process of georeferencing these pedons via ArcMap. This pedon data and locations will be evaluated for future site selection. Pressure transducers

were ordered and received for future water table monitoring. Assistance from the National Soil Survey Lab has been requested and approved for complete characterization of selected sample sites.

4-20-2011 Pedon descriptions of geosols have been entered into Pedon PC. Continue to georeference pedons, Dale Baumgartner has primary responsibility, Amy Kuhel has assisted. Over 100 pedon descriptions of geosols have been located, via ArcMap. Jim Hornickel has queried the NSSL and UofI lab data base for possible sample sites. Minimal lab data for geosols except Atlas. Data has been put into a spreadsheet for analysis. No intersection of lab data with CRP, minor intersection of pedon descriptions with CRP. Currently investigating sites for lab sampling and water table monitoring in CRP areas. Plan to sample sites for lab analysis in Fall of 2011.

5-7-2012 Selected 6 sample sites in Christian, Montgomery, and Sangamon Counties. Prepared profile descriptions for these sites. Collected Amoozemter data and samples for lab analysis by NSSL. Installed piezometers at 4 of the 6 sites, and installed IRIS tubes at all 6 sites.

5-2014 Continue to monitor water table depths via piezometers and IRIS tubes. Received lab data results for sample sites.

Sodium Distribution Project

Description: This project will investigate mapunits that currently do not reflect a sodium influence, but are adjacent to sodium affected mapunits. The investigation will determine if sodium is in fact present in these units, if so how far the sodium influence extends from the current sodium affected mapunits.

A review of existing pedon descriptions, lab data, and EM data will be conducted. Additional data will be collected via EM meter, pedon descriptions, and lab analysis.

The study area will occur in MLRA 114B, and include Christian, Macoupin, and Montgomery Counties.

The resulting data will be used to confirm existing mapping or justify the correlation to different mapunits. Changes will be made to dmus in NASIS where needed, to document data obtained during the project.

5-7-2012 Collected EM 38 data on the site by Litchfield, in Montgomery County. Assisted Jim Doolittle, Jon Bonjean, and Roger Windhorn with this effort.

Status: 5-2014 No progress to report at this time.

LiDAR Projects slope analysis and maps

Description: This project will employ a slope model and LiDAR data to produce a slope map for a test area of approximately 1000 acres in Peoria Co., MLRA 115C.

The slope map will be checked in the field for accuracy. The slope map will be compared to the SSURGO data for the area. Edits will be made where needed, creating a new soil map of the test area. Additional mapunits will be added where needed, field investigations will be used to determine composition of new mapunits.

Map units delineated based on the slope model will also be evaluated for slope range and slope rv for each polygon. This composition will be compared to the slope composition of the mapunits in the SSURGO data.

This project will be used to develop standards and procedures for upgrading SSURGO data by using LiDAR data.

Status: Obtained LIDAR for Rock Island Co. and Winnebago Co.

Slope Maps

Slope map developed for Winnebago Co.

Slope map developed for 33% of Rock Island Co., obtained higher quality LIDAR data and will generate slope map based on that data.

Evaluated slope map vs. selected areas of SSURGO data in Winnebago Co.

Will spot check areas in the county to document quality of LIDAR data, this spring and summer. RTegeler 5-12-09

4-29-2010 Continue to test the LESS (LiDAR Enhanced Soil Survey) Model. Assisted with creation of LiDAR Enhanced Soil Survey base maps for Cook Co., IL. Provided the Winnebago County NRCS Field Office a county slope map generated by the LESS Model; and 2 foot contour topos based on LiDAR data, for the entire county. Assistance was provided to NRCS staff in several states in regard to use of the LESS Model. Numerous presentations were given at meetings and conferences in several states

4-20-2011 Reviewed slope map file organization for Cook Co., with staff members of the Aurora MLRA Office. Continue to test LESS Model, and assist NRCS staff including other states upon request. Provided LiDAR produced slope information for a test area of 640 acres for a soil project in Tennessee and Arkansas. Acquired LiDAR data for three counties from IDOT. IDOT is willing to share LiDAR data that they have with us. Will acquire new LiDAR data from Lake County, IL. Approximately ten Lake County Forest Preserve tracts have completed Order 1 soil surveys. Will generate slope maps from LiDAR data and compare to Order 1 soil survey maps.

5-7-2012 Developing a LiDAR/SIE project in Peoria Co. Obtained permission to work on 1000 acres. Held teleconference with Tom D'Avello and Tim Prescott to discuss methods and project goals. The LESS Model will be used for this project. Provided LiDAR produced slope information for projects in Florida, Kansas, Maine, and Virginia.

FY 2013 Conducted 2 field investigations at the Peoria Co. project site. Trying to determine process to quantify ponding percentage in poorly drained mapunits. If successful, this project could be used on an MLRA basis.

Status: 5-2014 Collected GPS locations of areas showing recent ponding in Peoria Co. Continuing to fine tune GIS analysis tools to predict ponded areas.

Hickory Distribution Project

Description: This project includes review of existing Hickory map units, pedon descriptions, and lab data to determine potential soil property trends in the MLRA (115C and parts of 108B). Determine need for different DMUs based on soil property trends.

Approximately 135 Hickory pedon descriptions from the Rock Falls MLRA Office have been entered into Pedon PC. Also, approximately 130 pedon descriptions from the Springfield MLRA Office have been entered. Will query the data for trends that would support regional Hickory data map units in the state. RTegeler 5-12-09

4-29-2010- We are in the process of georeferencing Hickory pedon locations via ArcMap.

4-20-2011 Amy Kuhel has assisted with georeferencing. All Hickory pedons are now georeferenced. Jim Hornickel put existing lab data into a spreadsheet for analysis.

5-7-2012 Began locating possible Amoozemeter sample sites.

Status: 5-2014 Collected Amoozemeter data from a site in Fulton Co. and a site in Sangamon Co.

Status: Finalizing Amoozemeter sites in Fulton, Macoupin, and Pike Counties for sampling this spring. Plan to locate additional sites in Morgan Co, in spring of 2014

Tazewell Co. Loess Terrace Project

Description: The proposed study deals with using electronic equipment, along with field verification and soil cores, to investigate the density and the rooting zone potential of areas that have been reclaimed after surface mining. Several study areas are to be included, both in western Illinois and southwestern Indiana. Electromagnetic Induction meters, including both the EM-38 and the EM-31 will be used in assessing possible depths to an impermeable or restrictive root zone layer. The VERIS tool will also be used in the same manner, but more applicable for larger field coverage. All these tools produce a current which passes through the soil and is read by the receiver end of the same tool. Each one listed has the capability of reading to a different depth. The U of I will use a sophisticated penetrometer to directly measure density and several other soil parameters. This information is all geo-referenced and will be summarized and maps plotted. Hopefully some of this information can be used to evaluate timing of the bond-release period and also to help NRCS classify and characterize mine land soils at a higher level.

4-29-2010- Preliminary investigations in this project were recently conducted. Depth to outwash deposits were typically at or below a depth of 8.5 feet. Data was collected via the EM 38, EM31, Ground Penetrating Radar and soil borings. Photo imagery suggests periglacial features in this area. Additional investigations will be made in Tazewell and Mason Counties.

5-7-2012-No further field work conducted.

Status: No further field work conducted to date.

Onalaska, WI MLRA Office

Table 9: SDJR PROGRESS for FY 2013 by Office and User as of 04/15/2014

Project Name	Goaled
MLRA 105 - Dunbarton Map Unit Evaluation in MLRA Wisconsin Subset	58603
MLRA 105 - Steep and Stony Backslope Upgrade	267011
P1 - MLRA 105 - Correlation WI0043 - Partial	9874
P1 - MLRA 105 - Correlation WI049 - Prairie Du Chien to WI River	62495
P1 - MLRA 105 - Correlation WI121	94968
P1 - MLRA 105 and MLRA 89 - Correlation WI057	102950
P1 - MLRA 105 and MLRA 89 - Correlation WI081	116257
SDJR - MLRA 105 - Chaseburg silt loam, 0 to 2 percent slopes and similar map units	12865
SDJR - MLRA 105 - Dubuque silt loam, clayey substratum, 2 to 6 percent slopes, moderately eroded	1534
SDJR - MLRA 105 - NewGlarus silt loam, moderately deep, 2 to 6 percent slopes, moderately eroded	2242

Table 10: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
SDJR - MLRA 105 - Arenzville-Chaseburg complex, 1 to 5 percent slopes and similar map units	12572
SDJR - MLRA 105 - Chaseburg silt loam, 2 to 6 percent slopes and similar map unit(s)	6749
SDJR - MLRA 105 - Downs silt loam, 2 to 6 percent slopes	12816
SDJR - MLRA 105 - Dubuque silt loam, 10 to 18 percent slopes, moderately eroded	2365
SDJR - MLRA 105 - Dubuque silt loam, 5 to 10 percent slopes, moderately eroded	2436
SDJR - MLRA 105 - Dubuque silt loam, clayey substratum, 30 to 45 percent slopes	422
SDJR - MLRA 105 - NewGlarus silt loam, moderately deep, 12 to 20 percent slopes, moderately eroded	33919
SDJR - MLRA 105 - NewGlarus silt loam, moderately deep, 20 to 30 percent slopes, moderately eroded	11455
SDJR - MLRA 105 - NewGlarus silt loam, moderately deep, 6 to 12 percent slopes, moderately eroded	18504
SDJR - MLRA 105 - Sparta loamy fine sand, 0 to 3 percent slopes	2433

