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)

Full version is available on eFOTG in Section II, under Soil Planning Folder
http://efotg.sc.egov.usda.gov/efotg_locator.aspx

2014 Plan to Maintain: *http://efotg.sc.egov.usda.gov/references/public/IL/Plan_to_Maintain_the_Soil_Survey_of_Illinois_2014_04April_04.pdf*
2014 Minutes: *http: //efotg.sc.egov.usda.gov/references/public/IL/2014_minutes.docx*

2015 DRAFT Plan to Maintain
http://efotg.sc.egov.usda.gov/references/public/IL/A_DRAFT_Plan_to_Maintain_the_Soil_Survey_of_Illinois_2015_05May_21.pdf

May 2015

Natural Resources Conservation Service
2118 W. Park Court, Champaign, Illinois 61821
Voice (217) 353-6600 – FAX2mail (855) 668-0602

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AGENDA

2015 ILLINOIS COOPERATIVE SOIL SURVEY
WORK PLANNING CONFERENCE

Thursday, May 28, 2015

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

- **Convene 9:30 am (CST)**
- **Opening Remarks** — **Ivan Dozier, NRCS State Conservationist**
- **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**

Plan to Maintain the Soil Survey of Illinois

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- **Technical User's Conference?**

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        - Plan for additional RSS (embedded document)
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- **Illinois Soil Classifiers Association**
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- NRCS Regions Map
- Nutrient Loss Reduction and MRBI (with Maps)
- Current Illinois NRCS Administrative Areas with Area Assistants
- Proposed Illinois NRCS Administrative Areas with Area Office locations
- Current Administrative Areas with Resource Soil Scientist locations
- Proposed Administrative Areas with Resource Soil Scientist locations

BACKGROUND

National Cooperative Soil Survey http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/partnership/ncss/

The National Cooperative Soil Survey (NCSS) is a nationwide partnership of Federal, regional, State, and local agencies and private entities and institutions. This partnership works to cooperatively investigate, inventory, document, classify, interpret, disseminate, and publish information about soils of the United States and its trust territories and commonwealths. The activities of NCSS are carried out on national, regional (such as the Major Land Resource Area or MLRA), and State levels.

Partners

Primary Federal agency NCSS participants include the Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), Department of Defense (DoD), Forest Service (FS), National Park Service (NPS), and Natural Resources Conservation Service (NRCS). Appendix 601-1 has a short description of the roles of these partners. In addition to these Federal agency partners, there are numerous State and local partners participating in NCSS.

Vision:
Mission Statement:
Strategic Plan:

Under Development

The NCSS Strategic Plan for the next 5 years is being updated and discussed. It is expected to be discussed at the National Meeting in Duluth in June and should be completed this fiscal year ~depending~.

General Manual 430, part 402 – Soil Surveys **(contains authorities)** http://directives.sc.egov.usda.gov/RollupViewer.aspx?hid=17074

Illinois Cooperative Soil Survey

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. Illinois recognizes the importance of the cooperative partnership necessary to meet the goals of soil survey and data delivery in Illinois.

State conferences deal with the coordination of State soil survey efforts, review of research findings, setting of work priorities, and the development of work schedules. They serve as vehicles for determining and incorporating the views of individuals and organizations and for providing guidance for activities in the NCSS program for each State.

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. NRCS has partnered with many agencies and individuals to meet goals of the NCSS and its partners.

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.

Alignment to USDA, NRCS, and SSD Strategic Plans
USDA Strategic Plan: (http://www.ocfo.usda.gov/usdasp/sp2010/sp2010.pdf)

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)
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.

SSD Priorities for FY2015

1. Strengthen the National Cooperative Soil Survey (NCSS) through increased transparency and collaboration with partners in developing a strategic plan. (Led by Maxine Levin, NL, Soil Interpretations)
2. Sharpen the focus of technical soil services to enhance and support soil health initiatives, conservation planning, and program delivery. (Michael Robotham, NL Leader, TSS)
3. Increase the integration of soil science with USDA and NRCS climate change initiatives. (Michael Wilson, NL, Climate Change)
4. Accelerate the Soil Survey Data Join Recorrelation (SDJR) initiative with the overall goal of completing the initial phase in 3 years. (David Hoover, NL, Soil Business)
5. Accelerate the development of ecological site products to broaden applications in collaboration with State technical staff and Federal partners. (Joel Brown, NL, Ecological Sites)
6. Formulate a plan to accelerate the foundational (initial) soil inventory on all lands, including Federal lands. (Roy Vick, Associate Director, SSD)

Soil Business Area Analysis Group (SBAAG)--The Soil Business Area Analysis Group (SBAAG) acts as a forum to analyze and facilitate the integration of technical and operational business processes into the National Cooperative Soil Survey Program. This includes the coordination with National Centers in order to assure that research, development, delivery, and marketing of soil survey products and services follow an overall system plan. The objective of the group is to improve the quality and delivery of soil information and the process by

which that information is collected, managed, and presented. Including, technical specification of equipment and software, data distribution methodologies, and assistance with navigating the current IT framework.

SBAAG provides recommendations to the National Soil Science Division leadership on all issues related to the soil survey business area.

SBAAG accepts ideas, thoughts, or issues relating to soil survey business functions from any level within the National Cooperative Soil Survey. Items should be passed to the appropriate State Soil Scientist for submission to the SBAAG chair, Dave Hoover.

Retirement Note: Dr. Ken Olson, after 32 years of attendance has retired and will be handing the reins over to Dr. Kevin McSweeney to represent the University of Illinois and NCERA-3. The NCERA-3 committee consists of pedologists from each North Central Ag Experiment Station, representatives from the USDA, NRCS, CSREES, other universities, and an administrative advisor and this group is uniquely qualified to meet future needs for National priorities. (http://lgu.umd.edu/lgu_v2/homepages/home.cfm?trackID=15996).

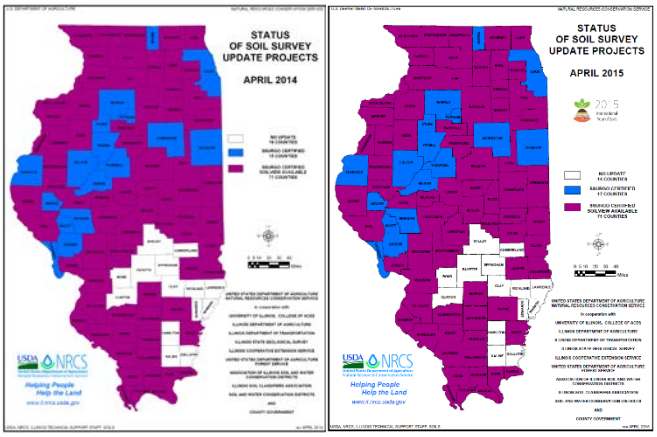
STATUS OF SOIL SURVEYS

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. This includes Provisions of **New Data and Data Delivery Methods**.

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/*. Large data sets are available from the *Geospatial Data Gateway 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).*

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 2014, 2015.

“pseudo” SSURGO
Description: Twenty-seven counties in Illinois have not been updated over that last 15-20 years of update activities in Illinois. Evaluations were 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:
Pseudo SSURGO update complete for eleven counties. Calhoun, Hancock, Greene, Scott, Morgan, Brown, 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.

Some map units, through the Soil Data Join Re-correlation, have had updated data incorporated into these legends. Additional field work will be needed to update maps and confirm decisions made during SDJR. Additionally, the next phase of maintenance projects will include disaggregation of map units based on landform and other significant geographical and defensible separations.

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 and again in 2009. 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 that are responsible for most of the state (Aurora, Springfield, and Carbondale). The MLRA office in Onalaska, Wisconsin 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 office in Milan, TN services MLRAs 131A and 134.

MO Region 12-Amhurst, Maine manages Grand Rapids, Michigan

MO Region 11-Indianapolis manages Aurora, Marion (formerly Carbondale), and Springfield.

MO Region 10-St. Paul, Minnesota manages Onalaska, Wisconsin

MO Region 7-Auburn, Alabama manages Milan, Tennessee

MO Region 6-Morgantown, West Virginia manages Owensboro, Kentucky

Figure 4. MLRA Office Regions

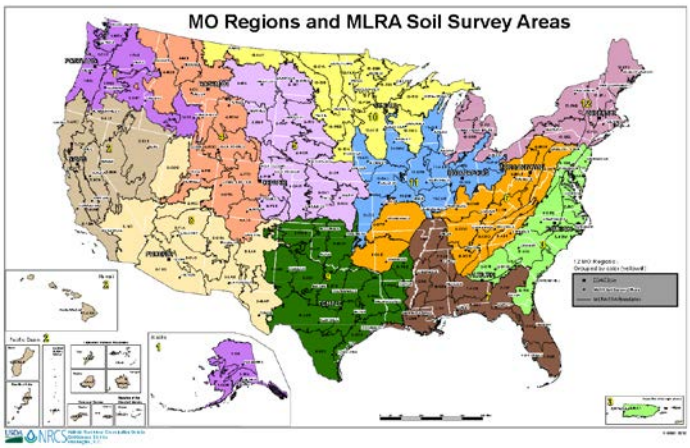
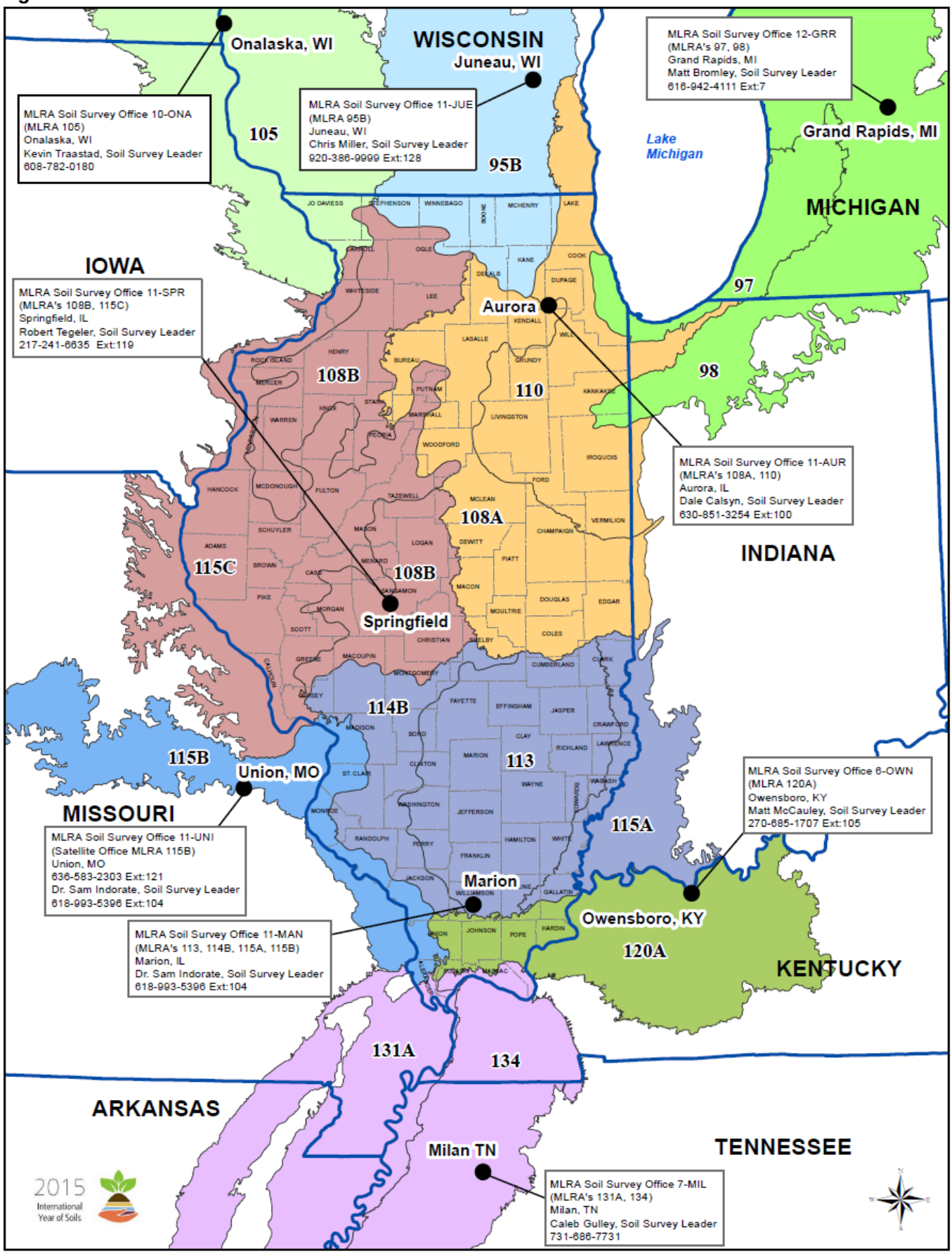


Figure 5. MLRA Boundaries and the Offices that serve Illinois



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-- The Soil Data Join Re-correlation (SDJR) is the focus of the Soil Survey Division for FY 2015 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 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 two years. Specifics of the harmonization are in the longer version of this document online.

- 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/ 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/ provide 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.

Current funding structure is from federal sources and covers salary plus 10 to 15 percent of salary for remaining Soils staffs, travel, supplies, maintenance of equipment, and vehicles. The state soil scientist is funded by the SSD through the Illinois NRCS. The MLRA staffs are funded by the SSD through the Regional Directors office, NRI provides funding for one position, the geologist's position is funded through the national geologist's office, and remaining employees are funded by the Illinois NRCS budget.

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. (Five) additional MLRA offices from adjacent states include Onalaska, WI, Juneau, WI, Milan, TN, Owensboro, KY, and Grand Rapids, MI) which cover parts of Illinois by assigned MLRAs (see figure 5). The MLRA office in Union, MO became part of the Carbondale MLRA. 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	3/2 Soil Scientists	1 Pathways student	
Springfield	4 Soil Scientists	~~1 GIS specialist~~ ---→	1 ESD Specialist
	---	---	---

12/11 soil scientists, 1 Pathways student, 1 GIS specialist, 1 ESD Specialist

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).
1 ACES Employee (NRI, ESD Review, Slide Scanning, Forestry Assistance), (Sipp)

ACES -- Agriculture Conservation Experienced Services Program. This partnership between the National Older Worker Career Center and the Natural Resources Conservation Service (NOWCC/NRCS) places experienced workers into positions supporting conservation and environmental protection efforts.

We also have volunteer assistance from time to time and encourage volunteers to assist with training material preparation, scanning, archiving of soil materials, and inventory.