Juneau, WI MLRA Office

Table 11: SDJR PROGRESS for FY 2013 by Office and User as of 04/15/2014

Project Name	Goaled
SDJR - MLRA 95B - 001a Hochheim loam, 2 to 6 percents slopes	8663
SDJR - MLRA 95B - 001b Hochheim loam, 2 to 6 percents slopes, eroded	7044
SDJR - MLRA 95B - 002 Hochheim silt loam, 2 to 6 percent slopes, eroded	4096
SDJR - MLRA 95B - 003 Hochheim loam, 6 to 12 percents slopes, eroded	11265
SDJR - MLRA 95B - 005 Hochheim loam, 12 to 20 percents slopes, eroded	4964
SDJR - MLRA 95B - 009 Manawa silt loam, 0 to 3 percent slopes	25702
SDJR - MLRA 95B - 010 Manawa silty clay loam, 0 to 3 percent slopes	17520
SDJR - MLRA 95B - 013 Poygan silty clay loam, 0 to 2 percent slopes	19354
SDJR - MLRA 95B - 019 Kewaunee silt loam, 2 to 6 percent slopes	42090
SDJR - MLRA 95B - 020 Kewaunee silt loam, 2 to 6 percent slopes, eroded	5337

Table 12: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
MLRA 95B - Onaway-Emmet Benchmark Soils Maintenance Project	357166
MLRA 95B - St. Charles Water Table	245074
SDJR - MLRA 95B - 007 Hochheim loam, 20 to 30 percent slopes	1131
SDJR - MLRA 95B - 016 Hochheim silt loam, 6 to 12 percent slopes, eroded	3560
SDJR - MLRA 95B - 017 Hochheim silt loam, 12 to 20 percent slopes, eroded	1460
SDJR - MLRA 95B - 018 Kewaunee loam, 2 to 6 percent slopes	21889
SDJR - MLRA 95B - 021 Pella silt loam, 0 to 2 percent slopes	21994
SDJR - MLRA 95B - 022 Pella silty clay loam, cool, 0 to 2 percent slopes	22055
SDJR - MLRA 95B - 023 Plano silt loam, till substratum, 0 to 2 percent slopes	11270
SDJR - MLRA 95B - 024 Plano silt loam, 2 to 6 percent slopes	27868
SDJR - MLRA 95B - 025 Plano silt loam, 6 to 12 percent slopes, eroded	2119
SDJR - MLRA 95B - 026 Plano silt loam, gravelly substratum, 0 to 2 percent	13341
SDJR - MLRA 95B - 027 Plano silt loam, gravelly substratum, 2 to 6 percent slopes	3784
SDJR - MLRA 95B - 028 Hortonville fine sandy loam, 2 to 6 percent slopes	13246
SDJR - MLRA 95B - 029 Hortonville loam, 6 to 12 percent slopes, eroded	2696
SDJR - MLRA 95B - 030 Hortonville silt loam, 12 to 20 percent slopes, eroded	1474
SDJR - MLRA 95B - 031 Hortonville silt loam, 2 to 6 percent slopes	28930
SDJR - MLRA 95B - 032 Hortonville silt loam, 6 to 12 percent slopes, eroded	6142
SDJR - MLRA 95B - 033 Hortonville-Symco silt loams, 2 to 6 percent slopes	2928
SDJR - MLRA 95B - 036 Lamartine silt loam, 0 to 2 percent slopes	950
SDJR - MLRA 95B - 037 Lamartine silt loam, 0 to 3 percent slopes	7221
SDJR - MLRA 95B - 038 Lamartine silt loam, 2 to 6 percent slopes	5835
SDJR - MLRA 95B - 039 Theresa silt loam, 0 to 2 percent slopes	1062
SDJR - MLRA 95B - 040 Theresa silt loam, 2 to 6 percent slopes	14791
SDJR - MLRA 95B - 041 Theresa silt loam, 2 to 6 percent slopes, eroded	6992
SDJR - MLRA 95B - 042 Theresa silt loam, 6 to 12 percent slopes, eroded	4899
SDJR - MLRA 95B - 043 Casco loam, 2 to 6 percent slopes	4589
SDJR - MLRA 95B - 044 Casco loam, 2 to 6 percent slopes, eroded	1900
SDJR - MLRA 95B - 045 Casco loam, 6 to 12 percent slopes, eroded	9490
SDJR - MLRA 95B - 046 Casco loam, 0 to 2 percent slopes	184

SDJR - MLRA 95B - 047 Casco loam, 12 to 20 percent slopes, eroded	3730
SDJR - MLRA 95B - 048 Casco sandy loam, 2 to 6 percent slopes	1618
SDJR - MLRA 95B - 049 Casco sandy loam, 2 to 6 percent slopes, eroded	437
SDJR - MLRA 95B - 050 Casco sandy loam, 6 to 12 percent slopes, eroded	653
SDJR - MLRA 95B - 051 Casco-Rodman complex, 6 to 12 percent slopes, eroded	264
SDJR - MLRA 95B - 052 Casco-Rodman complex, 6 to 12 percent slopes	293
SDJR - MLRA 95B - 053 Casco-Rodman complex, 12 to 20 percent slopes, eroded	5674
SDJR - MLRA 95B - 054 Casco-Rodman complex, 20 to 30 percent slopes	6509
SDJR - MLRA 95B - 055 Casco-Rodman complex, 20 to 30 percent slopes, eroded	2197
SDJR - MLRA 95B - 056 Casco-Rodman complex, 30 to 45 percent slopes	1494
SDJR - MLRA 95B - 057 Casco soils, 6 to 12 percent slopes, severely eroded	338
SDJR - MLRA 95B - 058 Casco soils, 12 to 20 percent slopes, severely eroded	308
SDJR - MLRA 95B - 059 Palms Mucky Peat, 0 to 2 percent slopes	5439
SDJR - MLRA 95B - 060 Palms Muck, 0 to 2 percent slopes	16274
SDJR - MLRA 95B - 061 Palms muck, ponded, 0 to 2 percent slopes	587
SDJR - MLRA 95B - 062 Colwood silt loam, 0 to 2 percent slopes	5594
SDJR - MLRA 95B - 063 Wacousta silty clay loam, 0 to 2 percent slopes	7292
SDJR - MLRA 95B - 064 Willette muck, 0 to 2 percent slopes	5970
SDJR - MLRA 95B - 065 Oshkosh silt loam, 0 to 2 percent slopes	1942
SDJR - MLRA 95B - 066 Oshkosh silt loam, 2 to 6 percent slopes	4139
SDJR - MLRA 95B - 067 Oshkosh silty clay loam, 0 to 2 percent slopes	1158
SDJR - MLRA 95B - 068 Oshkosh silty clay loam, 2 to 6 percent slopes	674
SDJR - MLRA 95B - 069 Plainfield loamy sand, 0 to 2 percent slopes	531
SDJR - MLRA 95B - 070 Plainfield loamy sand, 2 to 6 percent slopes	4203
SDJR - MLRA 95B - 071 Plainfield loamy sand, 6 to 12 percent slopes	1544
SDJR - MLRA 95B - 072 Plainfield loamy sand, 12 to 30 percent slopes	632
SDJR - MLRA 95B - 073 Plainfield loamy fine sand, 0 to 2 percent slopes	946
SDJR - MLRA 95B - 074 Plainfield loamy fine sand, 2 to 6 percent slopes	5116
SDJR - MLRA 95B - 075 Plainfield loamy fine sand, 12 to 20 percent slopes	1458
SDJR - MLRA 95B - 076 Plainfield loamy fine sand, 6 to 12 percent slopes	2844
SDJR - MLRA 95B - 077 Plainfield sand, 0 to 2 percent slopes	2427
SDJR - MLRA 95B - 078 Plainfield sand, 2 to 6 percent slopes	8582
SDJR - MLRA 95B - 079 Plainfield sand, 6 to 12 percent slopes	5838
SDJR - MLRA 95B - 081 Plainfield sand, 12 to 30 percent slopes	4207
SDJR- MLRA 95A - 091 Seeleyville and Markey mucks, warm, 0 to 1 percent slopes	16844
SDJR- MLRA 95A - 090 Seelyville muck 0 to 2 percent slopes	7340
SDJR- MLRA 95B - 082 St. Charles silt loam, 0 to 2 percent slopes	5060
SDJR- MLRA 95B - 083 St. Charles silt loam, 12 to 20 percent slopes	468
SDJR- MLRA 95B - 084 St. Charles silt loam, 2 to 6 percent slopes	20302
SDJR- MLRA 95B - 085 St. Charles silt loam, 6 to 12 percent slopes, eroded	3254
SDJR- MLRA 95B - 086 St. Charles silt loam, gravelly substratum, 0 to 2 percent slopes	3814
SDJR- MLRA 95B - 087 St. Charles silt loam, moderately well drained, 0 to 2 percent slopes	10562
SDJR- MLRA 95B - 088 St. Charles silt loam, gravelly substratum, 2 to 6 percent slopes	2562
SDJR- MLRA 95B - 089 Fox silt loam, 2 to 6 percent slopes	17065

Grand Rapids, MI MLRA Office**Table 13: SDJR PROGRESS for FY 2013 by Office and User as of 04/15/2014**

Project Name	Goaled
ES - MLRA 97 - Acidic Sandy Flatwoods Project	197623
MLRA 98 - Update Montcalm series map units	0
SDJR - MLRA 98 - 1 - Edwards muck	9314
SDJR - MLRA 98 - 2 - Houghton muck	54105
SDJR - MLRA 98 - 3 - Adrian muck	22861

Table 14: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
ES - MLRA 97 - Moist Sandy Lake Plain Project	165288
ES - MLRA 97 - Wet Acidic Sandy Flatwoods Project	11074
MLRA 98 - Update Montcalm series map units	142502
SDJR - MLRA 98 - Houghton-Adrian mucks	16659
SDJR - MLRA 98 - Marlette loam, 2 to 6 percent slopes	32895
SDJR - MLRA 98 - Marlette loam, 6 to 12 percent slopes	17749
SDJR - MLRA 98 - Oshtemo sandy loam, 0 to 6 percent slopes	50367
SDJR - MLRA 98 - Oshtemo sandy loam, 6 to 12 percent slopes	19168
SDJR - MLRA 98 - Sebewa loam	31262
SDJR - MLRA 98 - Spinks loamy sand, 0 to 6 percent slopes	35807
SDJR - MLRA 98 - Spinks loamy sand, 12 to 18 percent slopes	4375
SDJR - MLRA 98 - Spinks loamy sand, 6 to 12 percent slopes	14730