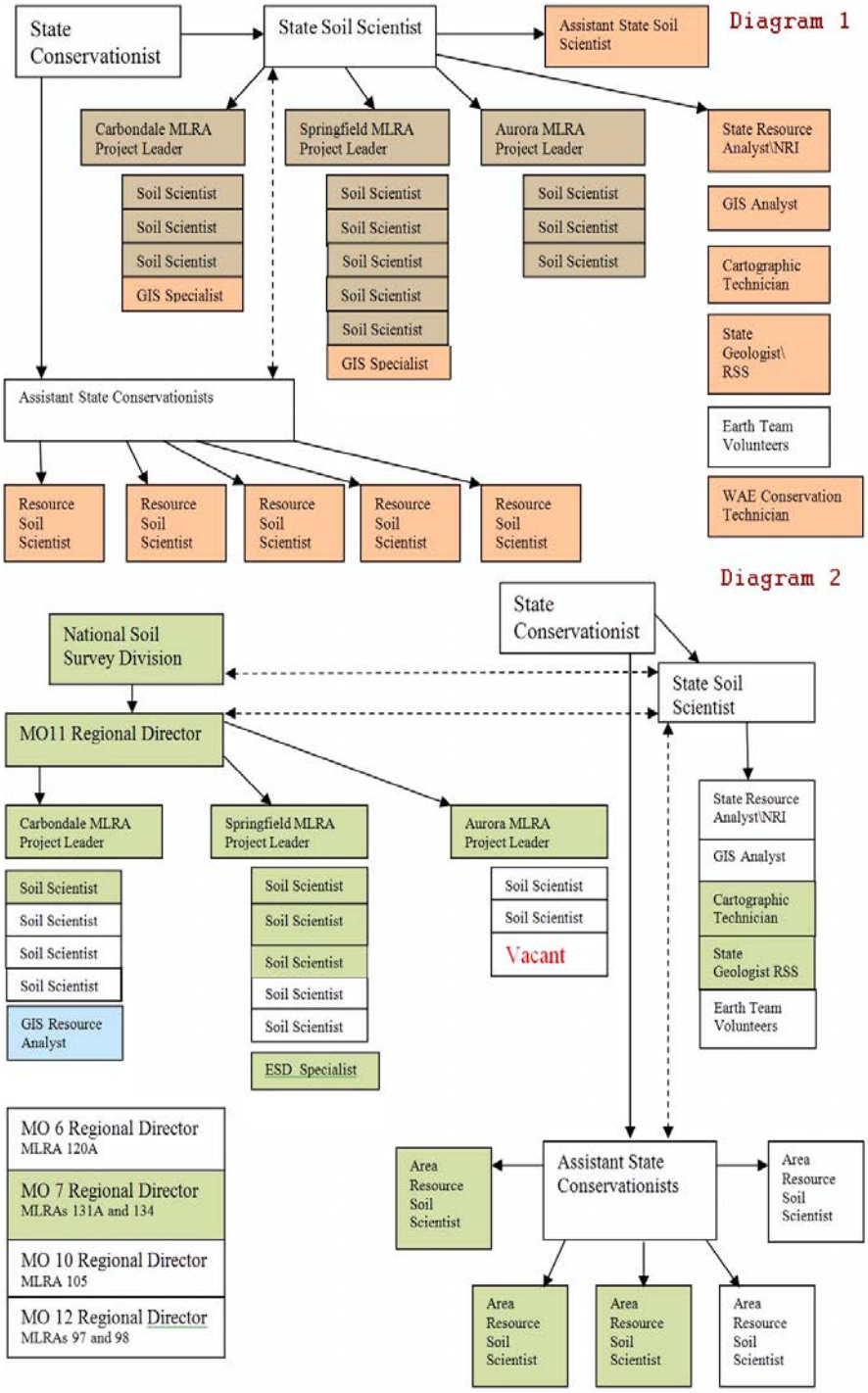
Current Wetlands and Compliance Workload analysis indicates support of hiring a State Office Compliance team to perform many of the tasks that are shared across the state. An effort will be made to address compliance needs by hiring a Compliance Coordinator and GIS technicians to make determinations and create maps, interpretations, and documentation for statewide compliance efforts to reduce the burden on area staff.

Area staff includes Four resource soil scientists and three GIS specialists located throughout the state to provide technical soil services and GIS support.

Retirements! MO11 and MO10 Regional Directors retired. These positions have been filled. Two MLRA soil scientist positions will remain empty after retirements in the Springfield MLRA. One other MLRA soil scientist recently resigned from the Aurora Office. Two Resource Soil Scientists also retired. The Illinois NRCS is also undergoing a re-organization and will fill only one of the RSS positions at this time.

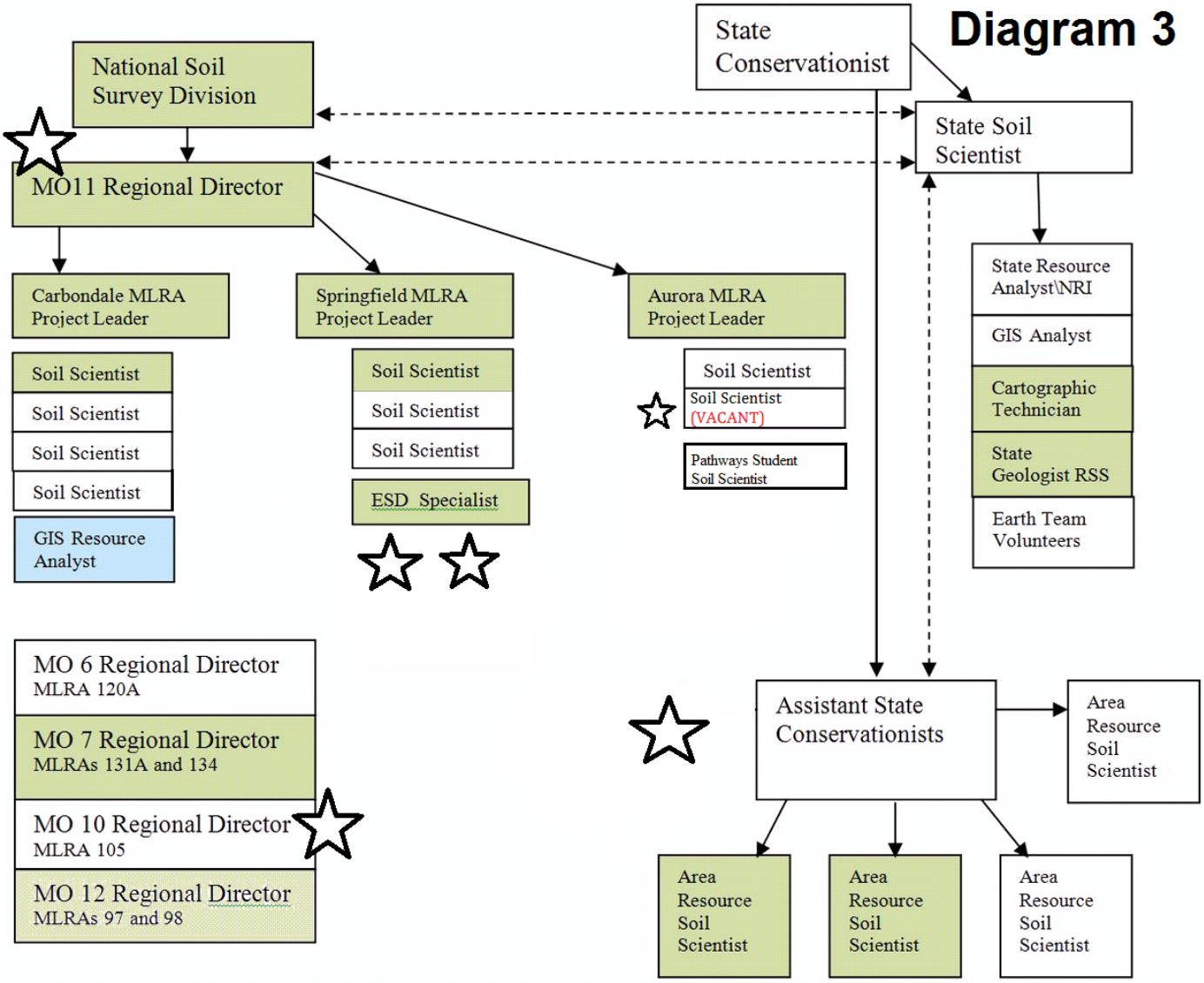
Diagram 1 shows the structure as it was in FY 2013. The initiation of reorganization occurred in FY 2013. Positions highlighted in orange are not supported in the national SSD reorganization plan. Positions highlighted in Tan were supported by SSD re-organization plan.

Diagram 2 shows 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.



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 3 shows current FY 2015 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.



WORKLOAD

State Soil Scientists: Leadership in the Soil Survey Division http://efotg.sc.egov.usda.gov/ http://efotg.sc.egov.usda.gov/references/public/IL/State_Soils_Scientists_Leadership_in_the_Soil_Science_Division.pdf

National Soil Survey Handbook (NSSH) | NRCS
Technical Soil Services Handbook (TSSH) | NRCS

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 soil and climate information http://efotg.sc.egov.usda.gov/efotg_locator.aspx

- Liaison between soil partners (Cooperative Soil Survey); Illinois NRCS; Soil Survey Division; Regional MLRA offices and Aurora, Carbondale, and Springfield MLRAs; and Onalaska, WI, Juneau, WI; Milan, TN; Owensboro, KY; and Grand Rapids, MI.
- 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 "Technical Soil Services\RSS in Illinois"
- Maintain the "Illinois 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
- Member of Soil Business Area Analysis Group—National Technical Committee for soil equipment, software, and computer needs
- Provide input for National Cooperative Soil Survey Strategic Plan
- Provide technical review and input on technical publications for the state, including development of publications
- Coordinate Soils Information, Special Studies, and Data Delivery
- Provide Programs support including compliance assistance with HEL and Wetland determinations and guidance

Inventory, Organization, and House Cleaning

- Equipment
- Scanning and Archiving Patric Roemer, volunteering Parkland Student, has been scanning manuscripts and data books that will be posted
    - Data books
    - Soil Descriptions
    - Old survey reports
    - County original materials
    - Other maps and sets of maps
- 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
- Ad-hoc requests for data and maps
- GIS support for toolkit, soil survey, programs, etc.
- Support for wetlands digitizing
- Support for easement management
- Development of new GIS tools, processes, and algorithms
- GIS and LiDAR strategy, coordination, and planning
- LiDAR processing and support
- 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
- Coordinate acquisition and distribution of "Big data"

GIS\Area Specialist

- Geodata Administration
- GIS and CST Training and Support
- GPS Training and Support
- Geospatial Analysis and Scripting
- Technically supervising FSA Compliance Slide Scanning and Archival

GIS\Cartographer

- Maps - Interpretive/Status/Watershed
- Soil Business
- Processing data, Lidar, SSURGO StateWide data
- 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

Current State Projects and Activities

Training Given:

- Intro to Soil Survey – Fall 2015?? XX participants
- Hydric Soils Course –2014, XX participants
- Conservation Planning, soil\landscape changes and hydric intros – April 8, 2014, 16 participants
- EM Meter training with Jim Doolittle—Assisted with basic operation of EM-38 operation. Jim provided training to Dan Withers, Roger Windhorn and three Illinois State archaeologists.

Compliance Team

The NRCS in Illinois, like many other states, has been faced with a backlog of Wetland and HEL Compliance determinations. Several states have begun the process of creating state teams to address the backlog. Illinois will hire a Compliance Coordinator to first review off-site determinations and approve those determinations that can be made using off-site methods including digital slides, digital aerial photography, LIDAR, and other techniques that have been approved for off-site determinations. Three technicians will also be hired to provide GIS, photo interpretation, and preparation of materials for off-site and on-site determinations across the state.

A set of GIS tools is being developed to aid in the process of review of digital layers and will automate some of the processing and generation of paperwork through linked databases.

A set of protocols (State Off-site Methods) has been written to be followed by the team which should be in place by October. The team will receive all determination requests for counties that have compliance slides in digital format. For those counties that do not have digital photos, existing area teams will continue to provide off-site determinations until digital materials are available. The team will be trained by State office and area staff on the determination process. The team will be supervised by the State Soil Scientist.

Positions announcements will be posted soon to USA JOBS.

Climate Summaries

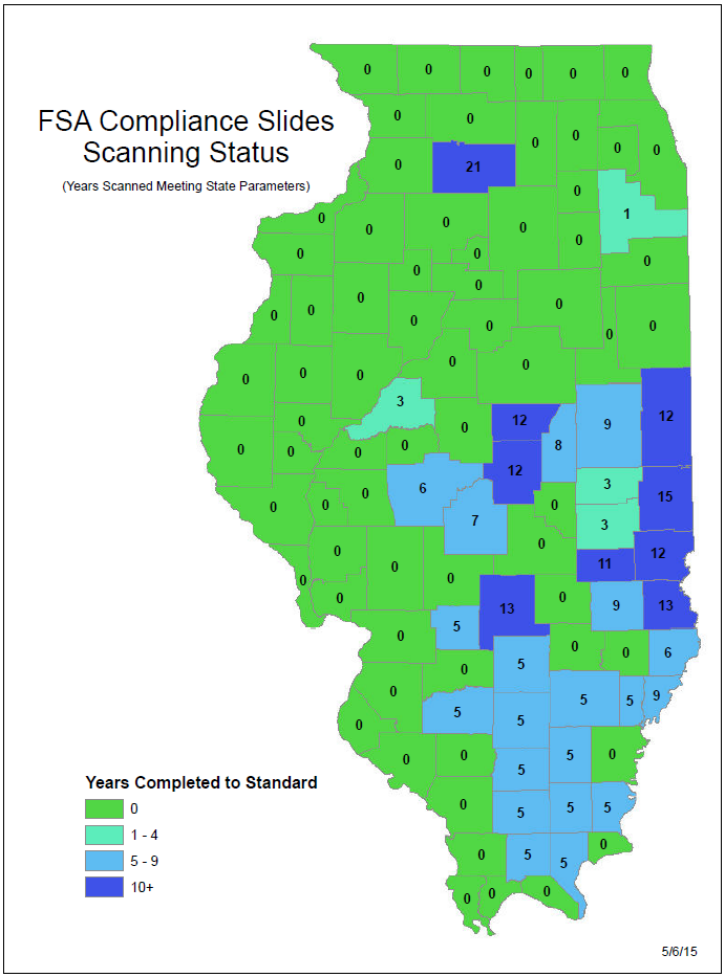
Climate data is summarized in WETS tables developed by The Midwest Regional Climate Center in conjunction with the NRCS National Water and Climate Center and the National Oceanic and Atmospheric Administration (NOAA). GIS has been used in Illinois to geo-locate the climate stations and assign specific complete data sets to specific Township, Range, and Sections using proximity analysis.

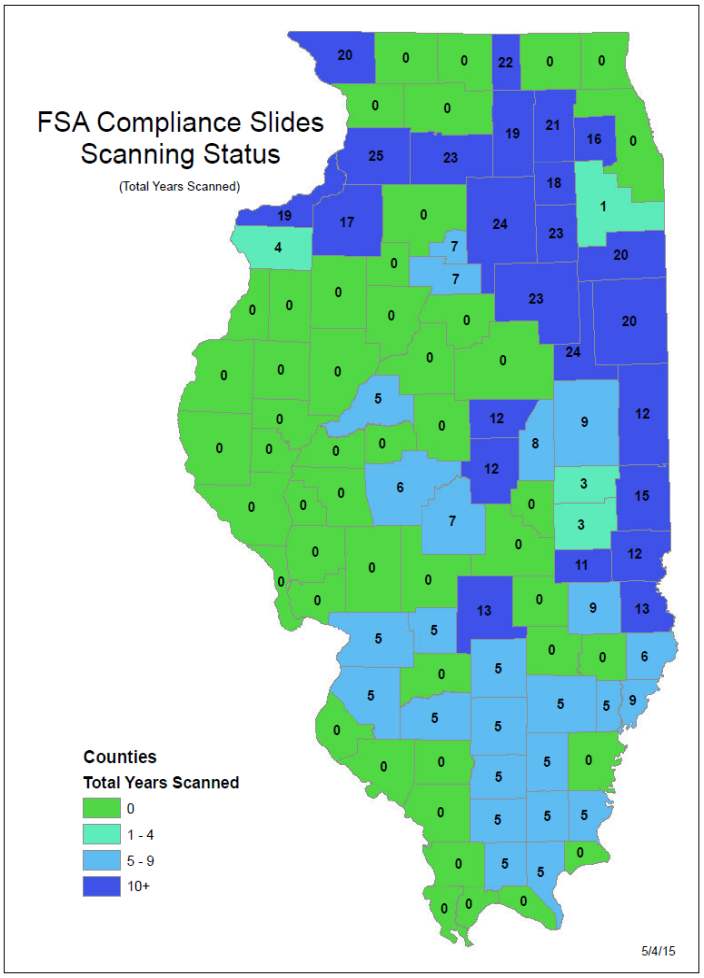
The WETS tables give a month by month summary and probability analysis of temperature and precipitation. The table also provides average length of growing season using three index temperatures (32, 28, and 24 degrees Fahrenheit) at 50 and 70% probabilities.
Growing Degree Days (GDD) has two indexes that are related to general crop type:

50 degree base - corn, maze, soybeans etc.
40 degree base - cereal grains and other grass type - general use.

Wet, Dry, and Normal years are determined using this comparison and national guidance. The Food Security Act allows the use of Normal Years for compliance slide review as a tool for off-site wetland determinations.

Figures 6 and 7: Compliance Slide Scanning Status





Land Evaluation and Site Assessment (LESA)

Farmland Protection Policy Act (FPPA) – Tim Prescott, Resource Inventory Specialist, completes the Farmland Conversion Impact Rating (AD 1006 and CPA 106) forms submitted to NRCS. Illinois has 37 counties that have LESA systems approved by the State Conservationist.

Annual LESA Report

No LESAs updated or reviewed this year

List Counties with LESAs

Natural Resources Inventory (NRI) http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/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 December.

2012 NRI Preliminary (DRAFT) release:

- Decrease of cultivated cropland by 34,000 acres
- Increase of non-cultivated cropland by 49,400 acres
- Decrease in Pastureland by 13,100 acres
- Increase in Forestland by 8,800 acres
- Increase in Urban land by 15,000 acres.
- Decrease in CRP by 27,900 acres.

Acres x 1,000

Year	Cult. Cropland	Noncult. Cropland (Permanent hay and horticulture)	Pasture land	Range land	Forest Land	Other Rural Land	Urban Built-up	Rural Transprt	Small Water	Large Water	Federal Land	CRP Land
1982	24,222.7	532.7	3,183.6	0.0	3,621.3	660.8	1,920.5	705.7	343.7	390.8	476.9	0.0
1987	24,327.8	396.6	2,940.0	0.0	3,642.0	660.1	2,080.3	683.5	339.4	391.3	477.6	120.1
1992	23,552.8	590.2	2,778.0	0.0	3,704.0	652.5	2,179.9	679.0	335.3	391.3	490.2	705.5
1997	23,624.7	438.2	2,521.4	0.0	3,801.3	637.5	2,418.0	678.4	330.6	392.2	490.8	725.6
2002	23,587.0	554.1	2,230.6	0.0	3,926.2	650.8	2,553.1	673.3	342.1	392.6	493.0	655.9
2007	23,230.6	656.5	2,236.5	0.0	3,991.7	675.3	2,676.1	678.1	349.4	392.8	499.6	672.1
2010	23,257.9	646.1	2,237.2	0.0	4,010.8	675.5	2,715.4	686.2	352.8	394.2	500.8	581.8
2012	23,223.7	695.5	2,224.1	0.0	4,019.6	676.9	2,730.4	685.4	352.9	394.2	502.1	553.9
2010 to 2012	-34200	49400	-13100	0	8800	1400	15000	-800	100	0	1300	-27900
1982 to 2012	-999000	162800	-959500	0	398300	16100	809900	-20300	9200	3400	25200	553900
1987 to 2012	-1104100	298900	-715900	0	377600	16800	650100	1900	13500	2900	24500	433800

National 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.
Status: Currently waiting for additional funding

Rapid Carbon Assessment – Final Reports available at:
http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcs142p2_054164

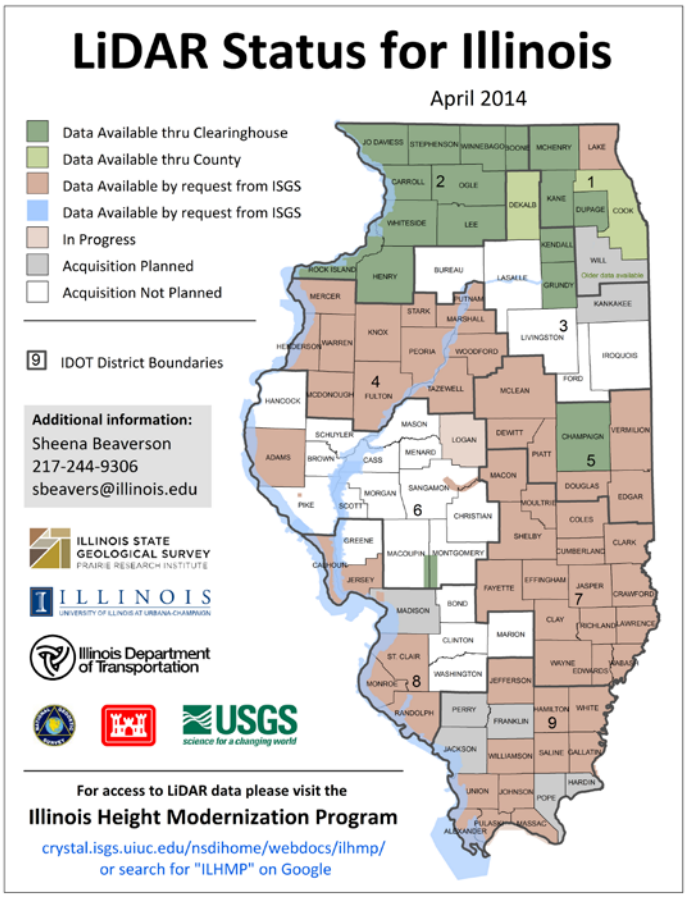
LIDAR Acquisition, Storage, Derivative Development, Tools and Distribution

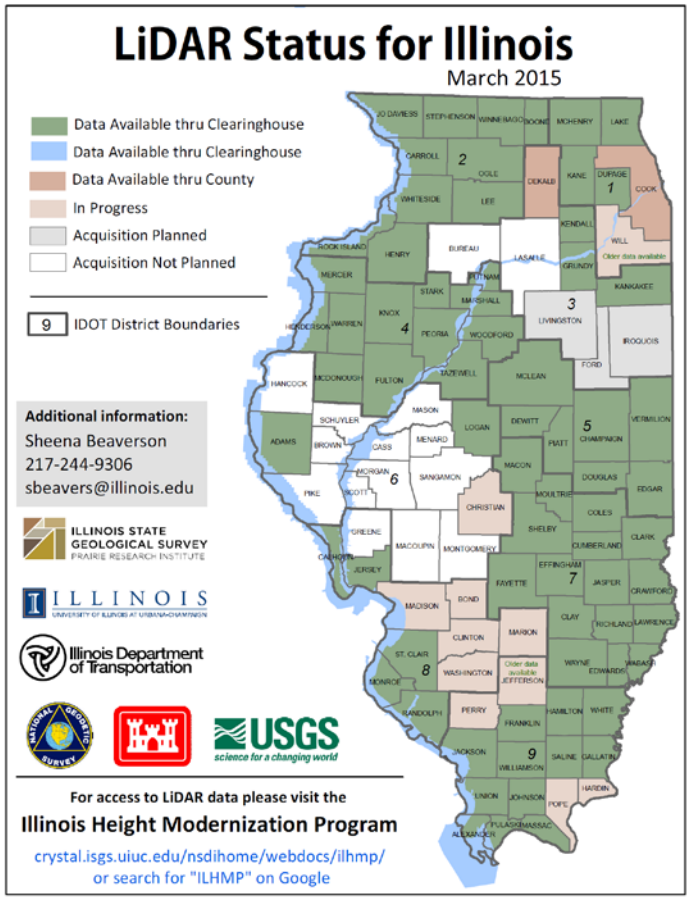
LIDAR - We have begun loading LiDAR data and products to the new storage space in the SO. We have also set up storage space for compliance slides. Due to upgrades to the IT infrastructure, we were forced to utilize this new space to house all "geodata" used for GIS maps and analysis to this storage space. Due to this, and the efficiency of LIDAR acquisition, it is anticipated that we will need another local storage server sooner than anticipated.

Illinois NRCS has entered into agreements with USGS and the National Center for Geospatial Excellence (NCGS) to leverage funds to acquire LIDAR.

- NRCS (IL and SSRAD) paid for about 90% of the $260,000 acquisition cost for Logan County. Products will be used to develop elevation, slope and contour maps to support planning for drainage water management and other conservation practices.
- Last year, Illinois NRCS committed $100,000 towards Christian County Lidar acquisition.
- Illinois NRCS is proposing $50,000 towards the acquisition of LIDAR in LaSalle and Bureau Counties this year.
- Illinois NRCS is seeking to acquire LiDAR data at a minimum nominal pulse spacing of 4 points per square meter, to develop high resolution digital elevation models and 1-2 foot contours for Bureau County. The effort will promote the Agricultural Water Management initiative, improve support for Soil Health management systems, enhance conservation planning and practice implementation, and support soil survey activities. Bureau County is entirely within the Mississippi River Basin Healthy Watersheds Initiative area, offering NRCS leverage for using LiDAR to promote conservation practices in watersheds with impairments where federal investments can make a difference in improving water quality.

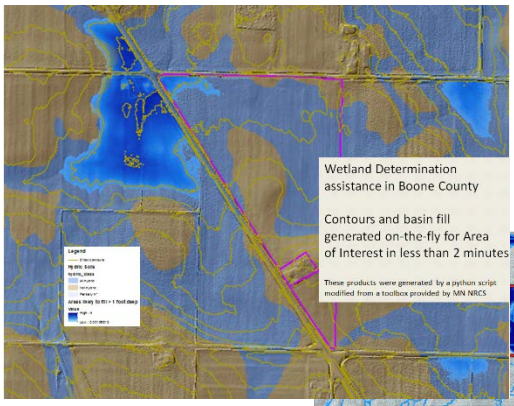
2014 and 2015 LIDAR Acquisition and Availability Status





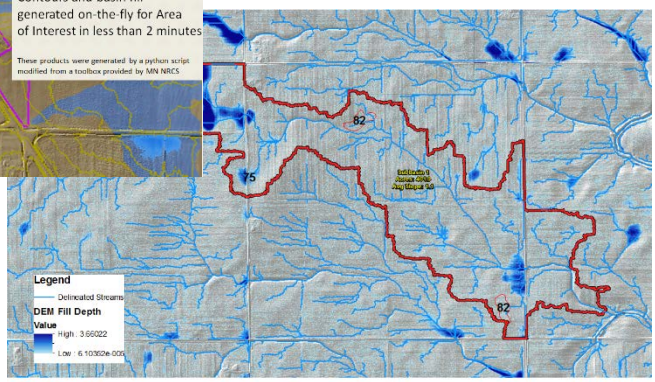
From Engineering Tools to Wetland Conservation Compliance

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.



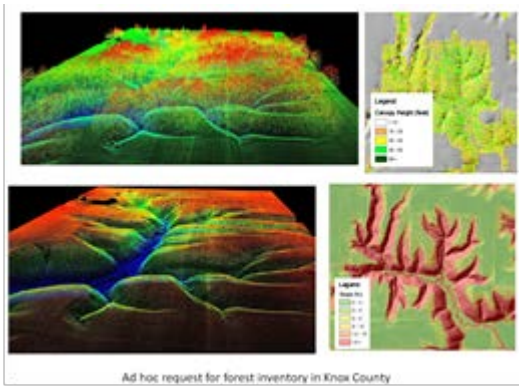
Wetland conservation compliance coordinators need simple tools to locate a field, check its compliance status, assess its hydrology, then digitize and store their determinations.

In planning for a grassed waterway, planners need to consider the contributing watershed, its average slope, its soils and its drainage patterns. MN NRCS developed a toolset that uses LiDAR elevation derivatives to generate contours, calculate drainage and ponding characteristics, and determine parameters for waterway design.



Runoff Curve Number Calculation in Macon County

A landowner in Knox County is considering grazing his woodlot. The NRCS State Forester and the District Conservationist for Knox County used LiDAR point cloud data and derived DEMs to assess tree canopy height and composition, and analyze slopes to assist the client in making prudent management decisions for his land.



BIG DATA – CYBER GIS DRAFT Abstract Proposal

Supercomputing solutions for high resolution elevation data

Tim Prescott[1], Jon Bonjean[1], Jonathan Rush[2], Aiman Soltani[2], Don Keefer[3]

Increasing volumes of high resolution elevation data derived from lidar present unique challenges for landscape modelers. Average GIS users desiring analytic surfaces like wetness index, slope length, slope shape, flow accumulation have little recourse for generating and storing these complex products. Even power users must allot large amounts of storage, processing power and time for generating elevation derivatives. Practical means of distributing derivatives to users, including network based solutions and portable storage media, present further operational challenges.

This paper demonstrates the application of massively parallel supercomputing to propose a solution to the aggravations of storing, processing and distributing large elevation datasets. The CyberGIS Center for Advanced Digital and Spatial Studies in the National Center for Supercomputer Applications at the University of Illinois, is working with partners, including the USDA Natural Resources Conservation Service to identify important analytic surfaces, develop algorithms and code to process those surfaces in a cluster environment, perform benchmark studies to demonstrate efficiencies, and establish distribution mechanisms for users.

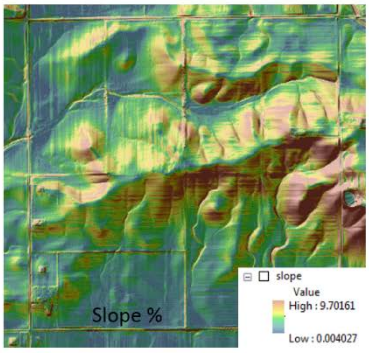
[1] USDA Natural Resources Conservation Service, Champaign IL
[2] CyberGIS Center for Advanced Digital and Spatial Studies, National Center for Supercomputing Applications, University of Illinois
[3] Illinois State Geological Survey, Prairie Research Institute, University of Illinois

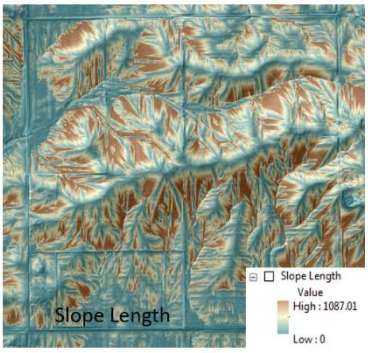
USDA-NRCS Programmatic and Data Needs

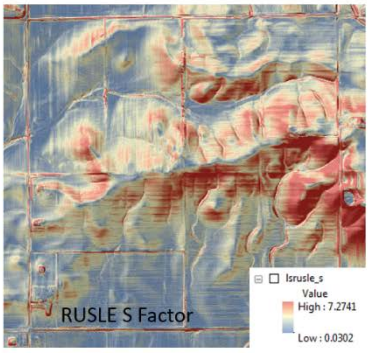
Conservation Planning	Revised Universal Soil Loss Equation (RUSLE) R*K*L*S / T (Erosion index (EI)) > 8 R = Rainfall factor K = Saturated soil hydraulic conductivity L = Slope length factor S = Slope factor T = Tolerable soil loss	*Sfactor = [0.065 +0.0456 (slope) + 0.006541(slope)^2]* *Lfactor = [flow length /72.5]^{MN}* *<1 % slopes MN=0.2; 1-3 % slopes MN=0.3; 3-5 % slopes MN=0.4; >5 % slopes MN=0.5* *e.g. Van Remortel, et al, Computers and Geosciences, 2007*
Conservation Compliance	Wetland Determinations Areas that pond Areas that accumulate flow Upland and lowland areas Climatological data Highly Erodible Land (HEL) Determinations Frozen list of soils that are Highly erodible Erosion Index (RKLS/T > 8)	*(Filled DEM – DEM) > 1 foot* *Flow accumulation (D∞, e.g. Tarboton or Shi)* *Wetness Index (D∞, e.g. Tarboton or Shi)* *Sfactor = [0.065 +0.0456 (slope) + 0.006541(slope)^2]* *Lfactor = [flow length /72.5]^{MN}* *<1 % slopes MN=0.2; 1-3 % slopes MN=0.3; 3-5 % slopes MN=0.4; >5 % slopes MN=0.5*
Soil Survey	Ecological Site Descriptions Physiography Climate Soil Hydrology	*Landform Classification (e.g. Iwahashi (2007), Schmidt (2004))* *Wetness Index (D∞, e.g. Tarboton or Shi)*

Slope, Slope Length, RUSLE "S" Factor, RUSLE "L" Factor, Erosion Index Greater than 8.