Union, MO MLRA Office**Table 15: SDJR PROGRESS for FY 2013 by Office and User as of 04/15/2014**

Project Name	Goaled
SDJR - MLRA 115B - Menfro silt loam, 14 to 35 percent slopes, eroded	15686
SDJR - MLRA 115B - Menfro silt loam, karst, 2 to 9 percent slopes, eroded	2924
SDJR - MLRA 115B - Winfield silt loam, 14 to 20 percent slopes, eroded	3276
SDJR - MLRA 115B and 115C - Menfro silt loam, 14 to 20 percent slopes, eroded	11443
SDJR - MLRA 115B and 115C - Menfro silt loam, 20 to 45 percent slopes	13566
SDJR - MLRA 115B and 115C - Menfro silt loam, 5 to 9 percent slopes, eroded	27705
SDJR - MLRA 115B and 115C - Menfro silt loam, karst, 2 to 14 percent slopes, eroded	8670

Table 16: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
SDJR - MLRA 113 - Keswick loam, 9 to 14 percent slopes, eroded	14835
SDJR - MLRA 113 - Leonard silt loam, 2 to 5 percent slopes, eroded	14852
SDJR - MLRA 113 - Leonard silt loam, 5 to 9 percent slopes, eroded	33874
SDJR - MLRA 113 - Leonard silty clay loam, 2 to 5 percent slopes, eroded	23688
SDJR - MLRA 113 - Lindley loam, 14 to 20 percent slopes, eroded	19823
SDJR - MLRA 113 - Lindley loam, 14 to 40 percent slopes	25178
SDJR - MLRA 113 - Lindley loam, 20 to 35 percent slopes	13744
SDJR - MLRA 115B - Winfield silt loam, 20 to 30 percent slopes, eroded	2832

SDJR - MLRA 115B - Winfield silt loam, 9 to 14 percent slopes, eroded	17546
SDJR - MLRA 115B - Wrengart silt loam, 8 to 15 percent slopes, eroded	25212
SDJR - MLRA 115B and 115C - Goss very gravelly silt loam, 14 to 45 percent slopes	49384

Owensboro, KY MLRA Office

Table 17: SDJR PROGRESS for FY 2013 by Office and User as of 04/15/2014

Project Name	Goaled
MLRA 120A - Kentucky Deep Loess Project Part 2	0
SDJR - MLRA 120A - 10Elk silt loam, 6 to 12% slopes, rarely flooded	197
SDJR - MLRA 120A - 14Elk silt loam, 2 to 6% slopes, rarely flooded	1974
SDJR - MLRA 120A - 15Elk silt loam, 12 to 50% slopes, rarely flooded	438
SDJR - MLRA 120A - 17Elk silt loam, 0 to 2% slopes, rarely flooded	2096
SDJR - MLRA 120A - 1Patton silt loam, rarely flooded	2619
SDJR - MLRA 120A - 2Clifty gravelly silt loam, occasionally flooded	3007
SDJR - MLRA 120A - 3Nolin silt loam, 0 to 2 % slopes, occasionally flooded	5976
SDJR - MLRA 120A - 4Patton silt loam, overwash, occasionally flooded	3057
SDJR - MLRA 120A - 5Rosine silt loam, 6 to 12 percent slopes, eroded	5175
SDJR - MLRA 120A - 6Nolin silt loam, 0 to 2 % slopes, frequently flooded	4775
SDJR - MLRA 120A - 7Blackford silt loam, 0 to 2 % slopes, occasionally flooded	192
SDJR - MLRA 121 - 12Elk silt loam, 2 to 6% slopes, rarely flooded	5757
SDJR - MLRA 121 - 13Elk silt loam, 2 to 6% slopes	2483
SDJR - MLRA 121 - 16Elk silt loam, 0 to 2% slopes, rarely flooded	1429
SDJR - MLRA 121 - 18McAfee silt loam, 2 to 6% slopes	5632
SDJR - MLRA 121 - 8Elk silt loam, 6 to 12% slopes	2186
SDJR - MLRA 121 - 9Elk silt loam, 6 to 12% slopes, rarely flooded	1780
SDJR - MLRA 122 - 11Elk silt loam, 2 to 6% slopes, rarely flooded	658

Table 18: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
ES - MLRA 121 - Knobs-Norman Upland Acidic Oak Forest	495347
ES - MLRA 121 - Moderately Deep Interbedded Limestone Backslope	2306484
ES - MLRA 121 - Shallow Limestone Residuuum Backslope	324756
SDJR - MLRA 120 - 22Newark silty clay loam, 0 to 2% slopes, frequently flooded	256
SDJR - MLRA 120A - 25Newark silt loam, 0 to 2% slopes, occasionally flooded	7313
SDJR - MLRA 120A - 27Belknap silt loam, 0 to 2% slopes, occasionally flooded	53195
SDJR - MLRA 120A - 28Zanesville silt loam, 2 to 6 % slopes	30433
SDJR - MLRA 120A - 29Zanesville silt loam, 2 to 6% slopes, eroded	10161
SDJR - MLRA 120A - 30Zanesville silt loam, 6-12% slopes	19081
SDJR - MLRA 120A - 31Zanesville silt loam, 6 to 12% slopes, eroded	15726
SDJR - MLRA 120A - 32Zanesville silt loam, 6 to 12% slopes, severely eroded	33108
SDJR - MLRA 120B - 20Newark silt loam, 0 to 2% slopes, frequently flooded	655
SDJR - MLRA 120B - 33Apalona-Zanesville silt loams, 6 to12%, severely eroded	17886
SDJR - MLRA 120B - 39Apalona-Zanesville silt loams, 2 to 6% slopes	13026
SDJR - MLRA 120B - 40Apalona-Zanesville silt loams, 2 to 6% slopes, eroded	7863
SDJR - MLRA 120B - 41Apalona-Zanesville silt loams, 6 to 12% slopes, eroded	21423
SDJR - MLRA 121 - 19Nolin silt loam, 0 to 2% slopes, occasionally flooded	12318

SDJR - MLRA 121 - 21Newark silt loam, 0 to 2% slopes, frequently flooded	1737
SDJR - MLRA 121 - 26Newark silt loam, 0 to 2% slopes, occasionally flooded	2544
SDJR - MLRA 121 - 34Nolin silt loam, 0 to 2 % slopes, frequently flooded	12408
SDJR - MLRA 121 - 37Nicholson silt loam, 2 to 6 % slopes	19741
SDJR - MLRA 121 - 38Nicholson silt loam, 2 to 6% slopes, eroded	491
SDJR - MLRA 122 - 23Newark silt loam, 0 to 2% slopes, frequently flooded	6315
SDJR - MLRA 122 - 24Newark silt loam, 0 to 2% slopes,occasionally flooded	1753
SDJR - MLRA 122 - 35Nolin silt loam, 0 to 2% slopes, frequently flooded	5772
SDJR - MLRA 122 - 36Bedford silt loam, 2 to 6% slopes	25189

Milan, TN MLRA Office

Table 19: SDJR PROGRESS for FY 2013 by Office and User as of 04/15/2014

Project Name	Goaled
SDJR - MLRA 131A - Sharkey clay, 0 to 1 percent slopes (FLOODING=NONE)	13351
SDJR - MLRA 131A - Sharkey clay, 0 to 1 percent slopes, occasionally flooded	2391
SDJR - MLRA 131A - Sharkey clay, 0 to 1 percent slopes, rarely flooded	33632
SDJR - MLRA 131A - Sharkey clay, 0 to 2 percent slopes, frequently flooded	13615
SDJR - MLRA 131A - Sharkey clay, 0 to 2 percent slopes, occasionally flooded	2344
SDJR - MLRA 131A - Sharkey silty clay loam, 0 to 1 percent slopes, rarely flooded	44485
SDJR - MLRA 131A - Sharkey silty clay, 0 to 1 percent slopes, rarely flooded	55112
SDJR - MLRA 131A - Sharkey soils, 0 to 1 percent slopes, frequently flooded	22823

Table 20: SDJR GOALS for FY 2014 by Office as of 04/15/2014

Project Name	Goaled
SDJR - MLRA 131A - Alligator clay, 0 to 1 percent slopes, rarely flooded, brief duration, east	3181
SDJR - MLRA 131A - Alligator clay, 0 to 1 percent slopes, rarely flooded, brief duration, west	21946
SDJR - MLRA 131A - Amagon silt loam, 0 to 1 percent slopes	16156
SDJR - MLRA 131A - Amagon silt loam, 0 to 1 percent slopes, rarely flooded	6728
SDJR - MLRA 134 - Calhoun silt loam, 0 to 1 percent slopes	16850
SDJR - MLRA 134 - Calloway silt loam, 0 to 1 percent slopes	32260
SDJR - MLRA 134 - Calloway silt loam, 0 to 2 percent slopes	13091
SDJR - MLRA 134 - Calloway silt loam, 1 to 3 percent slopes	11575
SDJR - MLRA 134 - Collins silt loam, 0 to 1 percent slopes, occasionally flooded, brief duration	10629
SDJR - MLRA 134 - Collins silt loam, 0 to 2 percent slopes, frequently flooded, brief duration	10262
SDJR - MLRA 134 - Collins silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration	27995
SDJR - MLRA 134 - Collins silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	7992
SDJR - MLRA 134 - Collins silt loam, local alluvium, 0 to 2 percent slopes, occasionally flooded, brief duration	6351
SDJR - MLRA 134 - Falaya silt loam, 0 to 1 percent slopes, occasionally flooded, brief duration	26241
SDJR - MLRA 134 - Falaya silt loam, 0 to 2 percent slopes, frequently flooded, brief duration	23401
SDJR - MLRA 134 - Falaya silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration	11233
SDJR - MLRA 134 - Falaya silt loam, 0 to 2 percent slopes, occasionally flooded, long duration	15245
SDJR - MLRA 134 - Falaya silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	18695
SDJR - MLRA 134 - Loring silt loam, 2 to 6 percent slopes	11721
SDJR - MLRA 134 - Memphis silt loam, 2 to 5 percent slopes	26427
SDJR - MLRA 134 - Memphis silt loam, 2 to 5 percent slopes, eroded	16344
SDJR - MLRA 134 - Memphis silt loam, 5 to 8 percent slopes, severely eroded	11822

SDJR - MLRA 134 - Waverly silt loam, 0 to 2 percent slopes, frequently flooded, long duration	15150
SDJR - MLRA 134 - Waverly silt loam, 0 to 2 percent slopes, occasionally flooded, long duration	14912

FUTURE PROJECTS

Potential Projects Identified in Evaluations

Aeolian sand fraction in Central Illinois (Springfield)
 Global Climate Change projects (Soil moisture/soil temperature) (Aurora)
 Green County Soils (Springfield)
 Elizabeth/LaCrescent Investigation (Springfield)
 Missouri projects (Springfield)
 OSD/Benchmark Soils Project e.g. Ashkum, Selma, Elliot and Varna (MLRA 110) (Aurora)
 Ksat studies of suites of silty clay loam till soils – Varna, Elliott, and Ashkum; Markham, Beecher, and Ashkum; Ozaukee, Blount, and Ashkum. (Aurora)
 Oxyaquic/Aquic Project (MLRA's 95B and 110) Aurora
 Relict mottles (Hickory, Atlas, Fishhook, Elco...)
 Toposequences (Tama/Osco/Buckhart) (Muscatine/Sable)
 Depth to Lithic/Paralithic contact (MLRA 105)
 Hickory/Elco/Atlas Study (range in characteristics, KSAT...)
 Logan County outwash plain
 Biosequences (native vegetation/integrades)
 Ablation till versus Basal Till
 "Till Substratum" phases in central Illinois
 Alluvial soils (Entisols vs Inceptisols/Alfisols?)
 (Effingham County remap) (Little Wabash)
 Map reclaimed mine land soils in Saline County
 Study Colp Series for seasonal high WT depths
 Set up a new series for Pike (Typic subgroup)
 Banlic series- Is it properly classified? Do we need to drop?
 Look at Cairo, Fultz and thermic/mesic temperature regime
 Investigate Caneyville soils in Hardin County
 Menfro-Memphis-Alford Landscape study
 Lenzburg-Morristown complex in Randolph and St. Clair counties
 Fix Robbs OSD (Location is incorrect) Use TUD
 Remap Alexander County flood plain south of Miller City
 Describe soils at the Illinois Shallow Wells WARM (Water Atmosphere Resource Monitoring) (Illinois State Climatologist Office and Illinois State Water Survey)
 Add Cowden in western Perry County
 Terrace along Shoal Creek in Clinton County.
 Find a new type location for the Sharon and Belknap series. The current Sharon location has been undermined.
 White County – Investigate the frequently and occasionally flooded Patton and Montgomery.
 Look at a warm mesic version of Houghton and Dickinson.
 Evaluate New Haven and Springerton terraces.
 Flooding frequency projects
 SoLIM projects
 LIDAR projects
 "Zero" characterization data" soils
 Saybrook/Lisbon vs Graymont/Chenoa in Iroquois, Livingston, Vermillion counties (Aurora)
 Danabrook vs Saybrook
 Catlin and Flannagan till composition in LaSalle County
 Literature Reviews
 Evaluate miscellaneous areas for consistency in the database.
 Evaluate flooding frequencies for consistency in the spatial data.

Projects for all offices planned to start in FY 13 or later

MLRA 115C Sand Fraction Project
MLRA 115C Pre-Illinoian Till Project
MLRA 115C - Wakeland Distribution Project
MLRA 115C - Menfro/Winfield Distribution Project
MLRA 115C - Quiver Project
MLRA 115C - Miscellaneous Areas Project
MLRA 115C - Mined Land Reclamation Project
MLRA 108A and 110 - Benchmark Soils Project
MLRA 110 - Evaluate Variants, miscellaneous areas and substratum phases in MLRA 110 Project
MLRA 110 - Ashkum Benchmark Soil Ksat Project
MLRA 115A - Mined Land Reclamation Project

Projects identified as future projects in Process of SDJR

[Future Projects](#)

This report prompts for the office (5-SAL or 5* or *) and lists those projects deemed as Future workload identified in the SDJR initiative.

Ecological Site Inventory

Soils and ecological site data provide information and interpretations for management and restoration for conservation planning, deployment of Conservation Delivery Streamline Initiative and Farm Bill Implementation. ESDs include identification of sites relative to the Plant\Animal\Climate\Soil interaction. Naming and definition is based on terms of Soil\Landform\Plant Community

Dale Baumgartner, GIS specialist in Springfield MLRA converted to ESD specialist with re-organization. Dale will take over ESD duties and development of ESDs. Stacy Clark provides technical supervision of the development of the ESDs. State Soil Scientist and State Resource Conservationist are identified as members of the management team.

4-2014- A ESD project plan has been developed for MLRA 115C. A draft MLRA Legend for Ecological Sites has been developed for MLRA 115C. Map units in MLRA 115C are currently being assigned to one of 50 preliminary ES site concepts.

Illinois Natural History Survey Contract Study

Illinois Natural History Survey developed draft Ecological Site information as data for inclusion into ESDs in Illinois. Primary focus was on MLRAs 108A, 108B, 110, 113, 114B and 115C for development of selected Ecological Site Descriptions from field-tested legends

Status: 18 Ecological Community Type associated with soil groups were described that could be additionally split by MLRA and include State and transition models for each.

Dry Mesic Prairie	Loess Hill Prairie
Dry Mesic Sand Savanna	Mesic Floodplain Forest
Dry Mesic Upland Forest	Mesic Prairie
Dry Mesic Woodland	Mesic Savanna
Dry to Dry Mesic Sand Prairie	Mesic Upland Forest
Dry Woodland	Sedge Meadow
Freshwater Marsh	Southern Flatwoods
Glacial Drift Hill Prairie	Wet Mesic Floodplain Forest
Graminoid Fen	Wet Mesic Prairie

Based on soils data and ecological site type definitions from the Illinois Natural History Survey and other sources. Assigns Ecological site types to soils based on groupings of soil properties.

Current ESD Projects

ES-MLRAs 108A and 110; and parts of MLRAs 95B, 97, and 98; and parts of adjacent

MLRAs: ESD Development

ES-MLRAs 113 and 114, and parts of adjacent MLRAs: ESD Development2

ES-MLRAs 108B and 115C, and parts of adjacent MLRAs: ESD Development2

Status: Draft legends and soil sorts have been developed. We are refining concepts of ESDs and the scale that is needed to capture all the information that is required to provide a useful tool. Several data sets from several sources and several source materials have been reviewed. INHS contract with several ecological site types have been developed and need to be tied to the soils and landforms.

Landform analysis needs to be done with LIDAR to better separate map unit phases that clearly support different vegetation associations.

Climate data needs to be summarized and delivered in a consistent way.

As SDJR projects are completed, I have attempted to develop a process of coordinating series distribution and adjacent soils by region. These will aid in future map unit projects and as a geographic base for the linking of ESDs to the series and mapunits, when landforms and landscape positions are more closely identified.

Status: I have fallen behind on this

Stan Sipp and others have reviewed the data and sites from the INHS contract, making comments, and preparing for field visits to verify soils, plant community, and landform\landscape relationships. There are very few areas that have not been manipulated in some way in Illinois.

Review of Missouri's process in ESD development for MLRA 115B and MLRA 115C.

Status: Technical team is reviewing soil sorts and preliminary legends. Correlation to the INHS and Illinois NRCS soil and plant groupings will need to be done prior to acceptance.

“Each soil has had its own history. Like a river, a mountain, a forest, or any natural thing, its present condition is due to the influences of many things and events of the past.”

--- Charles Kellogg

DATA DELIVERY AND ACQUISITION

gSSURGO A statewide seamless coverage was developed and is available upon request to the Illinois State Office. Old school. OR downloaded from the Geospatial Data Gateway. New School.

<http://datagateway.nrcs.usda.gov/>

From the "Get Data", click on the green to change the type of data. This will allow you to select data for the entire state at one time. Select the where option, Select the state, choose the data.

The screenshots illustrate the steps in the GeoSpatialDataGateway interface:

- Step 1:** The 'WHERE' section is set to 'Order by County/Countries'. A red circle highlights the 'WHERE' header.
- Step 2:** The 'WHERE' section is changed to 'Order by State'. A red arrow points from the 'WHERE' header in the first screenshot to the 'Order by State' option in the second.
- Step 3:** The 'WHAT' section is shown, displaying a list of available map layers. A red arrow points from the 'WHAT' section in the second screenshot to the 'WHAT' section in the third.
- Step 4:** The 'WHAT' section is shown with a list of available map layers. A red arrow points from the 'WHAT' section in the third screenshot to the 'WHAT' section in the fourth.

Check what you want and hit continue to follow the registration and to continue your order.

Data sets can be loaded into the base geodatabase and linked to maps. This will allow interpretive maps and informational maps similar to the "Illinois suite of maps" found on the Illinois NRCS web site. **REQUIREMENT:** ARC GIS. The maps are current to the date the data was downloaded. When data is updated, the mukey is often changed in the database and that is why statewide coverage is tied to a point in time and not updated continuously.