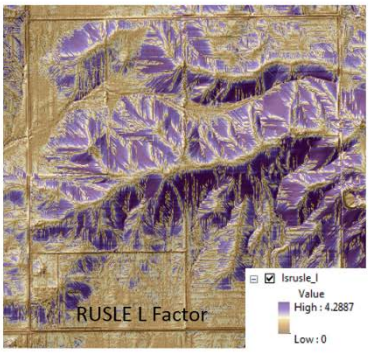
Sample RUSLE grids, Champaign County, Section 36, Township 18 North, Range 9 East

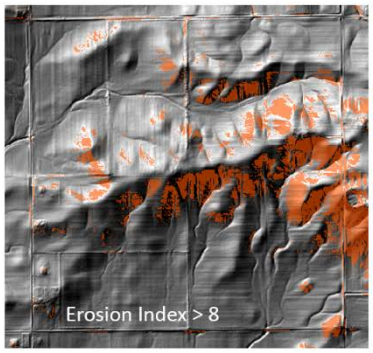






*Highly Erodible Land (HEL) calculated as ((R*K*L*S) / T) > 8*





Wetland Determinations for compliance with Food Security Act of 1985

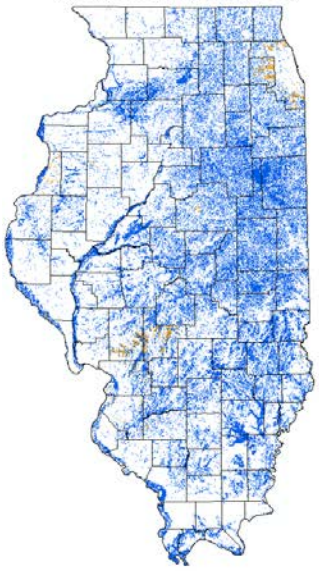
Three factors:

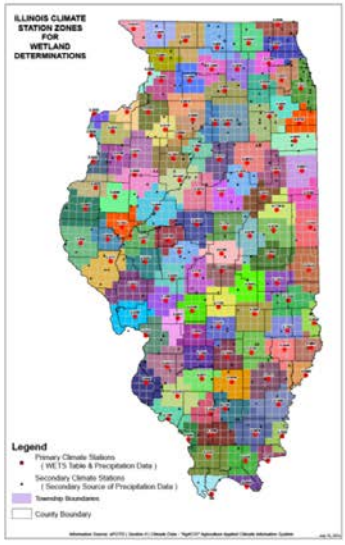
- Hydric soils
- Hydrophytic Vegetation
- Wetland Hydrology

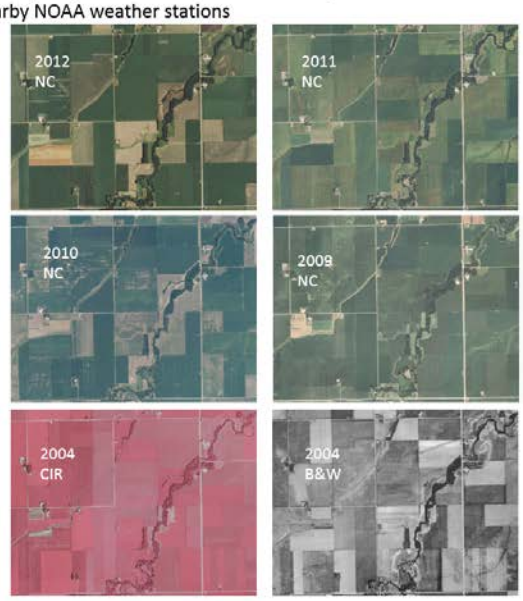
Hydrophytic vegetation

Determined by aerial imagery signatures for at least 5 "normal" precipitation years for a 30 year period between 1970 and now, as determined from nearby NOAA weather stations

Hydric soils (SSURGO)







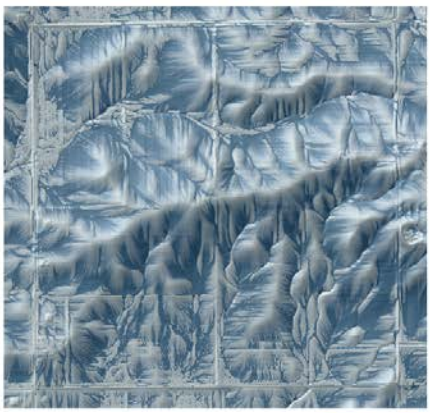
Wetland Determinations for compliance with Food Security Act of 1985

Three factors:

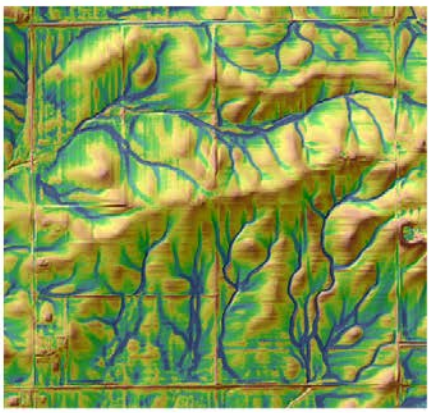
Hydric soils
Hydrophytic Vegetation
Wetland Hydrology

D∞ flow direction

D∞ flow accumulation



D∞ Wetness index



Landform Classification

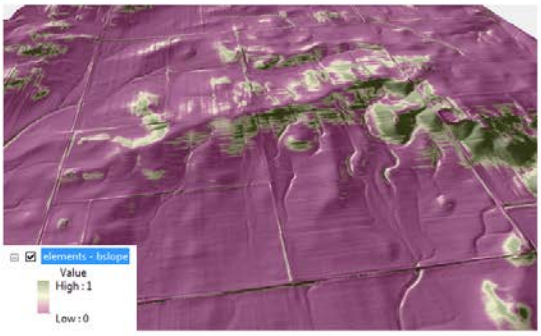
Schmidt, Geoderma, 2002

scalepar_edited.aml

```
/* this program calculates curvature measures and slope
/* according to different interpolation algorithms
/* for a second order polynomial interpolation function
/* on different window sizes
/*  according to Wood 1996
```

felememtf.aml

```
/* Algorithm for derivation of form elements acording to
/*      slope, maximum curvature, minimum curvature,
/*          profile curvature, tangential curvature
/*      based on linear semantic import model for slope and curvature
/*          and a fuzzy classification
```



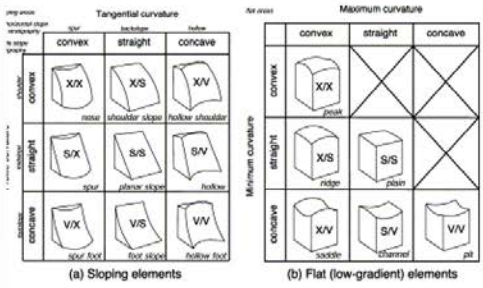
Backslope class membership

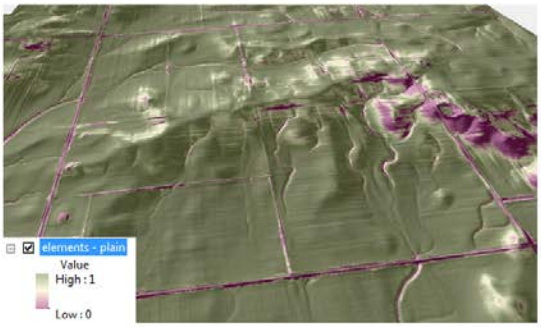
Table 2.

Modelling land elements by topological rules

Terrain	Form (Fig. 3)	Element
Hill	peak or plain or ridge or spur or saddle	ridge
Hill	shoulder or hollow shoulder or spur shoulder	shoulder
Hillslope	backslope	backslope
Hillslope	hollow or channel or hollow shoulder or hollow foot	hollow
Hillslope	spur or ridge or spur shoulder or spur foot	spur
Hillslope	plain or footslope or shoulder	terrace
Valley	footslope or hollow foot or spur foot	footslope
Valley	pit or plain or channel or hollow or saddle	valley bottom

Some examples for rules used. Inputs are the two terrain classifications: the form element classification (form) and the valley/hill classification (terrain). The output is a land element classification (element). The rules are implemented as a fuzzy classification (compare Table 1).





Plain class membership

Landform Classification

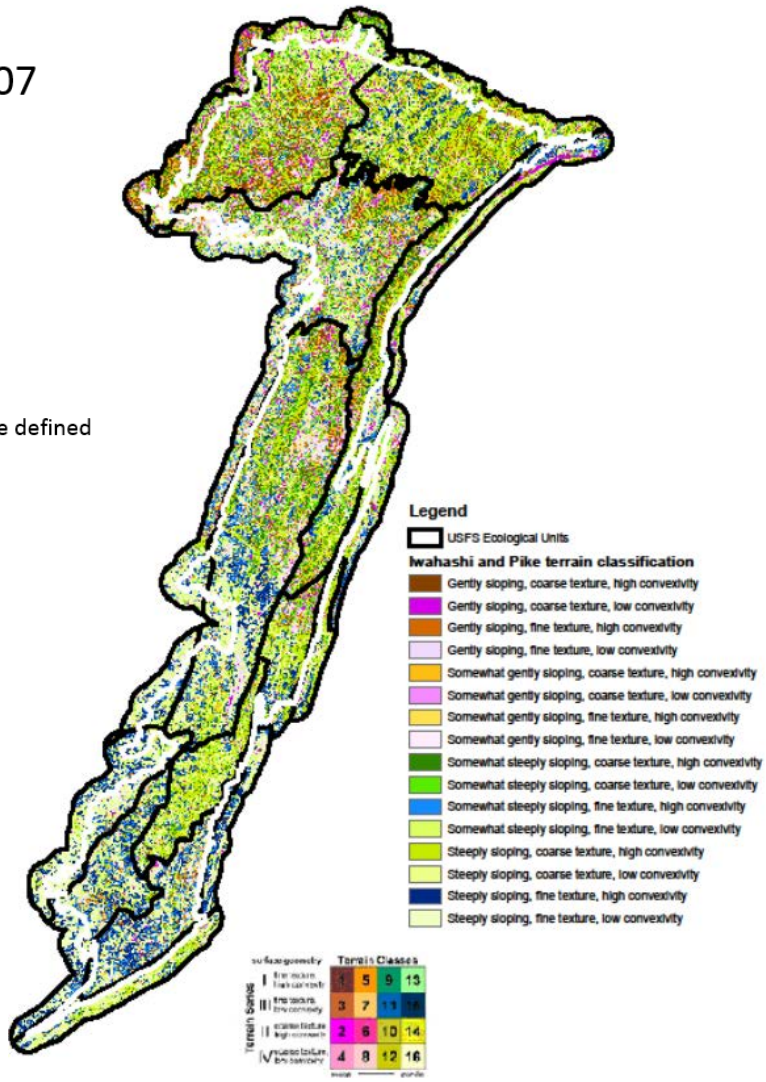
Iwahashi and Pike, Geomorphology, 2007

ACT.aml

```
/* AML program for automated classification of topography
/* by Junko IWAHASHI, Geographical Survey Institute of Japan
/*   October, 2005
/* usage
/*  Arc: &r ACT.aml
/* data needed:
/*     dem: DEM image (Arc/INFO GRID format); NODATA area must be defined
/*          for waterbodies
/*     laplacian: kernel file (ASCII text) for 3*3 laplacian filter
/*     classnumber: ASCII number (8, 12 or 16)
```

http://www.ai-relief.org/wiki/index.php?n=Main.HomePage

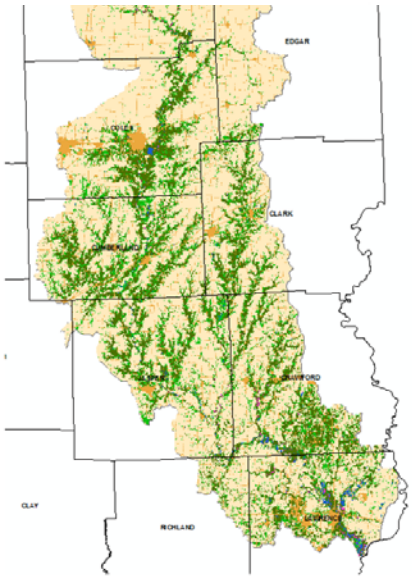
http://eusoils.jrc.ec.europa.eu/projects/landform/



Embarras River Watershed

Drains 1,558,907 Acres
In 12 Counties

Land Cover	Acreage	Percent
Row Crops	1,072,198	69
Forest	213,149	14
Hay, Pasture or Alfalfa	136,889	9
Developed	123,585	8
Water	9,165	1
Wetlands	3,179	0
Barren	739	0
Fruit Production	10	0
Shrub/Scrub	1	0



USDA National Agricultural Statistics Service Cropland Data Layer. 2013.
Published crop-specific data layer [Online].
Available at http://nassgeodata.gmu.edu/CropScape/ (accessed 8/2014; verified 8/2014. USDA-NASS, Washington, DC.

SOIL Judging

The 58th Annual American Society of Agronomy Region 3 Soil Judging Contest was held in northwestern Illinois October 8-11. The contest was co-hosted by Black Hawk College – East Campus (BHE) and the University of Illinois (UI). Fifty-four students from 8 teams participated overall, with additional students from 3 community college teams participating as well. The winners are listed in the tables below. Plaques were provided by the Illinois Soil Classifiers Association.

Scott Wiesbrook, Illinois Natural History Survey (INHS), was the superintendent of the contest, while the head official was NRCS State Soil Scientist Ron Collman. Other ISCA members who served as officials and helped describe practice or contest pits included Ian Kenney (INHS), Steve Elmer (NRCS, Ret.), Steve Zwicker (NRCS, Ret.), and Brad Cate (private consultant). Dr. Andrew Larson, Agronomy professor, provided practice site locations, hosted the coaches meeting, and provided additional support to the coaches, judgers, and judges. Complete descriptions were made for 8 practice pits and 6 contest pits. Soils described included Hapludolls, Hapludalfs, Argiudolls,Endoaquolls, Argiaquolls, and an Argialboll. Parent materials in the pits included loess (both Peoria and Roxanna though not separated for the contest), colluvium, residuum, aeolian sand, alluvium, till, outwash, and glacio-lacustrine\slackwater sediments.

Regional Team Top Four Teams Advance to Nationals: Purdue 1st, UW-Platteville 2nd, Northern Illinois 3rd, University of Illinois 4th in overall standings.

Regional individual Top 10 were: 1st Maggie Shoue-Purdue University; 2nd Betta McGaughey-Purdue University; 3rd Brittany Iverson-UW-Platteville; 4th Alec Kueter-UW-Platteville; 5th Brian Maule*-Northern Illinois University; 6th Tom Lund-Northern Illinois University; 7th Vincent Conte-University of Illinois; 8th Shelbi Louck-Purdue University; 9th Danielle Morgan-UW-Platteville; and 10th Katie Fagan-Purdue University.

Regional Group Judging: Northern Illinois 1st, UW-Steven Point 2nd, Purdue 3rd, University of Illinois 4th.

Images from Northwestern Illinois Soil Judging

NACTA –National American Colleges & Teachers of Agriculture **2015 National Judging Conference**. Black Hawk College, Galva, Illinois, hosted the Conference that included a national Soil Judging Contest. Many of the same pits used for the Regional Contest were used as practice pits for the NACTA National. Corporate Sponsors included John Deere, Asgrow, Dekalb, Farm Credit, Helena, and the iWireless center in Moline.

The Annual North American Colleges and Teachers of Agriculture (NACTA) National Soil Judging Contest was held in northwestern Illinois April 7-10. The contest was hosted by Black Hawk College – East Campus (BHE). Sixty-three students from nine colleges participated in the four-year division; while an additional thirty students from six community college teams participated in the two-year division. The winners are listed in the tables below. Plaques were provided by BHE.

Scott Wiesbrook, Illinois Natural History Survey (INHS), was the superintendent of the contest, while the head official was Natural Resources Conservation Service (NRCS) State Soil Scientist Ron Collman. Andrew Larson, professor at BHE, provided sites, food, and even dug all the practice pits. Other ISCA members who served as officials and helped describe practice or contest pits included Ian Kenney (INHS) and Steve Elmer (NRCS, Ret.). Calmer Corn Heads and John Deere sponsored the contest. Complete descriptions were made for 11 practice pits and 4 contest pits.

The contest consists of 4 pits judged individually by team members from each school. The individual contest pits were located on the Wexell family farm south of Cambridge in Henry County. Practice pits were located in southern Henry County on the DeDecker and Johnston family farms and on land owned by BHE, as well as on the Philip Wiesbrook family farm (operated by Andy Wiesbrook) south of Mineral in Bureau County. Steve Elmer (former NRCS) and Tom Anderson, now private consultants, graciously donated the use of their probe truck to collect samples for analysis. Nelson Farm Service provided and operated a backhoe to excavate the pits. Soil particle size analyses were conducted in Dr. Michelle Wander's (University of Illinois) lab by Ian Kenney (INHS). Pallets were provided by Brandon Hall (former two time NACTA national soil judging champion, BHE and UW-Platteville) and West Central FS. Pit monitors for the contest were members of the 5 time defending national championship soil judging team from BHE: Zane Torrance, Tanner Clementz, Trevor Nelson, and Conner King.

Overall Results 4 year Schools: UW-River Falls 1st; UW-Platteville 2nd; Purdue 3rd; Virginia Tech 4th; Iowa St. 5th; Ball State 6th; South Dakota State 6th; Western Kentucky 7th; University of Minnesota-Crookston 8th.

Overall Results 2 year Schools: Eastern Oklahoma State 1st; Ivy Teck 2nd; Vincennes 3rd; Hutchinson Community 4th; Northeast Community 5th; Seward County Community 6th.

The event was a success because of all the hard work, time, and treasure expended by all the volunteers, landowners, and donors. There is no better way to get young people interested in a career in soil science than soil judging.

How interesting are these?

Soil Health – Roger Windhorn is Point of Contact for soils. Several meetings still occurring. Illinois Soil Health Website: http://www.nrcs.usda.gov/wps/portal/nrcs/main/il/soils/health/

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. Goals are meant to: Integrate Soil Health Management Systems 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; Increase understanding of healthy soil ecosystems and biology; and emphasize 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 (Reminiscent of "Illinois Farmer's Institute" meetings of the early 1900's, where farmers and academics come together to talk about what works). Workshops include presentations on Cover Crops and conservation systems as well as University studies and sampling of areas known to have been following soil health initiative management plans. Presentations are by University Professors, State and Federal Personnel, and very importantly, Successful Farmers using these practices. Roger Windhorn is the point of contact for Soil Health in Illinois soils.

Soil Technical Notes: Soil HEALTH

Document	Description
Soil Tech Note 1A	Soil Health Guiding Principles
Soil Tech Note 2A	Soil Assessment
Soil Tech Note 3A	Surface Layer
Soil Tech Note 4A	Soil Structure
Soil Tech Note 5A	What the Bugs Do
Soil Tech Note 6A	Bacteria
Soil Tech Note 7A	Fungi
Soil Tech Note 8A	Actinomycetes
Soil Tech Note 9A	Large Microbes
Soil Tech Note 10A	Earthworms
Soil Tech Note 11A	Biological Underground Community
Soil Tech Note 12A	Soil Organic Matter (SOM)
Soil Tech Note 13A	Types of Organic Matter (SOM)
Soil Tech Note 14A	Residue Accumulation
Soil Tech Note 15A	Cation Exchange Capacity
Soil Tech Note 16A	Compacted Zone In Soil
Soil Tech Note 17A	Soil Respiration
Soil Tech Note 18A	Crop Diversity
Soil Tech Note 19A	Baby Steps
Soil Tech Note 20A	"So how do we mess it up??"
Soil Tech Note 21A	"If you get the chance..."

Conservation Discussions

Illinois Soil Health Producer profiles

Soil Health & Cover Crop Events
Illinois Department of Agriculture Cover Crop Network

Midwest Cover Crop Council

National Soil Health information

Cover Crop Economics
The Cover Crop Economics Tool is a user-friendly economic assessment tool to assess the costs and benefits of incorporating cover crops into a crop rotation. The tool assesses both the short term and long term expected costs and benefits. If you have any problems accessing the tool from this site, using the tool, or if you are interested in being added to an email list to be notified when updated versions of the tool are released, please contact Illinois NRCS's Bryon Kirwan.

Electromagnetic Induction Field Investigations conducted in Illinois 2015

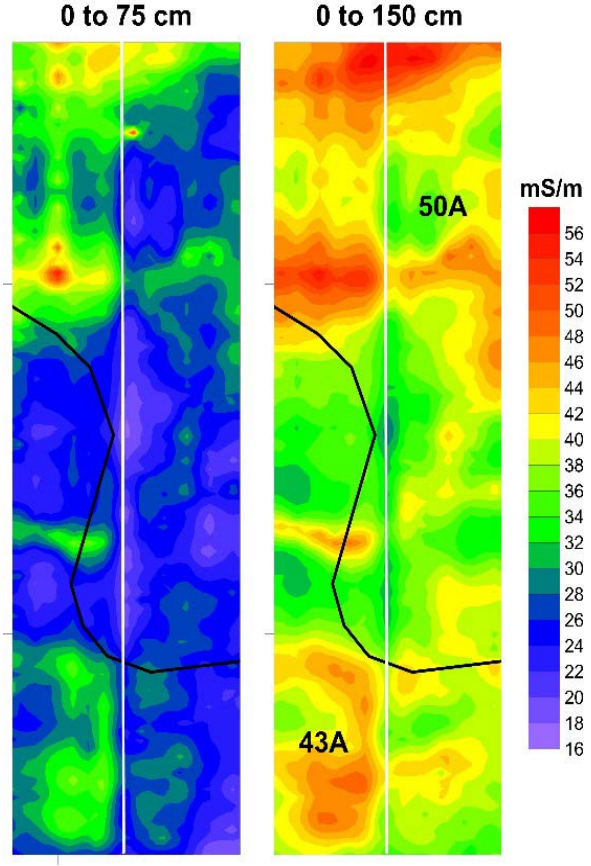
Soil Health Project: Water quality concerns.

GPR and EM Investigations Jim Doolittle:
During the week of 20 April, soil scientists from the Illinois State Office, Springfield MLRA Soil Survey Office and the Research and Laboratory Staff of the National Soil Survey Center conducted electromagnetic induction (EMI) surveys to support a nitrate study and ecological site inventory in east-central Illinois and Iowa Deep Drift Region. Working in conjunction with hydrologists from USGS, the group completed several high-intensity surveys in Morgan County, IL. The EMI surveys provided detailed spatial data on soil moisture variation and tile drain locations, but was unable to detect nitrate level variation across the fields.

At two sites in Morgan County, EMI provided no indication of nitrate levels or distribution patterns within fields. However, this was not unexpected, as nitrogen is applied and dispersed across entire fields rather than being concentrated at point sources. This study did suggest that under favorable soil moisture conditions, EMI may be a suitable tool to detect buried agricultural drainage tiles.

At two *Prairie Hill* ecological sites in Mason County, EMI was used to separate areas of coarse-silty from sandy soils. Soil texture is strongly correlated with soil moisture, and the viability of different sites for diverse plant communities. Spatial EMI data appears to provide an innovative and helpful resource for interpreting some ecosystem patterns. As evident in this study, EMI offers insight into the distribution and patterns of soil properties and vegetation that are subtle and difficult to interpret using traditional surveying techniques.

High-intensity EMI surveys improved the depiction of soils that differ in drainage and form hydrosequences on two different landscapes in McLean and Piatt Counties.



Marc Zucco (Resource Soil Scientist, Springfield, IL) calibrates EMI sensor prior to conducting a survey of nitrate levels in a cultivated field in Morgan County (left). Results of EMI survey are discussed with landowner, NRCS soil scientists and USGS hydrologist (right).

EMI plots from fields in Morgan County, IL show an increase in apparent conductivity (ECa) with increasing soil depth. Zones of higher ECa are attributed to wetter soil conditions and older drainage tiles that appear to span and possibly interconnect two farmers' fields (separated by white line). The tile drainage may affect nitrate measurements collected at a drain that leaves the field on the left.

Dr. Jim Doolittle: EM and GPR

Between June 1990 and April 2015, Jim Doolittle participated in 30 field assistance projects in Illinois. Jim is deeply grateful to the SCS and NRCS personnel who worked with and assisted him on these projects, and shared fellowship in the field. Knowledge has been gained from these investigations and several papers written documenting these experiences. This is Jim's last trip as a NRCS employee to Illinois. He wishes you and your staff "Fair Winds and Following Seas".

Doolittle began his career with the Soil Conservation Service in North Dakota in 1975, using previous experience in the Navy with another kind of radar. When reassigned to Florida six years later, he operated USDA's first ground-penetrating radar unit to map soil.

As a research soil scientist with the U.S. Department of Agriculture, Doolittle works with ground-penetrating radar and electromagnetic induction—geophysical tools that have helped investigators coax surprises out the soil, including historic structures and human remains.

He has spent much of his career researching soil conditions that allow the radar to work well. Where radar wasn't suitable, he expanded the use of electromagnetic induction.

Doolittle traveled the country with his equipment, and linked his findings to the U.S. soil classification system, which groups soils by their properties. He created a map of the continental U.S. that shows where the soil was suitable for radar, vastly improving site investigations across the nation.

The radar system works by sending energy into the ground. When it hits unusual features in the soil, some of it bounces back to a receiving antenna.

The ground-penetrating radar tells us where the soil is different or where there are anomalies in the ground, and then we have to dig to ground-truth our findings. Soil conditions play a big role in its success and failure; the radar can detect things, but can't identify them; and results depend largely on the soil scientist's interpretation.

His tools and techniques enable him to interpret the depth, shape, size and location of sub-surface features, giving clues to the buried cultural phenomena. And with the device, scientists don't have to dig as many random holes, instead homing in on the radar's findings.

He has shared his knowledge by writing more than 140 publications about soil exploration using ground-penetrating radar and electromagnetic induction.

Ground Penetrating Radar - Jim Doolittle, USDA-NRCS, National Soil Survey Center https://www.youtube.com/watch?v=-pSbZv2Afso

Use of GPR in Soil Surveys - Jim Doolittle, USDA-NRCS
https://www.youtube.com/watch?v=u6TDyQAntmo
Geophysical Methods Within NRCS : Applications

Here Jim is assisting Archaeologists from the Illinois State Archaeological Survey in the calibration and use of the EM-38.

NRCS/University of Illinois Mine Land Reclamation Study MLRAs 115A and 115C
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.

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.

2011 – Investigations were conducted in Schuyler Co. by Jim Doolittle-National Soil Survey Center (NCCS), Roger Windhorn and Jon Bonjean-NRCS State Office, Steve Suhl Resource Soil Scientist-NRCS, and Bob Tegeler-MLRA 115C Survey Leader. Electromagnetic induction (EMI) equipment was used on selected mined areas that have been reclaimed. Several soil cores were pulled and notes taken in addition to the EMI data collected.

2013 – MLRA 108B and 115C Technical Team Meeting held in Peoria. A need was identified for more data from reclaimed sites, to enable District Conservationists to provide more information to land users in these areas.

Investigations were conducted in Fulton Co. by Jim Doolittle-NSSC, Roger Windhorn and Dan Withers-NRCS State Office, and Kim Smail Fulton Co. District Conservationist-NRCS. Electromagnetic induction (EMI) equipment was used on selected mined areas that have been reclaimed. Samples were taken and analyzed for heavy metals.

2014 – Investigations were conducted in Fulton Co. by Jim Doolittle-NSSC, Roger Windhorn and Dan Withers-NRCS State Office, and Kim Smail Fulton Co. District Conservationist-NRCS. Electromagnetic induction (EMI) equipment was used on selected mined areas that have been reclaimed. Samples were taken and analyzed for heavy metals. Sites will be identified for the collection of characterization samples during the fall of 2014, by the Springfield MLRA Staff. Additional studies in Fulton and Jo Daviess (MLRA 105) were scheduled for Karst areas to be investigated. Mike England from Onalaska MLRA to assist Jim Doolittle, Roger Windhorn, and Dan Withers.

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. T factor, Kf, Kw, hydrologic soil group, and others typically have been populated manually in the database.

Status: The calculations of T, K, WEI, WEG, HSG, Corrosion Concrete and Corrosion Steel were done across the entire state. In most cases, the numbers have been made more consistent. There were a few exceptions granted based on arguments presented.

Benchmark Soils: Classification/Correlation

- Update OSD's (describe to 80", GPS, historical folder, classification data, determine data needs)
- Collect "fundamental data" for OSD's
- Develop representative DMU's using fundamental data
- Update representative pedons DMU identification spreadsheets
- Review Correlation Documents
- Revised Soil Properties "Hit List"
- Spatial Distribution analysis of benchmark soil series and DMU's (spatial inconsistencies/discontinuities)
- Develop Block Diagrams for important/representative suites of soils
- Characterization Data collections, update location information, organize, and

Interpretations

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

Conservation Tree and Shrub Groups (CTSG)
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 (FSG) 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.

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.

2014 - 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.

2015 – Map units in MLRAs 108B and 115C have been assigned to one of the 50 preliminary ES site concepts. Dale is conducting a literature review of available documents. The Illinois Department of Natural Resources has provided GIS and Inventory data on Hill Prairies in MLRA 115C. Other data will be available as needed.

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

These ecological types are based on soils data and ecological site type definitions from the Illinois Natural History Survey and other sources. The data within these documents represents this analysis supported by over ecological data collection in Illinois since 1858. The assignment of Ecological site types to soils is based on groupings of soil properties. Illinois Natural History Survey Heritage sites were overlain on Illinois soil map units. Where there was significant agreement between soil properties and site types, these sites were isolated for analysis. Data available was not complete for each ecological site type or for each MLRA. Data by site type from the entire state was used to derive plant lists. Climatic and geographic separations will affect some species and population densities.

Issues exist between sample methodology and different data scales. Some sites are identified on what would be inclusions in typical soil map units. Some ecological sites were sampled crossing more than one map unit, landform, or landscape position, affecting species identified for the 'site'. Soil map units do not always follow the landform breaks as completely as vegetation due to original mapping scales and original interpretive intent of the soil maps.

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

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

These Ecological types are based on soils data and ecological site type definitions from the Illinois Natural History Survey and other sources. The data within these documents represents this analysis supported by over ecological data collection in Illinois spanning nearly 100 years. Assigns Ecological site types to soils based on groupings of soil properties. Illinois Natural History Survey Heritage sites were overlain on Illinois soil map units. Where there was significant agreement between soil properties and site types, these sites were isolated for analysis. Data available was not complete for each ecological site type or for each MLRA. Data by site type from the entire state was used to derive plant lists.

Issues exist with methodology and different data scales. Some sites are identified on what would be inclusions in typical soil map units. Some ecological sites were sampled crossing more than one map unit, landform, or landscape position, affecting species identified for the 'site'. Soil map units do not always follow the landform breaks as completely as vegetation due to original mapping scales and original interpretive intent of the soil maps. Soil map units need some disaggregation in respect to specific landform types and vegetation differences.

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 vegetative (biological) 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.

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.

Stan Sipp has reviewed approved ESDs from Missouri and we are attempting to cross walk to soils and species in Illinois.

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.

Title 306 – National Instruction (430-306-NI, April 2015) 306-2
5-year initiative, to be completed in fiscal year 2020, intended to result in complete conterminous coverage of ecological site information via provisional ecological site development principles and tools for each major land resource area (MLRA).