By linking aggregated data to the spatial data by mukey or musym, or component, several maps can be produced. The link below is to the Illinois Suite of Maps on the Soils Web Page:

http://www.il.nrcs.usda.gov/technical/soils/Suite_Maps.html

Directions for obtaining tabular data reports similar to Soil Data Mart from Web Soil Survey (WSS)

Downloads from the **Soil Data Mart** and the Web Soil Survey are relative to the version and date at which they were submitted to the Soil Data Warehouse. Soil Data Mart is no longer available. Data sets in similar format are available through the Geospatial Data Gateway and the Web Soil Survey.

Click on the Green Button “Start WSS”

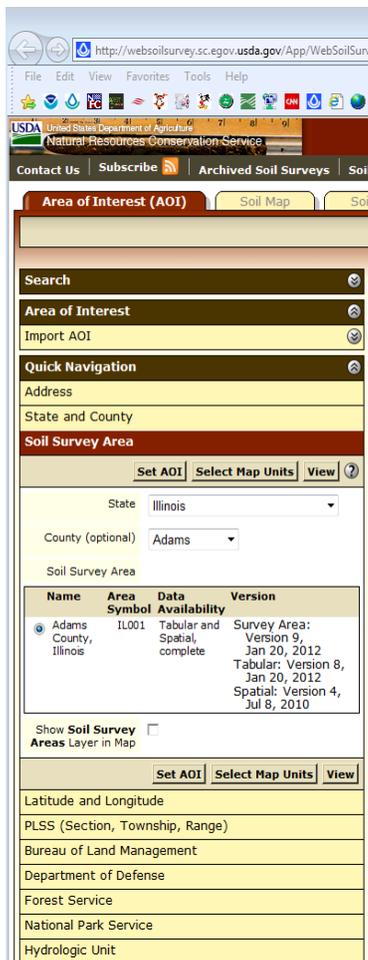
The simple yet powerful way to access and use soil data.



<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

There are several ways to select data by location in WSS. To get specific tabular data, click on the row on the left of the screen titled “Soil Survey Area”. From the drop down menus, select state “Illinois” and the County.

Your choice list of available surveys for that county will come up and you will select the one you want by clicking on the small circle to the left of the county name. (It will turn blue when selected).



From here, you have the 3 choices:

1. **“Set AOI”** (Area of interest) of the entire county. This will allow you to use tabs at the top of WSS to produce interpretive maps based on the reports you select –this option also loads the soil map for viewing which is not available if you choose to select only the tabular data using “Select Map Units”.
2. **“Select Map Units”** will bring up a list of map units for the entire county. This option allows you to select one, some, or all map units and produce tabular reports similar to those that were available on the soil data mart. The tabs for “Soil Data Explorer” at the top of WSS and “Download Soils

Data” are now active and you can run tabular reports on any or all soils.

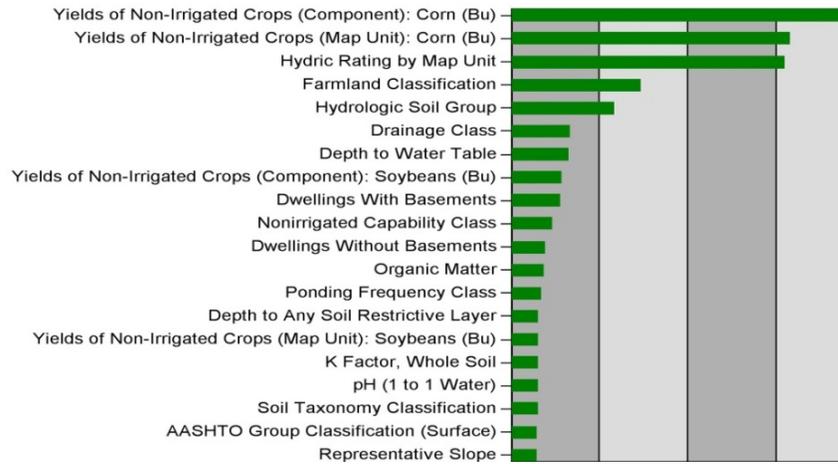
3. If download of data and template is preferred, after starting WSS, the **“Download Soils Data”** tab is already active. Selecting the row “Soil Survey Area (SSURGO)” allows the navigation similar to county downloads in Soil Data Mart.



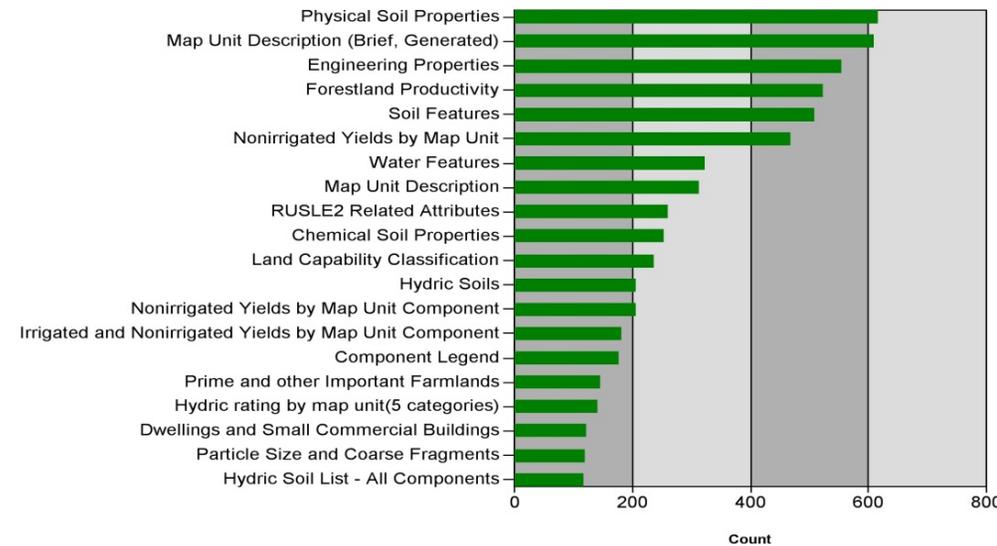
In the interim of this phase of soil survey, new future projects are identified and several changes have occurred for the delivery of some soil information. Some statewide lists, like productivity and yield indices, were populated in **eFOTG** http://efotg.sc.egov.usda.gov/efotg_locator.aspx for access by users.

WEB SOIL SURVEY METRICS

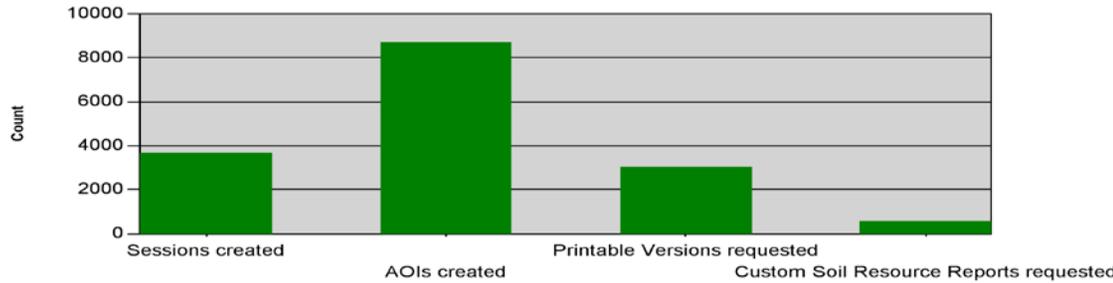
Usage of Ratings (Top 20)



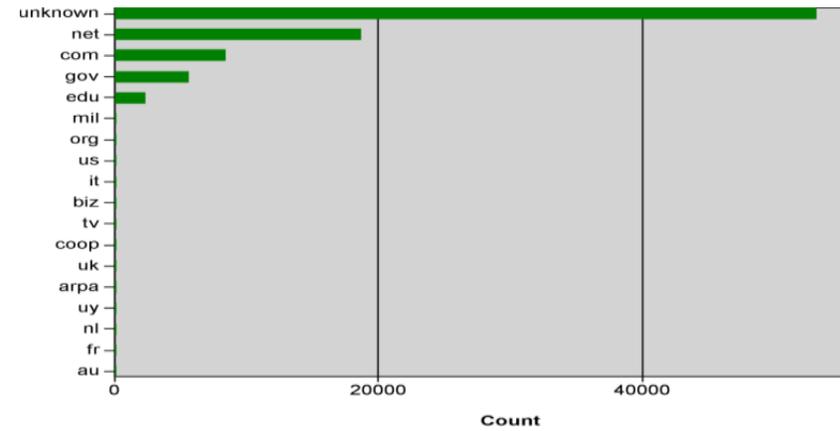
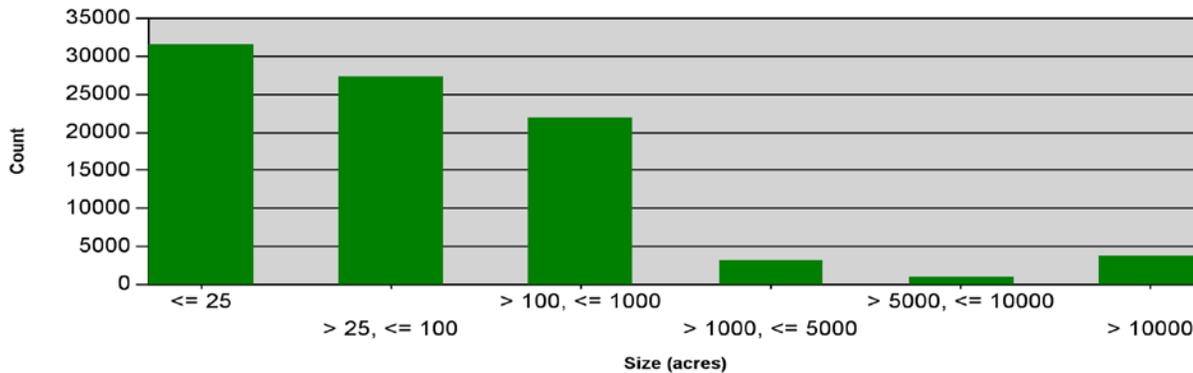
Usage of Soil Reports (Top 20)



Usage of Printable Output



AOI Size Range



Total Usage of Ratings: 2691
Total printable Outputs: 16006
Total AOI's created 89019
Total Soil Reports: 7041

National Soils Website Updated: <http://www.nrcs.usda.gov/wps/portal/nrcs/site/soils/home/>

Illinois Soils Website Updated: <http://www.il.nrcs.usda.gov/technical/soils/index.html>

Links Page Updated http://efotg.sc.egov.usda.gov/references/public/IL/Links_1_201404April09.docx

On the RADAR

National Bulletins <http://directives.sc.egov.usda.gov/Default.aspx>

Title 430 - Soil Survey

NB 430-14-8 SOI – National Soil Survey Handbook, Amendment 28

NB 430-14-7 SOI – Call for Dynamic Soil Properties Project Proposals

NB 430-14-6 SOI - To Announce the Release of SSIR 51, Soil Survey Field and Labo...