Soil Productivity Index and Crop Yield Indices
Current productivity index values are developed by the University of Illinois. http://soilproductivity.nres.uiuc.edu/; SDJR was 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, gravelly and soils with bedrock in the profile in particular, are not handled the same way in the different models.

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. 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, erosion, 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.

Status: It is important to Illinois that data served to the public is relative to the U of I base values in ranking from series to series. It is further important that if this data is available through WSS reports, that documentation is provided on how the data was derived and how it relates to U of I data. Links to the U of I data on the U of I site as well as on eFOTG should also be provided through WSS to meet the needs of users. Currently, U of I Base data is tied to state law for tax assessment and is the base for land appraisal.

Data linked to U of I Base data is available from a NASIS report, is posted in tabular form in eFOTG, and data is available through WSS "Soil Reports" for Row Crops, Hay and Pasture. Productivity Index should be available soon from a WSS "Soil Report". Data is available for component and Map Unit.

WSS REPORTS

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. We would like to discuss 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.

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 have been included in a WSS "Soil Report". Data is available for Compoent and Map Unit.

WSS REPORTS

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

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.

ISEE— http://isee.purdue.edu/ http://isee.purdue.edu/extra.php?about=isee Development of educational maps through University of Illinois. Illinois NRCS 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. It has expanded to include more states.

Illinois NRCS has provided several interpretive geospatial data sets to the project including: General Soil Surface Color, General Soils, Soil Drainage Class, General Parent Material, Loess Thickness, Quaternary Geology (modified from ISGS), Bedrock (modified form ISGS). Other interpretive maps are planned.

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. Recommend 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. A growing number of these items are on the endangered list.

- 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 Depart 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.

Technical Soil Services provided by MLRA staff

Currently, 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 - 2014 TSS Reported by MLRA offices SUMMARY

Staff Member	Technical Soil Service Type	Sum of Instances
Francen, Rick	Technical consultation	1
Gerhard, Erik	On-site investigation, wetland determination or delineation	10
Heisner, Frank	Develop or validate interpretations	35
	Teaching, lectures, presentation, displays, posters	1
Hornickel, James	Soil judging contests, envirothons, etc.	1
Indorante, Sam	On-site investigation, geophysical	1
	Provide training to NRCS and partners	2
	Teaching, lectures, presentation, displays, posters	8

	Technical consultation	5
Reinhardt, Lindsay	Teaching, lectures, presentation, displays, posters	4
Ryan, Kristine	On-site investigation, wetland determination or delineation	3
	Teaching, lectures, presentation, displays, posters	1
Teater, Bill	Teaching, lectures, presentation, displays, posters	1
Tegeler, Robert	Technical consultation	5
Weber, Zach	Off-site wetland determination	7
	On-site investigation, reconsideration of wetland determine	7
	On-site investigation, soil health management	1
	On-site investigation, wetland determination or delineation	47
	Teaching, lectures, presentation, displays, posters	2
Williams, Dwayne	Off-site wetland determination	13
	On-site investigation, wetland determination or delineation	1
	Soil judging contests, envirothons, etc.	1
Sub Total		159
Godsey, Kevin	Create custom maps, reports, data files, etc.	2
	Provide training to NRCS and partners	1
	Technical consultation	2
Nemecek, Jason	Create custom maps, reports, data files, etc.	12
	Teaching, lectures, presentation, displays, posters	3
Zimmermann, David	Technical consultation	1
England, Michael	On-site investigation, geophysical	3
Sub Total		27
Grand Total		186

Table 2 - 2015 TSS Reported by MLRA offices SUMMARY Number Requested this FY: 189

Staff Member	Technical Soil Service Type	Instances
Francen, Rick	National Resource Inventory (NRI)	2
	Soil judging contests, envirothons, etc.	1
Godsey, Kevin	Provide training to NRCS and partners	1
Heisner, Frank	Off-site wetland determination	1
	On-site investigation, wetland determination or delineation	7
Larsen, Scott	Provide training to NRCS and partners	1
Reinhardt, Lindsay	On-site investigation, wetland determination or delineation	1
	Teaching, lectures, presentation, displays, posters	2
Ryan, Kristine	Off-site wetland determination	1
	On-site investigation, wetland determination or delineation	1
	Teaching, lectures, presentation, displays, posters	1
Tegeler, Robert	Create custom maps, reports, data files, etc.	1
	National Resource Inventory (NRI)	3
	Soil judging contests, envirothons, etc.	1
	Technical consultation	1
Weber, Zach	On-site investigation, reconsideration of wetland determine	1
Williams, Dwayne	Soil judging contests, envirothons, etc.	1
	Teaching, lectures, presentation, displays, posters	1
Grand Total		28

SOIL SURVEY

AURORA MLRA OFFICE

Table 3: SDJR PROGRESS for FY 2014 by Office as of 05/06/2015

Project Name	Goaled	Reported
SDJR - MLRA 110 - Pella silty clay loam, 0 to 2 percent slopes	12,220	12,220
SDJR - MLRA 110 - Swygert silty clay loam, 0 to 2 percent slopes	17,290	17,290
SDJR - MLRA 110 - Pella clay loam, Glacial Lake Watseka, 0 to 2 percent slopes	13,060	13,060
SDJR - MLRA 110 - Bryce silty clay, 0 to 2 percent slopes	57,364	57,364
SDJR - MLRA 110 - Swygert silty clay loam, 4 to 6 percent slopes, eroded	1,482	1,482
SDJR - MLRA 108A - Elburn silt loam, 0 to 2 percent slopes	40,933	40,933
SDJR - MLRA 108A - Elpaso silty clay loam, 0 to 2 percent slopes	36,109	36,109
SDJR - MLRA 110 - Selma loam, 0 to 2 percent slopes	34,050	34,050
SDJR - MLRA 108A - Graymont silt loam, 2 to 5 percent slopes, eroded	4,017	4,017

SDJR - MLRA 110 - Elliott silt loam, 0 to 2 percent slopes	42,269	42,269
SDJR - MLRA 108A - Raub silt loam, non-densic substratum, 0 to 2 percent slopes	20,777	20,777
SDJR - MLRA 110 - Elliott silt loam, 2 to 4 percent slopes	21,403	21,403
SDJR - MLRA 110 - Elliott silty clay loam, 2 to 4 percent slopes, eroded	18,593	18,593
SDJR - MLRA 108A - Graymont silt loam, 5 to 10 percent slopes, eroded	1,375	1,375
SDJR - MLRA 110 - Elliott silty clay loam, 4 to 6 percent slopes, eroded	711	711
SDJR - MLRA 108A - Drummer silty clay loam, 0 to 2 percent slopes	226,887	226,887

Table 4: SDJR GOALS for FY 2015 by Office as of 05/06/2015

Project Name	Goaled	Reported
SDJR - MLRA 108A - Dana silt loam, 0 to 2 percent slopes	2,769	2,769
SDJR - MLRA 108A - Dana silt loam, 2 to 5 percent slopes	12,070	12,070
SDJR - MLRA 108A - Dana silt loam, 2 to 5 percent slopes, eroded	14,476	14,476
SDJR - MLRA 110 - Reddick clay loam, 0 to 2 percent slopes	22,144	22,144
SDJR - MLRA 110 - Andres silt loam, 0 to 2 percent slopes	22,906	22,906
SDJR - MLRA 108A - Birkbeck silt loam, 2 to 5 percent slopes	10,424	10,424
SDJR - MLRA 110 - Andres silt loam, 2 to 5 percent slopes	621	621
SDJR - MLRA 108A - Fincastle silt loam, Bloomington Ridged Plain, 0 to 2 percent slopes	7,626	7,626
SDJR - MLRA 108A - Birkbeck silt loam, 0 to 2 percent slopes	349	349
SDJR - MLRA 108A - Xenia silt loam, Bloomington Ridged Plain, 2 to 5 percent slopes	21,069	21,069
SDJR - MLRA 108A - Fincastle silt loam, udic moisture class, 0 to 2 percent slopes	4,401	4,401
SDJR - MLRA 108A - Birkbeck silt loam, 2 to 5 percent slopes, eroded	2,483	2,483
SDJR - MLRA 108A - Russell silt loam, Bloomington Ridged Plain, 2 to 5 percent slopes, eroded	1,881	1,881
SDJR - MLRA 108A - Russell silt loam, Bloomington Ridged Plain, 2 to 5 percent slopes	3,498	3,498
SDJR - MLRA 108A - Toronto silt loam, Bloomington Ridged Plain, 0 to 2 percent slopes	4,418	4,418
SDJR - MLRA 108A - Russell silt loam, Bloomington Ridged Plain, 5 to 10 percent slopes, eroded	7,394	7,394
SDJR - MLRA 108A - Birkbeck silt loam, 5 to 10 percent slopes, eroded	7,777	7,777
SDJR - MLRA 108A - Birkbeck silt loam, 10 to 18 percent slopes, eroded	463	463
SDJR - MLRA 108A - Streator silty clay loam, 0 to 2 percent slopes	8,947	8,947
SDJR - MLRA 110 - Chenoa silty clay loam, 0 to 2 percent slopes	12,426	12,426
SDJR - MLRA 108A - Wingate silt loam, 2 to 5 percent slopes	5,741	5,741
SDJR - MLRA 108A - Harpster silty clay loam, 0 to 2 percent slopes	14,904	
SDJR - MLRA 110 - Peotone silty clay loam, 0 to 2 percent slopes	11,103	
SDJR - MLRA 108A - Proctor silt loam, 0 to 2 percent slopes	1,952	
SDJR - MLRA 108A - Proctor silt loam, 2 to 5 percent slopes	6,428	
SDJR - MLRA 108A - Proctor silt loam, 2 to 5 percent slopes, eroded	1,323	
SDJR - MLRA 108A - Proctor silt loam, 5 to 10 percent slopes, eroded	2,316	
SDJR - MLRA 108A - Sabina silt loam, 0 to 2 percent slopes	8,711	
SDJR - MLRA 108A - Sunbury silt loam, 0 to 2 percent slopes	3,928	
SDJR - MLRA 108A - Wingate silt loam, cool mesic, 2 to 5 percent slopes	3,268	

MARION (formerly CARBONDALE) MLRA OFFICE

Table 5: SDJR PROGRESS for FY 2014 by Office as of 05/14/2015

Project Name	Goaled	Reported
MLRA 113, 114, 115B - Lenzburg, Schuline Minesoil Water Table Study	8980	0
MLRA 115A - Mined Land Reclamation Project FY14	1240	1240
SDJR - MLRA 113 - Ava silt loam, 2 to 5 percent slopes	65523	65523
SDJR - MLRA 113 - Ava silt loam, 2 to 5 percent slopes, eroded	7527	7527
SDJR - MLRA 113 - Ava silt loam, 5 to 10 percent slopes, eroded	24367	24367
SDJR - MLRA 113 - Bluford silt loam, 0 to 2 percent slopes	104592	104592
SDJR - MLRA 113 - Bluford silt loam, 2 to 5 percent slopes	47666	47666
SDJR - MLRA 113 - Bluford silt loam, 2 to 5 percent slopes, eroded	33776	33776
SDJR - MLRA 113 - Cisne silt loam, bench, 0 to 2 percent slopes	1491	1491
SDJR - MLRA 113 - Hoyleton silt loam, 0 to 2 percent slopes	45256	45256
SDJR - MLRA 113 - Hoyleton silt loam, 2 to 5 percent slopes	17112	17112
SDJR - MLRA 113 - Hoyleton silt loam, 2 to 5 percent slopes, eroded	9607	9607
SDJR - MLRA 113 - Hoyleton silt loam, bench, 0 to 2 percent slopes	735	735
SDJR - MLRA 113 - Stoy silt loam, 0 to 2 percent slopes	8257	8257
SDJR - MLRA 113 - Stoy silt loam, 2 to 5 percent slopes	11166	11166
SDJR - MLRA 113 - Stoy silt loam, 2 to 5 percent slopes, eroded	1750	1750
SDJR - MLRA 113 - Stoy silt loam, 5 to 10 percent slopes	56	56
SDJR - MLRA 113 - Stoy silt loam, 5 to 10 percent slopes, eroded	266	266
SDJR - MLRA 114B - Marine silt loam, 0 to 2 percent slopes	18623	18623
SDJR - MLRA 114B - Marine silt loam, 2 to 5 percent slopes	13282	13282
SDJR - MLRA 114B - Oconee silt loam, 0 to 2 percent slopes	17675	17675