NB 430-14-5 SOI – National Cooperative Soil Survey (NCSS) 2014 Awards

NB 430-14-4 SOI – Announcement Publication of National Instruction 430-305, Seco...

NB 430-14-3 SOI – Calculated Soil Interpretation Factors in NASIS

NB 430-14-2 SOI – FY 2014 Priorities for Soil Science Division

NB 430-14-1 SOI – Role of State Soil Scientists Issue Paper

NB 430-13-12 SOI – Soil Survey Success Stories

NB 430-13-11 SOI – Revision of Official Soil Survey Data Refresh Frequency and P...

NB 430-13-10 SOI – Request For National Soil Survey Center Assistance – Fiscal Y...

NB 430-13-09 SOI – Selection of Interpretations for Inclusion in Fiscal Year 201...

NB 430-13-08 SOI – Fiscal Year (FY) 2013 Guidance For Soil Survey Performance Me...

NB 430-13-07 SOI – Transition of SSURGO Responsibilities to Soil Survey Regional...

NB 430-13-06 SOI – National Cooperative Soil Survey 2013 Awards Announcement

NB 430-13-05 SOI – To Announce the Release of the Field Book for Describing and...

NB 430-13-04 SOI – National Cooperative Soil Survey (NCSS) 2013 Awards

NB 430-13-03 SOI – Publication and Distribution of 2013 Soil Planner

NB 430-12-07 SOI - Request for National Soil Survey Center Assistance - FY 2013

NB 430-12-08 SOI - Soil Survey Success Stories

NB 430-12-06 SOI - National Cooperative Soil Survey 2012 Awards Announcement

NB 430-12-05 SOI - Base Map Materials

NB 430-12-04 SOI - Establishment of Official Soil Survey Data Refresh Frequency

NB 430-12-03 SOI - National Cooperative Soil Survey 2012 Awards

NB 430-12-02 SOI - Proposed Operating Procedures for Ecological Site Inventory a...

NB 430-12-01 SOI - Calculated Soil Interpretation Factors in NASIS

NB 430-13-01 SOI – Implementation of Soil Data Join Recorrelation Initiative

NB 430-13-02 SOI – Update of Soil Survey Technical and Quality Assurance Respons...

Title 170 - Cartography and Geographic Information Systems

NB 170-14-3 CGI – High-Resolution Elevation Data

NB 170-14-2 CGI – Request for Comments on the Draft Subpart Additions to the cur...

NB 170-14-1 CGI – State and Local Geospatial Services to support Toolkit and GIS...

NB 170-13-01 CGI – High-Resolution Elevation Data

Report Tools These examples and other URL style reports are or will become available as development continues. Additional HTML style reports will focus on quick data retrieval.

Reports Available for Use

https://nasis.sc.egov.usda.gov/NasisReportsWebSite/lmsreport.aspx?report_name=WEB-Masterlist

TSS reports

[TSS table by county and fiscal year](#)

This report prompts for the State Code and FY. It displays all Tech services sorted by Staff Member, by County name, for the given Fiscal year.

[TSS table by state and fiscal year](#)

This report prompts for the State Code and FY. It displays all Tech services sorted by Staff Member for the given Fiscal year

[TSS table by Soil Scientist and fiscal year](#)

This report prompts for the Soil Scientist Name and FY. Correct format of name is required e.g. Smith, John. It displays all Tech services for the soil scientist and Fiscal year.

[National TSS Report](#)

This report prompts for the Fiscal Year. It is a national report showing all Tech services sorted by state for the entered Fiscal year

[National TSS Report by Region](#)

This report prompts for the MO area and Fiscal Year. It is a national report showing all Tech services for the area by Fiscal year

[Graph TSS by state and fiscal year](#)

This report prompts for the State and Fiscal Year. This works best in Firefox or Chrome, If internet explorer hit f12 then Alt 9 and resubmit the query and show all content. Click on the sort button and the graph resorts by the Y axis.

[Graph TSS by state](#)

This report prompts for the Fiscal Year. This works best in Firefox or Chrome, If internet explorer hit f12 then Alt 9 and resubmit the query and show all content. Click on the sort button and the graph resorts by the Y axis.

[Graph TSS Hours for one provider](#)

This report prompts for the provider and Fiscal Year. This works best in Firefox or Chrome, If internet explorer hit f12 then Alt 9 and resubmit the query and show all content. Click on the sort button and the graph resorts by the Y axis.

[Graph TSS Hours for providers by state](#)

This report prompts for the State and Fiscal Year. This works best in Firefox or Chrome, If internet explorer hit f12 then Alt 9 and resubmit the query and show all content. Click on the sort button and the graph resorts by the Y axis.

State Soil Scientist Reports

[Prime Farmland by Area Symbol](#)

This report prompts for the Area symbol. One area can be chosen e.g. MO123 or all areas in a State MO%. This table can be copied and pasted into Excel where it can be sorted, grouped and subtotaled by any field.

[State Correlation Report](#)

This report identifies the old and new map unit correlation information. It prompts for the Survey symbol and the percent wildcard must be used. One area can be chosen e.g. MO123 or all areas in a State MO%. This table can be copied and pasted into Excel where it can be sorted, grouped and subtotaled by any field.

[EFOTG soils data](#)

This report This report gives brief summary soils information for a county or the whole state, it prompts for the Survey symbol. One area can be chosen e.g. MO123 or all areas in a State MO%. This table can be copied and pasted into Excel where it can be then added to the EFOTOG website.

Project reports

[Identify surveys with projects ready to upload](#)

This report is designed for the State Soil Scientist to identify the Soil Surveys with projects impacting those surveys with all the correlation activity dates populated.

[Project Summary Report](#)

This is a very good summary report, by office or region, providing nine summary reports. The prompts are soil survey office, fiscal year and project name. Good report for managers to use to monitor project work.

Project name	Approved?	SSRO Use	State Soil Scientist Use for Concurrence Review	Properties Comparison	Interpretation Comparison (Manuscript Style)	Project Extent Map	Pedon Extent Map	Series Extent Map	Generated Text Notes	Correlation Letter	QC QA Checks	Project Description Draft Generator
		Tech Standard Review	Project Proposal									

[Reported Projects for the FY](#)

This report identifies Projects with a populated Project Mapping Progress table. The prompts are fiscal year and office. This report will provide the Reported Acres, User Name, and Reported date. If any of these fields are not populated in this table, then they will not appear on this report.

[Approved Project Goals Progress](#)

This report displays only Approved projects. It prompts for the FY and delivers the list of approved projects by office, SSRO, and summarizes the Total Goal and Total Reported by the FY. It displays the MO, SSO, Approved, Project Name, Goaled User, Goaled Acres, Reported Acres, Reported User. If a Project does not contain reported acres it is due to the Reported User not being populated

[All Project Plans: national report](#)

This report displays approved and not approved projects with the breakdown of Goals and Progress by Initial vs. Update and NRCS vs. Cooperator. It prompts for the fiscal year and provides goal and progress information for any project with goals populated

[Summary Project Plans national report](#)

This report prompts for the office (5-SAL or 5*) and provides a summary of the SDJR projects. It includes - the project name, description, acres, SDJR acres, map unit concept

[Project Mapunits with recorded acres](#)

This report prompts for the office (6-SPR or 6-%) and Fiscal Year. The output table is saved to Excel and joined to the Raster soils map to create a Progress Map; the fields need to be formatted to text before being saved.

[Project QC and QA Milestones](#)

This report prompts for the office (5-SAL or 5-*) and Fiscal Year. The abbreviated report focuses on the QC and QA milestones and Reported acres.

[Summary Project Plans by milestone date](#)

This is the summary project plan report that prompts for an office (5-SAL or 5*) and identifies all the project plans and their milestone dates. Included is the total MU acres and the Report acres

[PRS Mining SQL](#)

This report is the same SQL that PRS uses to mine data for the PRS report. This report provides the Project Name, the reported date, the state assigned, the NRCS acres, and the Cooperator acres.

[National FY Progress by State for All Land Category](#)

This is the national report used to identify all progress reporting by land category, by state

Ecological Site Projects

[Ecological Site Projects In NASIS with Goals and Milestones](#)

This national report that prompts for an office (5-SAL or 5* or * for all) and displays all the Ecological Site project plans with goals, acres and reporting dates.

[All Ecological Site Project In NASIS](#)

This national report that identifies all the Ecological Site project plans populated in NASIS.

[Ecological Site Project Plans by milestone](#)

This is the milestone project plan report that prompts for an office (5-SAL or 5* or * for all) and identifies all the Ecological Site project plans and their milestone dates.

[Summary ES Project Plans](#)

This is the summary project plan report that prompts for the Fiscal Year and an office (5-SAL or 5* or * for all) and summarizes all the Ecological Site project plans.

Future Projects

[Future Projects](#)

This report prompts for the office (5-SAL or 5* or *) and lists those projects deemed as Future workload identified in the SDJR initiative.