SDJR - MLRA 114B - Oconee silt loam, 2 to 5 percent slopes	11507	11507

Table 6: SDJR GOALS for FY 2015 by Office as of 05/14/2015

Project Name	Goaled	Reported
SDJR - MLRA 108B & 113 - Cowden-Piasa silt loams, 0 to 2 percent slopes	30344	0
SDJR - MLRA 108B - Herrick-Biddle-Piasa silt loams, 0 to 2 percent slopes	21253	0
SDJR - MLRA 108B - Virden-Piasa silt loams	11115	0
SDJR - MLRA 113 - Atlas silt loam, 10 to 18 percent slopes, eroded	3323	0
SDJR - MLRA 113 - Atlas silt loam, 5 to 10 percent slopes, eroded	13863	0
SDJR - MLRA 113 - Atlas silty clay loam, 10 to 18 percent slopes, severely eroded	2984	0
SDJR - MLRA 113 - Atlas silty clay loam, 5 to 10 percent slopes, severely eroded	5364	0
SDJR - MLRA 113 - Belknap silt loam, 0 to 2 percent slopes, frequently flooded	44176	0
SDJR - MLRA 113 - Belknap silt loam, 0 to 2 percent slopes, occasionally flooded	17594	0
SDJR - MLRA 113 - Blair silt loam, 10 to 18 percent slopes	10420	0
SDJR - MLRA 113 - Blair silt loam, 5 to 10 percent slopes, eroded	5925	0
SDJR - MLRA 113 - Blair silty clay loam, 10 to 18 percent slopes, severely eroded	2929	0
SDJR - MLRA 113 - Blair silty clay loam, 5 to 10 percent slopes, severely eroded	9682	0
SDJR - MLRA 113 - Bluford-Darmstadt silt loams, 0 to 2 percent slopes	1976	1976
SDJR - MLRA 113 - Bonnie silt loam, 0 to 2 percent slopes, frequently flooded	15926	15926
SDJR - MLRA 113 - Bonnie silt loam, 0 to 2 percent slopes, occasionally flooded	1989	1989
SDJR - MLRA 113 - Bonnie silt loam, frequently flooded	7447	7447
SDJR - MLRA 113 - Bonnie silt loam, sodic, 0 to 2 percent slopes, frequently flooded	14551	14551
SDJR - MLRA 113 - Bunkum silt loam, 5 to 10 percent slopes, eroded	4660	4660
SDJR - MLRA 113 - Bunkum silty clay loam, 10 to 18 percent slopes, severely eroded	6146	6146
SDJR - MLRA 113 - Bunkum silty clay loam, 5 to 10 percent slopes, severely eroded	9414	9413
SDJR - MLRA 113 - Cisne silt loam, mine sinks, 0 to 2 percent slopes	21	21
SDJR - MLRA 113 - Cisne-Huey silt loams, 0 to 2 percent slopes	23524	23524
SDJR - MLRA 113 - Darmstadt silt loam, 0 to 2 percent slopes	8255	8255
SDJR - MLRA 113 - Darmstadt silt loam, 2 to 5 percent slopes	1002	1002
SDJR - MLRA 113 - Darmstadt silt loam, 2 to 5 percent slopes, eroded	2096	2096
SDJR - MLRA 113 - Darmstadt-Bluford silt loams, 2 to 5 percent slopes, eroded	574	574
SDJR - MLRA 113 - Hoyleton-Darmstadt silt loams, 0 to 2 percent slopes	22748	22748
SDJR - MLRA 113 - Hoyleton-Darmstadt silt loams, 2 to 5 percent slopes	754	754
SDJR - MLRA 113 - Hoyleton-Darmstadt silt loams, 2 to 5 percent slopes, eroded	8192	8192
SDJR - MLRA 113 - Huey silt loam, 0 to 2 percent slopes	2206	2206
SDJR - MLRA 113 - Huey silt loam, 2 to 5 percent slopes, eroded	242	0
SDJR - MLRA 113 - Huey silt loam, 2 to 5 percent slopes, severely eroded	89	0
SDJR - MLRA 113 - Newberry silt loam, 0 to 2 percent slopes	17662	17662
SDJR - MLRA 113 - Passport silt loam, 10 to 18 percent slopes, eroded	511	0
SDJR - MLRA 113 - Passport silt loam, 5 to 10 percent slopes, eroded	9491	0
SDJR - MLRA 113 - Passport silty clay loam, 5 to 10 percent slopes, severely eroded	6286	0
SDJR - MLRA 113 - Racoon silt loam, 0 to 2 percent slopes	6009	6009
SDJR - MLRA 113 - Racoon silt loam, 0 to 2 percent slopes, occasionally flooded	1513	1513
SDJR - MLRA 113 - Racoon silt loam, 0 to 2 percent slopes, rarely flooded	2037	2037
SDJR - MLRA 113 - Richview silt loam, 2 to 5 percent slopes	615	615
SDJR - MLRA 113 - Richview silt loam, 2 to 5 percent slopes, eroded	806	0
SDJR - MLRA 113 - Richview silt loam, 5 to 10 percent slopes, eroded	902	0
SDJR - MLRA 113 - Wynoose silt loam, bench, 0 to 2 percent slopes	3874	3874
SDJR - MLRA 114B - Blair silt loam, 10 to 18 percent slopes, eroded	66	0
SDJR - MLRA 114B - Cowden silt loam, 0 to 2 percent slopes	13094	0
SDJR - MLRA 114B - Herrick silt loam, 0 to 2 percent slopes	50223	50223
SDJR - MLRA 114B - Herrick-Piasa silt loams, 0 to 2 percent slopes	410	0
SDJR - MLRA 114B - Hickory-Homen silty clay loams, 10 to 18 percent slopes, severely eroded	2044	0
SDJR - MLRA 114B - Homen silt loam, 2 to 5 percent slopes, eroded	367	367
SDJR - MLRA 114B - Homen silt loam, 2 to 5 percent slopes	26087	26087
SDJR - MLRA 114B - Homen silt loam, 5 to 10 percent slopes, eroded	5418	5418
SDJR - MLRA 114B - Homen silty clay loam, 10 to 18 percent slopes, severely eroded	713	71
SDJR - MLRA 114B - Homen silty clay loam, 5 to 10 percent slopes, severely eroded	2879	2879
SDJR - MLRA 114B - Hurst silt loam, 0 to 2 percent slopes	4645	0
SDJR - MLRA 114B - Hurst silt loam, 0 to 2 percent slopes, occasionally flooded	160	0
SDJR - MLRA 114B - Hurst silt loam, 0 to 2 percent slopes, rarely flooded	1259	0
SDJR - MLRA 114B - Hurst silt loam, 2 to 5 percent slopes	383	0
SDJR - MLRA 114B - Hurst silt loam, 2 to 5 percent slopes, eroded	451	0
SDJR - MLRA 114B - Hurst silt loam, 2 to 5 percent slopes, eroded, occasionally flooded	222	0
SDJR - MLRA 114B - Hurst silt loam, 2 to 5 percent slopes, eroded, rarely flooded	696	0
SDJR - MLRA 114B - Hurst silt loam, sandy substratum, 0 to 2 percent slopes, occasionally flooded	222	0
SDJR - MLRA 114B - Hurst silty clay loam, 5 to 10 percent slopes, eroded, occasionally flooded	325	0

SDJR - MLRA 114B - Piasa silt loam, 0 to 2 percent slopes	1594	1594
SDJR - MLRA 114B - Ruma silt loam, 10 to 18 percent slopes	33	0
SDJR - MLRA 114B - Ruma silt loam, 10 to 18 percent slopes, eroded	365	0
SDJR - MLRA 114B - Ruma silt loam, 2 to 5 percent slopes	2093	2093
SDJR - MLRA 114B - Ruma silt loam, 5 to 10 percent slopes, eroded	1350	0
SDJR - MLRA 114B - Ruma silt loam, karst, 12 to 25 percent slopes, eroded	42	0
SDJR - MLRA 114B - Ruma silt loam, karst, 25 to 60 percent slopes	302	0
SDJR - MLRA 114B - Ruma silty clay loam, 10 to 18 percent slopes, severely eroded	953	0
SDJR - MLRA 114B - Ruma silty clay loam, 2 to 5 percent slopes, eroded	250	250
SDJR - MLRA 114B - Ruma silty clay loam, 5 to 10 percent slopes, severely eroded	373	0
SDJR - MLRA 114B - Ruma silty clay loam, karst, 12 to 25 percent slopes, severely eroded	307	0
SDJR - MLRA 114B - Ruma silty clay loam, karst, 5 to 12 percent slopes, severely eroded	349	0

Union, MO MLRA Office (Marion--Carbondale)

Table 7: SDJR PROGRESS for FY 2014 by Office as of 05/14/2015

Project Name	Goaled	Reported
SDJR - MLRA 113 - Keswick loam, 9 to 14 percent slopes, eroded	14835	14835
SDJR - MLRA 113 - Lindley loam, 14 to 20 percent slopes, eroded	19823	19823
SDJR - MLRA 113 - Lindley loam, 14 to 40 percent slopes	25178	25178
SDJR - MLRA 113 - Lindley loam, 20 to 35 percent slopes, eroded	13744	13744
SDJR - MLRA 115B - Winfield silt loam, 20 to 30 percent slopes, eroded	2832	2832
SDJR - MLRA 115B - Winfield silt loam, 9 to 14 percent slopes, eroded	17802	17802
SDJR - MLRA 115B and 115C - Goss very gravelly silt loam, 14 to 45 percent slopes	49384	49384

Table 8: SDJR GOALS for FY 2015 by Office as of 05/14/2015

Project Name	Goaled	Reported
ES - MLRA 113 - Claypan Summit Prairie	1251346	0
SDJR - MLRA 113 - Gorin silt loam, 5 to 9 percent slopes, eroded	27313	27313
SDJR - MLRA 115B - Elsah silt loam, 1 to 3 percent slopes, frequently flooded	2723	2723
SDJR - MLRA 115B - Gladden fine sandy loam, 1 to 3 percent slopes, frequently flooded	289	289
SDJR - MLRA 115B - Haynie silt loam, 0 to 2 percent slopes, frequently flooded	3432	3432
SDJR - MLRA 115B - Haynie silt loam, 0 to 2 percent slopes, occasionally flooded	5518	5518
SDJR - MLRA 115B - Nameoki silty clay loam, 0 to 2 percent slopes, frequently flooded	903	903
SDJR - MLRA 115B and 115C - Haymond silt loam, 1 to 3 percent slopes, frequently flooded	5288	5288

Digital Soil Mapping techniques Pilot study Selected landforms in Wabash, Lawrence, Richland, and Edwards counties in Illinois. Status: On Hold

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: Completed all 16 of the soil investigations for the low water crossings. 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 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: On Hold

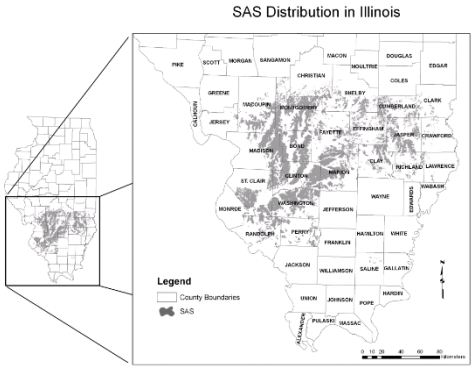


Image processing for Sodium Affected Soils SAS
Jon Bathgate's computer has ERDAS Imagine 9.3. He will be doing image analysis and LIDAR analysis of the SAS areas with Tim Prescott. Status: On Hold

Darmstadt/Loess Thickness Study Description: This study is being led by Zach Webber. This is now included in the Sodium Affected Soils Project. Status: On Hold

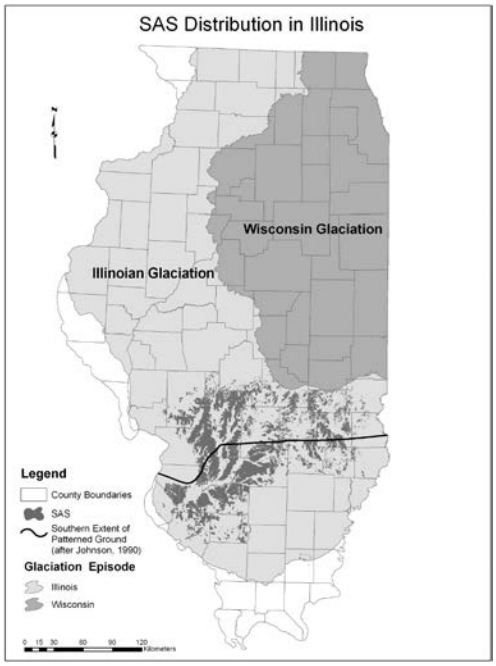
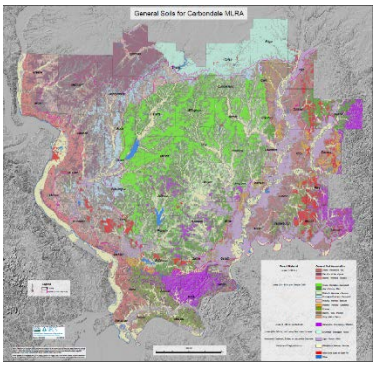


Photo mosaic of 1938 Imagery



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.

General Soils Map Development for Carbondale Multi-State and MLRA Map-Bathgate.
Has analysis of association map units by acreage and percent.

SPRINGFIELD MLRA OFFICE

Table 9: SDJR PROGRESS for FY 2014 by Office as of 05/11/2015

Project Name	Goaled	Reported
SDJR - MLRA 108B - Hickory silt loam, 10 to 18 percent slopes	3583	3583
SDJR - MLRA 108B - Osco silt loam, 2 to 5 percent slopes	150113	150113
SDJR - MLRA 108B - Osco silt loam, 5 to 10 percent slopes, eroded	40382	40382
SDJR - MLRA 108B - Sable silty clay loam, 0 to 2 percent slopes	179794	179794

SDJR - MLRA 115C - Hickory silt loam, 18 to 35 percent slopes	98994	98994
SDJR - MLRA 115C - Hickory silt loam, 35 to 60 percent slopes	26039	26039
SDJR - MLRA 115C - Keomah silt loam, 0 to 2 percent slopes	40110	40110
SDJR - MLRA 115C - Keomah silt loam, 2 to 5 percent slopes	10797	10797
SDJR - MLRA 115C - Rozetta silt loam, 0 to 2 percent slopes	5515	5515
SDJR - MLRA 115C - Rozetta silt loam, 2 to 5 percent slopes	97312	97312
SDJR - MLRA 115C - Rozetta silt loam, 5 to 10 percent slopes, eroded	41751	41751
TOTAL ACRES	694390	694390

Table 10: SDJR GOALS for FY 2015 by Office as of 05/11/2015

Project Name	Goaled	Reported
SDJR - MLRA 108B - Hickory clay loam, 10 to 18 percent slopes, severely eroded	3891	0
SDJR - MLRA 108B - Hickory silt loam, 10 to 18 percent slopes, eroded	16194	0
SDJR - MLRA 108B - Ipava-Osco silt loams, 2 to 5 percent slopes	278	0
SDJR - MLRA 108B - Muscatune silt loam, 0 to 2 percent slopes	78956	78956
SDJR - MLRA 108B - Muscatune silt loam, 2 to 5 percent slopes	6047	6047
SDJR - MLRA 108B - Muscatune silt loam, terrace, 0 to 2 percent slopes	169	169
SDJR - MLRA 108B - Osco silt loam, 0 to 2 percent slopes	3729	3729
SDJR - MLRA 108B - Osco silt loam, 10 to 18 percent slopes, eroded	372	0
SDJR - MLRA 108B - Osco silt loam, 2 to 5 percent slopes, eroded	23701	23701
SDJR - MLRA 108B - Osco silt loam, 5 to 10 percent slopes	4190	4190
SDJR - MLRA 108B - Osco silt loam, terrace, 0 to 2 percent slopes	39	0
SDJR - MLRA 108B - Osco silt loam, terrace, 2 to 5 percent slopes	73	0
SDJR - MLRA 108B - Osco silty clay loam, 5 to 10 percent slopes, severely eroded	1540	0
SDJR - MLRA 108B - Rozetta silt loam, 10 to 18 percent slopes	44	0
SDJR - MLRA 108B - Sable silt loam, 0 to 2 percent slopes, overwash	2955	0
SDJR - MLRA 108B - Virden silt loam, 0 to 2 percent slopes	6627	6627
SDJR - MLRA 108B - Virden silty clay loam, 0 to 2 percent slopes	71200	71200
SDJR - MLRA 115C - Clarksdale silt loam, 0 to 2 percent slopes	24091	0
SDJR - MLRA 115C - Clarksdale silt loam, 2 to 5 percent slopes	5756	0
SDJR - MLRA 115C - Clarksdale silt loam, 2 to 5 percent slopes, eroded	4513	0
SDJR - MLRA 115C - Clarksdale silt loam, terrace, 0 to 2 percent slopes	324	0
SDJR - MLRA 115C - Hickory clay loam, 18 to 25 percent slopes, severely eroded	338	0
SDJR - MLRA 115C - Hickory clay loam, 18 to 35 percent slopes, severely eroded	949	0
SDJR - MLRA 115C - Hickory silt loam, 18 to 25 percent slopes, eroded	11198	0
SDJR - MLRA 115C - Hickory silt loam, 18 to 35 percent slopes, eroded	12062	0
SDJR - MLRA 115C - Ipava-Sable complex, 0 to 2 percent slopes	974	0
SDJR - MLRA 115C - Keomah silt loam, 2 to 5 percent slopes, eroded	2933	0
SDJR - MLRA 115C - Keomah silt loam, terrace, 0 to 2 percent slopes	309	0
SDJR - MLRA 115C - Keomah silt loam, terrace, 2 to 5 percent slopes	169	0
SDJR - MLRA 115C - Muscatune silt loam, 2 to 5 percent slopes, eroded	1606	1606
SDJR - MLRA 115C - Rozetta silt loam, 10 to 18 percent slopes, eroded	2998	2998
SDJR - MLRA 115C - Rozetta silt loam, 2 to 5 percent slopes, eroded	8334	8334
SDJR - MLRA 115C - Rozetta silt loam, 5 to 10 percent slopes	17	0
SDJR - MLRA 115C - Rozetta silt loam, terrace, 0 to 2 percent slopes	130	0
SDJR - MLRA 115C - Rozetta silt loam, terrace, 2 to 5 percent slopes	1162	0
SDJR - MLRA 115C - Rozetta silt loam, terrace, 5 to 10 percent slopes, eroded	755	755
SDJR - MLRA 115C - Rozetta silty clay loam, 10 to 18 percent slopes, severely eroded	258	0
SDJR - MLRA 115C - Rozetta silty clay loam, 2 to 5 percent slopes, severely eroded	47	47
SDJR - MLRA 115C - Rozetta silty clay loam, 5 to 10 percent slopes, severely eroded	5226	5226
SDJR - MLRA 115C - Rozetta silty clay loam, terrace, 10 to 18 percent slopes, severely eroded	72	0
SDJR - MLRA 115C - Rozetta silty clay loam, terrace, 5 to 10 percent slopes, severely eroded	14	0
SDJR - MLRA 115C - Sable silty clay loam, terrace, 0 to 2 percent slopes	183	0
SDJR - MLRA 115C - Virden silty clay loam, terrace, 0 to 2 percent slopes	146	146
SDJR - MLRA 115C- Clarksdale silt loam, terrace, 2 to 5 percent slopes, eroded	45	0
TOTAL ACRES	304614	213731

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

5-2015 Continue to collect piezometer and IRIS tube data. Added an IRIS tube site in Henry Co. in a map unit of Elco.