[Digitizing Unit Report](#)

This report prompts for the FY. It lists the those map units and surveys deemed in need of DU recertification because of the SDJR initiative.

Pedon reports

[Create Mini Profiles of pedons in NASIS by soil name](#)

Run this report, then change the soil name or the choice in the URL to choose another soil (f=fragment percentage and t=texture and r=redoximorphic feature percentage and m1=1 for dry color and m1=2 for moist) If the color is blank then the color is null or the moisture state is null

[plot all KSSL pedons within a county](#)

Run this report as is, then change the county fips code in the URL for a different data set

[Transect Analysis](#)

Run this report and you will be prompted for the transect IDs to analyze

[Pedon Sample Analysis](#)

Run this reports, then change the name of the series in the URL.

NHQ report

[Program Manager Report](#)

Bottom of Form

Legend Export Certification History This report gives details of the correlation of map units during the FY relative to the SDJR process.

https://nasis.sc.egov.usda.gov/NasisReportsWebSite/limsreport.aspx?report_name=WEB-PROJECT-LMU_TEXT_METADATA_BY_AREASYMBOL

Dynamic Soil Properties Inventory-DSP will provide information on soils change due to management and natural disturbance, including climate change. Population of the database will begin with RaCA data and CEAP APEX modeling and other model output to provide support for CDSI. SSO Field sampling (at a lower intensity than described in the Soil Change Guide) will help verify and calibrate models in addition to adding value to the database, available through Web Soil Survey, to guide conservation planning. Training for new sampling design and techniques will be developed.

Status: Emphasis on Academic Style studies and data collection.

February 25, 2014 NB_430_14_7: SOI – [Call for Dynamic Soil Properties Project Proposals](#) - Action Required

By: 3/28/2014 <http://directives.sc.egov.usda.gov/34840.wba> <http://directives.sc.egov.usda.gov/34841.wba>

This call is for PROPOSED projects, full project plans are not needed at this time. Also, while the call states approximately 6 projects will be selected at this time, additional projects will be selected for FY15 and out years.

Conservation Delivery Streamline Initiative (CDSI) Soils Integration - The Soil Survey Division will provide support to the Conservation Desktop, Mobile Planner, and other conservation planner and customer needs. This will include working towards making additional soil interpretations available to Web Soil Survey. We anticipate increased Resource Soil Scientist involvement in the planning process through training and field investigations.

Status: Not on schedule, however, several tools and new methodologies have been developed including Toolkit enhancements and use of gSSURGO in planning process.

The NRCS Road to Soil Health - Gives NRCS the chance to treat the systemic cause of resource degradation on the vast majority of America's cropland, cost-effectively, while increasing productivity of our nation's working lands. NRCS can help America's farmers and ranchers save energy, address climate change, and help meet the needs of the world's growing population. Integrate Soil Health Management System planning and implementation into NRCS' conservation program and service delivery; Increase the number of producers operating with Soil Health Systems (at the NRCS criteria level). Increase employee, customer and stakeholder awareness and understanding of healthy soil ecosystems and biology, and healthy soil's role in natural resource protection and agricultural production.

Status: HOT Topic. Several Soil Health workshops have been held statewide and there are more planned. Cover Crops and conservation systems as well as University studies and sampling of areas know to have been following soil health initiative management plans. Roger Windhorn is the point of contact for Soil Health in Illinois soils.

Urban Interpretations – The National Soil Survey Center is developing urban interpretations such as storm water runoff, geothermal heat pumps, fiber optic cables, pipelines, rain gardens, etc. that could be used in Cook County and other urban areas.

Status: Several retirements. Still being worked on, but development has been slowed.

EPA National Wetland Condition Assessment - EPA and its State, Tribal, and Federal partners are implementing the first-ever national survey on the condition of the Nation's wetlands. The survey is designed to provide regional and national estimates of wetland ecological integrity and rank the stressors most commonly associated with poor conditions. The process of designing and conducting the survey is also intended to help build state and tribal capacity to monitor and analyze wetland condition while promoting collaboration across jurisdictional boundaries.

The National Wetland Condition Assessment (NWCA) will use a probability-based sampling design to provide statistically-valid estimates of condition for a population of wetlands. States, tribes and federal partners will participate in the NWCA design, planning, and field assessment. A consistent field assessment procedure will be used for the NWCA to ensure that the results can be compared across the country.

<http://water.epa.gov/type/wetlands/assessment/survey/>

Status: EPA expects to release a final report by the end of 2014.

Climate Change Hubs http://www.usda.gov/oce/climate_change/regional_hubs.htm USDA's regional hubs will deliver information to farmers, ranchers and forest landowners to help them adapt to climate change and

weather variability. The Hubs will build capacity within USDA to provide information and guidance on technologies and risk management practices at regional and local scales. To learn about how climate change and weather variability are affecting agriculture in your area, click on a region of the map above. For more information on the Climate Hubs, check out the following resources:

[Climate Hubs Webinar Presentation](#)

[USDA Regional Hubs for Risk Adaptation and Mitigation to Climate Change Factsheet.](#)

[Climate Hubs Charter](#)

To learn more about USDA's approaches to climate challenges, visit the [USDA Climate Solutions page](#).

ISEE— <http://isee.purdue.edu/> <http://isee.purdue.edu/extra.php?about=isee> Development of educational maps through University of Illinois. Illinois NRC has agreed to provide assistance to University of Illinois Dr. Robert Darmody (Pedology) and Dr. Jennifer M. Fraterrigo (GIS).

The Integrating Spatial Educational Experiences (Isee) web site allows anyone anywhere to access information about the soils, landscapes, and natural and man-made features of Indiana. Isee was originally conceived to support the soil, crop, and environmental science teaching program in the Agronomy Department at Purdue University. Anyone interested in Earth Science, however, is likely to find Isee interesting.

One of the focuses of Isee is on the spatial aspects of soil properties, in other words, how soil properties are distributed over large areas. In the past, soil science has focused primarily on how soil properties vary with depth at specific points in the landscape. Although the concept that soils vary in patterns across landscapes has always been a part of soil science education, teaching students how to understand these patterns was very difficult. Isee allows one to see and understand spatial patterns in the Indiana soil landscape without spending years mapping soils in the field.

Isee consists of maps from different sources, all of which are georeferenced so that each point on each map corresponds to its equivalent latitude and longitude on the Earth's surface. Below we describe where we obtained the data on which these maps are based and the technical details describing how the maps were created.

Captain Mine Plots U of I

I will be putting together a Technical Soil Services plan in the next month or so. I will include this in the plan. Funding is questionable at this time until there is a budget, however we should be able to get some personnel involved at the least.

Would there be an interest in becoming involved with an initiative to evaluate some of our reclamation research plots 30 years after construction? In particular, the Captain Mine and possibly the Denmark truck plots. Kevin McSweeney, University of Wisconsin, Department of Soil Science and I discussed this when we visited earlier this week. The Captain plots were the subject of Kevin's thesis when he was at UIUC. These are some of the longest term prime farmland plots in the US and this information would be a valuable contribution to reclamation science to evaluate soil development changes over 30 plus years. We assume that we will be able to get access to these areas and would want to use a backhoe for pit descriptions. I have a backhoe. This would be done during 2014.

In addition to pit descriptions we would take soil samples to process. We will also take Soil EC data and probe data from the Veris NIR-VIS probe to evaluate soil strength and organic matter.

Farmland Classification

Mine reclaimed lands

Inconsistencies in population

Order 1 Mapping

Procedures

Agreements for reimbursables

Lake County

Soils in the City Conference <http://www.iweasite.org/Conferences/SoilCity.html>

International Year of Soils 2015

ACTIONS/STRATEGIES

Annual Illinois Cooperative Soil Survey Work Planning Conference will be held in May or June each year.

Map Unit Correlation and numbering. Illinois Map Unit Numbering Protocols

Currently, Illinois has a 3 digit number that identifies the series. There is a letter suffix that corresponds to slope, and if eroded, a number suffix following the slope letter to indicate the degree of erosion. In flooded areas, or on potential flooded landforms within the 100 year floodplain, a numerical prefix is identified to indicate the frequency of flooding*. Other numerical prefixes are used for landform, undrained areas, and ponded areas.

Correlation and disaggregation of like map units is creating a need to develop additional prefixes for separations relative to landform, geography, and/or vegetation that significantly affects interpretations.

A lowercase prefix is suggested. The consistent application of this is important to maintain the integrity of the numbering system we have. Discussion and input from ICSS partners.

TSS needs

Develop plan of action to maintain the quality of services available to internal and external customers including a request for GS 7/9/11 soil scientists to train in Illinois and be mentored by those with several years' experience to maintain the continuity and integrity of services provided.

TSS/RSS Plan <http://efotg.sc.egov.usda.gov/>

http://efotg.sc.egov.usda.gov/references/public/IL/Technical_Soil_Services_RSS_Plan.docx

Plan Summary

http://efotg.sc.egov.usda.gov/references/public/IL/Technical_Soil_Services_RSS_Plan_Executive_Summary.docx

GIS Needs

Develop plan of action to maintain the quality of services available to internal and external customers including a proposed Illinois GIS Planning conference and discussions on acquisition of LIDAR and development of products to users.

GIS Plan <http://efotg.sc.egov.usda.gov/>

http://efotg.sc.egov.usda.gov/references/public/IL/Illinois_GIS_Plan_Executive_Summary.docx

OPPORTUNITIES

Cooperative Ecosystem Study Units (CESUs)

In preparation for end of year closeout (yes, I know it's only the end of March), we would like for each of you to explore the potential of setting up CESU (Cooperative Ecosystem Study Units) agreements with participating universities and colleges in your Region. These agreements can be developed for collecting vegetation data for ESD's, developing and implementing a soil systems study (master's thesis), conduct water table monitoring studies, etc. Basically, any project for which there will be deliverables.

We will be discussing CESU's at the upcoming NHQ Leadership meeting in late April.

Info about the CESU program is at the following link: <http://www.cesu.psu.edu/>

Conservation Initiative Grants (CIG) NRCS provides [funding opportunities](http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cig/) for agriculturalists and others through various programs. Conservation Innovation Grants (CIG) is a voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging Federal investment in environmental enhancement and protection, in conjunction with agricultural production. Under CIG, Environmental Quality Incentives Program funds are used to award competitive grants to non-Federal governmental or nongovernmental organizations, Tribes, or individuals.

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cig/>

Training

Training Given:

Intro to Soil Survey – May 20-22, 2014, XX participants

Hydric Soils Course – June 2012, XX participants

Conservation Planning, soil/landscape changes and hydric intros – April 8, 2014, 16 participants

Training Received:

State Office Staff: SSS, GIS, State Geologist

Course name	Count
AbilityOne Program Training	1
Applying Basic Data Formatting in Excel 2010	1
Basics of Python	1
Ethics: Basic Post-Employment Restrictions	1
Ethics: Government Purchase Card Training	1
FY2014 USDA Information Security Awareness Training	5
Geotechnical study	1
No FEAR Training Placeholder Item (Ensures duplicate assignments are not made)	5
Performance Management in USDA	5
Python 3: The Python Environment	1
Python 4: Advanced Python	1
Python Scripting for Map Automation in ArcGIS 10	1
Python Scripting for Geoprocessing Workflows	1
Readings in Geology	1
Readings in Groundwater Hydrology	1
Supervising For Excellence	1
Supervisory Training	1
USDA Cross Training Programs FSA Noninsured Crop Disaster Assistance Program (NAP)	1
USDA Cross Training Programs: AMS Organic 101	1
USDA Cross Training Programs: AMS Organic 201	1
USDA Cross Training Programs: FSA Loan Programs	1
USDA Cross Training Programs: FSA Overview	1
USDA Cross Training Programs: NRCS Conservation Programs Part 1	1
USDA Cross Training Programs: NRCS Conservation Programs Part II	1
USDA Cross Training Programs: NRCS Conservation Technical Assistance Program	1
USDA Cross Training Programs: NRCS Overview	1
USDA Cross Training Programs: NRCS Partners	1
USDA Cross Training Programs: NRCS Wetland and Highly Erodible Land Compliance	1
USDA Cross Training Programs: RD (RHS) Housing and Community Facilities Programs	1
USDA Cross Training Programs: RD Overview	1
USDA Cross Training Programs: RD Rural Business and Cooperative Programs	1
USDA Cross Training Programs: RD Rural Utilities Service	1
USDA Cross Training Programs: RMA Crop Insurance 101	1
USDA Cross Training Programs: RMA Crop insurance Cycle	1
USDA Federal Appropriations Law Training	1
USDA No FEAR Act Training - FY2013	5
USDA Pathways Programs for Hiring Managers	1
USDA Scientific Integrity Policy	4
webTA for Supervisors	1
Workplace Harassment for Employees	4
Workplace Harassment for Supervisors and Managers	1

LiDAR Status for Illinois

March 2013

- Data Available thru Clearinghouse
 - Data Available thru County
 - Data Available by request from ISGS
 - In Progress - IDOT
 - In Progress - USGS & IDOT
 - In Progress - USACE (UMRR-EMP)
 - Acquisition Not Planned
- IDOT Acquisition Boundary
 - FEMA Acquisition Boundaries
 - IDOT District Boundaries

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For access to LiDAR data please visit the
Illinois Height Modernization Program
www.isgs.illinois.edu/nsdihome/webdocs/ilhmp/
 or search for "ILHMP" on Google



LiDAR Status for Illinois

April 2014

- Data Available thru Clearinghouse
- Data Available thru County
- Data Available by request from ISGS
- Data Available by request from ISGS
- In Progress
- Acquisition Planned
- Acquisition Not Planned

IDOT District Boundaries

Additional information:
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Illinois Height Modernization Program
crystal.isgs.uiuc.edu/nsdihome/webdocs/ilhmp/
 or search for "ILHMP" on Google



1938-41 Historic Aerial Photo Orthomosaic Progress



1938-41 Historic Aerial Photo Orthomosaic Progress





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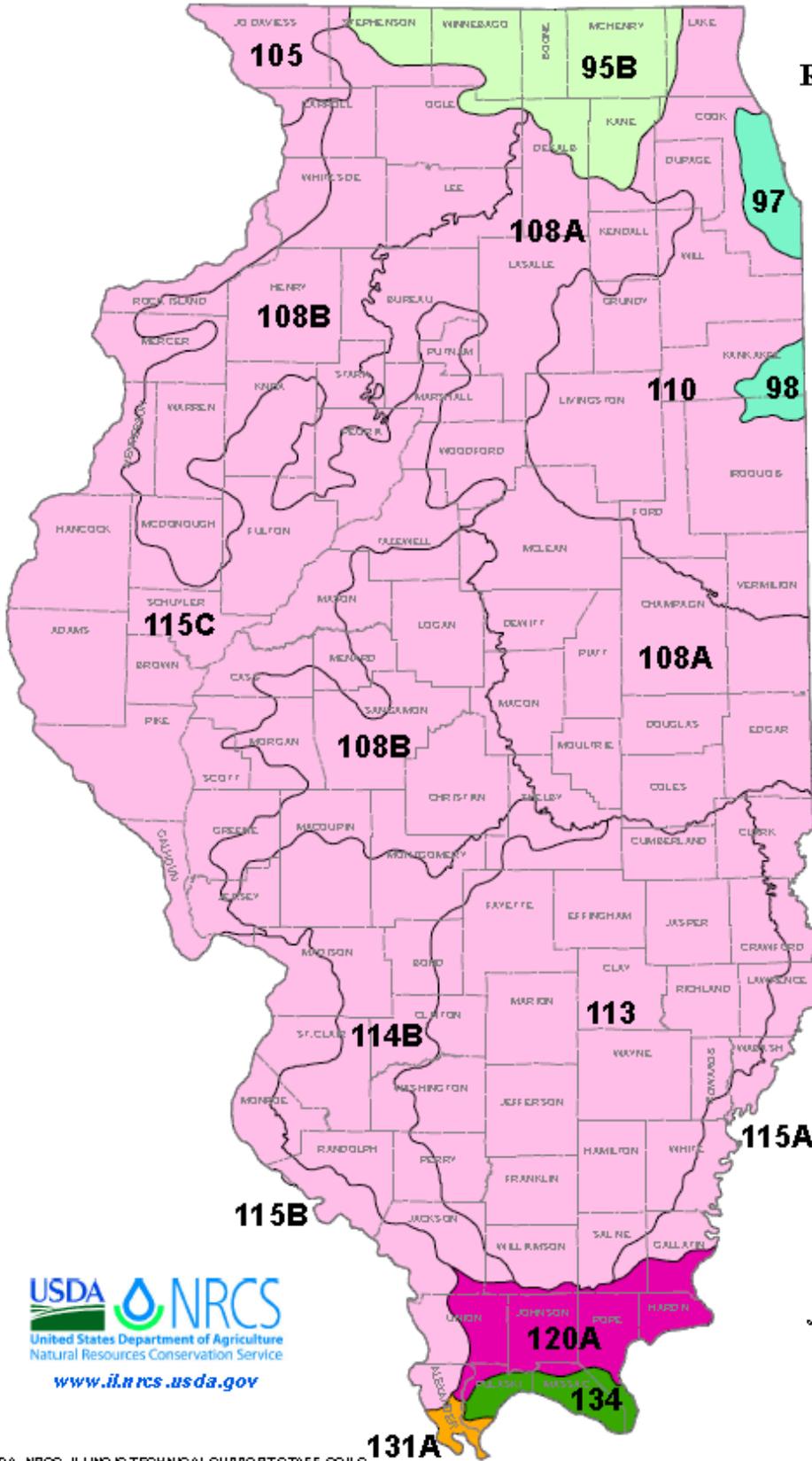
ILLINOIS RESOURCE SOIL SCIENTIST



MAJOR LAND RESOURCE AREAS ILLINOIS

LEGEND

- K** NORTHERN LAKE STATES FOREST AND FORAGE REGION
- 95B - SOUTHERN WISCONSIN AND NORTHERN ILLINOIS DRIFT PLAIN
- L** LAKE STATES FRUIT, TRUCK AND DAIRY REGION
- 97 - SOUTHWESTERN MICHIGAN FRUIT AND TRUCK BELT
- 98 - SOUTHERN MICHIGAN AND NORTHERN INDIANA DRIFT PLAIN
- M** CENTRAL FEED GRAIN AND LIVESTOCK REGION
- 105 - NORTHERN MISSISSIPPI VALLEY LOESS HILLS
- 108A, 108B - ILLINOIS AND IOWA DEEP LOESS HILLS
- 110 - NORTHERN ILLINOIS AND INDIANA HEAVY TILL PLAIN
- 113 - CENTRAL CLAYPAN AREAS
- 114B - SOUTHERN ILLINOIS AND INDIANA THIN LOESS AND TILL PLAIN
- 115A, 115B, 115C - CENTRAL MISSISSIPPI VALLEY WOODED SLOPES
- N** EAST AND CENTRAL FARMING AND FOREST REGION
- 120A - KENTUCKY AND INDIANA SANDSTONE AND SHALE HILLS AND VALLEYS
- O** MISSISSIPPI DELTA COTTON AND FEED GRAIN REGION
- 131A - SOUTHERN MISSISSIPPI VALLEY ALLUVIUM
- P** SOUTHERN ATLANTIC AND GULF SLOPE CASH CROPS, FOREST, AND LIVESTOCK REGION
- 134 - SOUTHERN MISSISSIPPI VALLEY LOESS



ILLINOIS FIELD OFFICE TECHNICAL GUIDE
SECTION 1 - MAPS
JANUARY 2005