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. **Status:** 5-2014 5-

2014: No progress to report at this time.
2015: 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 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:** 5-2014 Collected GPS locations of areas showing recent ponding in Peoria Co. Continuing to fine tune GIS analysis tools to predict ponded areas.

5-2015: No progress to report at this time.

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

5-2015: No progress to report at this time.

Tazewell Co. Loess Terrace Project
Description: This project deals with areas of deep loess soils, mainly Tama, Plano and adjacent Edgington soils, on high stream terraces in Mason and Tazewell Counties. The depth to outwash will be investigated.

Onalaska, WI MLRA Office
Table 11: SDJR PROGRESS for FY 2014 by Office as of 05/14/2015

Project Name	Goaled	Reported
ES - MLRA 105 - Dolomite Colluvium Bluff Prairie	69355	0
ES - MLRA 105 - Sandstone Colluvium Bluff Prairie	9464	0
SDJR - MLRA 105 - Chaseburg silt loam, 2 to 6 percent slopes and similar map unit(s)	6749	6749
SDJR - MLRA 105 - Downs silt loam, 12 to 18 percent slopes, moderately eroded	957	957
SDJR - MLRA 105 - Downs silt loam, 14 to 18 percent slopes, moderately eroded	2476	2476
SDJR - MLRA 105 - Downs silt loam, 2 to 6 percent slopes	12816	12816
SDJR - MLRA 105 - Downs silt loam, 2 to 6 percent slopes, moderately eroded	2602	2602
SDJR - MLRA 105 - Downs silt loam, 5 to 9 percent slopes, moderately eroded	39826	39826
SDJR - MLRA 105 - Downs silt loam, 6 to 12 percent slopes, moderately eroded	3819	3819
SDJR - MLRA 105 - Downs silt loam, 9 to 14 percent slopes, moderately eroded	25485	25485
SDJR - MLRA 105 - Downs silt loam, benches, 0 to 2 percent slopes	205	205
SDJR - MLRA 105 - Downs silt loam, benches, 2 to 5 percent slopes	407	0
SDJR - MLRA 105 - Downs silt loam, benches, 5 to 9 percent slopes	164	164
SDJR - MLRA 105 - Downs silt loam, valleys, 18 to 25 percent slopes	1016	1016
SDJR - MLRA 105 - Newglarus silt loam, moderately deep, 12 to 20 percent slopes, moderately eroded	30275	30275
SDJR - MLRA 105 - Newglarus silt loam, moderately deep, 2 to 6 percent slopes, moderately eroded	2214	2214

SDJR - MLRA 105 - Newglarus silt loam, moderately deep, 20 to 30 percent slopes, moderately eroded	11455	11455
SDJR - MLRA 105 - Newglarus silt loam, moderately deep, 6 to 12 percent slopes, moderately eroded	17744	17744
SDJR - MLRA 89 - Plainfield sand, 0 to 2 percent slopes	10340	10340
SDJR - MLRA 89 - Plainfield sand, 12 to 35 percent slopes	1841	1841
SDJR - MLRA 89 - Plainfield sand, 2 to 6 percent slopes	16365	16365
SDJR - MLRA 89 - Plainfield sand, 6 to 12 percent slopes	5570	5570
MLRA 105 - Sparta loamy fine sand, 2 to 6 percent slopes	576	0
MLRA 89 - Plainfield sand, 2 - 6 percent slopes	16278	0
MLRA 89 - Plainfield sand, 6 - 12 percent slopes	5565	0
MLRA 89 - Plainfield sand, 12 - 35 percent slopes	1910	0

Table 12: SDJR GOALS for FY 2015 by Office as of 05/14/2015

Project Name	Goaled	Reported
SDJR - MLRA 105 - Arenzville-Chaseburg complex, 1 to 5 percent slopes and similar map units	12572	0
SDJR - MLRA 105 - Downs silt loam, 18 to 25 percent slopes, moderately eroded	71	0
SDJR - MLRA 105 - Dubuque silt loam, 10 to 18 percent slopes, moderately eroded	2364	2364
SDJR - MLRA 105 - Dubuque silt loam, 14 to 18 percent slopes	2402	0
SDJR - MLRA 105 - Dubuque silt loam, 14 to 18 percent slopes, moderately eroded	5143	0
SDJR - MLRA 105 - Dubuque silt loam, 18 to 25 percent slopes	1744	0
SDJR - MLRA 105 - Dubuque silt loam, 5 to 10 percent slopes, moderately eroded	2435	2435
SDJR - MLRA 105 - Dubuque silt loam, 5 to 9 percent slopes	218	0
SDJR - MLRA 105 - Dubuque silt loam, 5 to 9 percent slopes, moderately eroded	410	0
SDJR - MLRA 105 - Dubuque silt loam, 9 to 14 percent slopes	928	0
SDJR - MLRA 105 - Dubuque silt loam, 9 to 14 percent slopes, moderately eroded	2953	0
SDJR - MLRA 105 - Mt. Carroll silt loam, 14 to 18 percent slopes, moderately eroded	166	0
SDJR - MLRA 105 - Mt. Carroll silt loam, 2 to 6 percent slopes	19884	0
SDJR - MLRA 105 - Mt. Carroll silt loam, 5 to 9 percent slopes, moderately eroded	85	0
SDJR - MLRA 105 - Newglarus silt loam, deep, 12 to 20 percent slopes, moderately eroded	15447	0
SDJR - MLRA 105 - Newglarus silt loam, deep, 2 to 6 percent slopes, moderately eroded	1219	0
SDJR - MLRA 105 - Newglarus silt loam, deep, 20 to 30 percent slopes, moderately eroded	7998	0
SDJR - MLRA 105 - Newglarus silt loam, deep, 6 to 12 percent slopes, moderately eroded	6992	0
SDJR - MLRA 105 - Palsgrove silt loam, 10 to 18 percent slopes, moderately eroded	2151	0
SDJR - MLRA 105 - Palsgrove silt loam, 12 to 20 percent slopes, moderately eroded	14813	0
SDJR - MLRA 105 - Palsgrove silt loam, 18 to 25 percent slopes, moderately eroded	343	0
SDJR - MLRA 105 - Palsgrove silt loam, 2 to 6 percent slopes, moderately eroded	8286	0
SDJR - MLRA 105 - Palsgrove silt loam, 5 to 10 percent slopes, moderately eroded	4326	0
SDJR - MLRA 105 - Palsgrove silt loam, 6 to 12 percent slopes, moderately eroded	17085	17085
SDJR - MLRA 105 - Sparta loamy fine sand, 0 to 3 percent slopes	2572	2572
SDJR - MLRA 105 - Sparta loamy fine sand, 2 to 6 percent slopes	576	576
SDJR - MLRA 105 - Tama and Downs silt loams, 0 to 2 percent slopes	152	0
SDJR - MLRA 105 - Tama and Downs silt loams, 18 to 35 percent slopes	28	0
SDJR - MLRA 105 - Tama and Downs silt loams, 2 to 6 percent slopes	10186	0
SDJR - MLRA 105 - Tama and Downs silt loams, 5 to 9 percent slopes	485	0
SDJR - MLRA 105 - Tama and Downs silt loams, 6 to 12 percent slopes	3164	0
SDJR - MLRA 105 - Tama silt loam, 0 to 2 percent slopes	1330	0
SDJR - MLRA 105 - Tama silt loam, 2 to 6 percent slopes	8776	0
SDJR - MLRA 105 - Tama silt loam, 2 to 6 percent slopes, moderately eroded	16877	0
SDJR - MLRA 105 - Tama silt loam, 5 to 9 percent slopes	3561	0
SDJR - MLRA 105 - Tama silt loam, 5 to 9 percent slopes, moderately eroded	1356	0
SDJR - MLRA 105 - Tama silt loam, 6 to 12 percent slopes, moderately eroded	9123	0
SDJR - MLRA 105 - Tama silt loam, benches, 0 to 2 percent slopes	525	0
SDJR - MLRA 105 - Tama silt loam, benches, 2 to 5 percent slopes	1199	0
SDJR - MLRA 105 - Tama silt loam, sandy substratum, 0 to 3 percent slopes	476	0
SDJR - MLRA 105 - Tama silt loam, valleys, 12 to 18 percent slopes, moderately eroded	873	0
SDJR - MLRA 105 - Tama silt loam, valleys, 2 to 6 percent slopes	29	0
SDJR - MLRA 105 - Tama silt loam, valleys, 6 to 12 percent slopes, moderately eroded	441	0
SDJR - MLRA 105 - Downs and Mt. Carroll silt loams, 0 to 2 percent slopes	52	0
SDJR - MLRA 105 - Dubuque silt loam, 5 to 14 percent slopes	47	0
SDJR - MLRA 105 - Dunbarton-Dubuque silt loams, 15 to 25 percent slopes, moderately eroded	2534	0
SDJR - MLRA 105 - Dunbarton-Dubuque silt loams, 7 to 15 percent slopes, moderately eroded	2287	0
SDJR - MLRA 105 - Fayette silt loam, 14 to 18 percent slopes, moderately eroded	30287	0
SDJR - MLRA 105 - Fayette silt loam, 18 to 25 percent slopes, moderately eroded	18169	0
SDJR - MLRA 105 - Fayette silt loam, 2 to 6 percent slopes	21644	0
SDJR - MLRA 105 - Fayette silt loam, 25 to 40 percent slopes, moderately eroded	6309	0
SDJR - MLRA 105 - Fayette silt loam, 5 to 9 percent slopes	8746	0
SDJR - MLRA 105 - Fayette silt loam, 5 to 9 percent slopes, moderately eroded	38429	0
SDJR - MLRA 105 - Fayette silt loam, 9 to 14 percent slopes, moderately eroded	77882	0

SDJR - MLRA 105 - Lamont fine sandy loam, 12 to 20 percent slopes	104	0
SDJR - MLRA 105 - Mt. Carroll silt loam, 12 to 20 percent slopes, moderately eroded	3137	0
SDJR - MLRA 105 - Mt. Carroll silt loam, 6 to 12 percent slopes, moderately eroded	15049	0
SDJR - MLRA 105 - Mt. Carroll silt loam, 9 to 14 percent slopes, moderately eroded	249	0
SDJR - MLRA 105 - Newglarus complex, 12 to 20 percent slopes, moderately eroded	4669	0
SDJR - MLRA 105 - Newglarus complex, 6 to 12 percent slopes, moderately eroded	983	0
SDJR - MLRA 105 - Newglarus-Dunbarton silt loams, 12 to 20 percent slopes, moderately eroded	5443	0
SDJR - MLRA 105 - Newglarus-Dunbarton silt loams, 2 to 6 percent slopes, moderately eroded	357	0
SDJR - MLRA 105 - Newglarus-Dunbarton silt loams, 6 to 12 percent slopes, moderately eroded	3818	0
SDJR - MLRA 105 - Newglarus-Dunbarton, very stony complex, 20 to 30 percent slopes, moderately eroded, very rocky	2356	0
SDJR - MLRA 105 - Newglarus-Dunbarton, very stony complex, 30 to 60 percent slopes, very rocky	598	0
SDJR - MLRA 105 - Newglarus-Lamoille silt loams, silurian landscape, 18 to 35 percent slopes	4132	0
SDJR - MLRA 105 - Newglarus-Lamoille silt loams, silurian landscape, 35 to 60 percent slopes	598	0
SDJR - MLRA 105 - Newglarus-Palsgrove silt loams, 10 to 18 percent slopes, moderately eroded	2773	0
SDJR - MLRA 105 - Newglarus-Palsgrove silt loams, 5 to 10 percent slopes, moderately eroded	122	0
SDJR - MLRA 105 - Plainfield sand, 0 to 3 percent	3121	0
SDJR - MLRA 105 - Plainfield sand, 1 to 6 percent slopes	3216	0
SDJR - MLRA 105 - Plainfield sand, 12 to 25 percent slopes	349	0
SDJR - MLRA 105 - Plainfield sand, 15 to 60 percent slopes	5771	0
SDJR - MLRA 105 - Plainfield sand, 6 to 15 percent slopes	1311	0
SDJR - MLRA 105 - Seaton silt loam, 0 - 3 percent slopes	1148	0
SDJR - MLRA 105 - Seaton silt loam, 10 - 15 percent slopes	1849	0
SDJR - MLRA 105 - Seaton silt loam, 12 - 20 percent slopes	20769	0
SDJR - MLRA 105 - Seaton silt loam, 12 - 20 percent slopes, LE	25044	0
SDJR - MLRA 105 - Seaton silt loam, 18 - 25 percent slopes	1053	0
SDJR - MLRA 105 - Seaton silt loam, 18 -35 percent slopes	1302	0
SDJR - MLRA 105 - Seaton silt loam, 2 - 6 percent slopes	13132	0
SDJR - MLRA 105 - Seaton silt loam, 2 - 6 percent slopes,LE	17262	0
SDJR - MLRA 105 - Seaton silt loam, 20 - 30 percent slopes	5574	0
SDJR - MLRA 105 - Seaton silt loam, 6 - 12 percent slopes	27808	0
SDJR - MLRA 105 - Seaton silt loam, 6 - 12 percent slopes LE	17110	0
SDJR - MLRA 105 - Sparta loamy fine sand, 6 to 15 percent slopes	338	0
SDJR - MLRA 105 - Sparta loamy sand, 0 to 2 percent slopes	1978	0
SDJR - MLRA 105 - Sparta loamy sand, 1 to 6 percent slopes	4860	0
SDJR - MLRA 105 - Sparta loamy sand, 6 to 12 percent slopes	289	0
SDJR - MLRA 105 - Tama and Downs silt loams, 12 to 18 percent slopes, moderately eroded	465	0
SDJR - MLRA 105 - Tama silt loam, 9 to 14 percent slopes, moderately eroded	634	0
SDJR - MLRA 89 - Plainfield loamy sand, 0 to 2 percent slopes	3928	0
SDJR - MLRA 89 - Plainfield loamy sand, 2 to 6 percent slopes	1610	0

Juneau, WI MLRA Office

Table 13: SDJR PROGRESS for FY 2014 by Office as of 05/14/2015

Project Name	Goaled	Reported
SDJR - MLRA 95 - 018 Kewaunee loam, 2 to 6 percent slopes	21889	21889
SDJR - MLRA 95 - 021 Pella silt loam, 0 to 2 percent slopes	21994	21994
SDJR - MLRA 95 - 022 Pella silty clay loam, cool, 0 to 2 percent slopes	22055	22055
SDJR - MLRA 95 - 023 Plano silt loam, till substratum, 0 to 2 percent slopes	11270	11270
SDJR - MLRA 95 - 024 Plano silt loam, till substratum, 2 to 6 percent slopes	23382	23382
SDJR - MLRA 95 - 025 Plano silt loam, till substratum, 6 to 12 percent slopes, eroded	1208	1208
SDJR - MLRA 95 - 026 Plano silt loam, gravelly substratum, 0 to 2 percent	13341	13341
SDJR - MLRA 95 - 027 Plano silt loam, gravelly substratum, 2 to 6 percent slopes	3784	3784
SDJR - MLRA 95 - 036 Lamartine silt loam, 0 to 2 percent slopes	950	950
SDJR - MLRA 95 - 037 Lamartine silt loam, 0 to 3 percent slopes	7221	7221
SDJR - MLRA 95 - 038 Lamartine silt loam, 2 to 6 percent slopes	5835	5835
SDJR - MLRA 95 - 043 Casco loam, 2 to 6 percent slopes	4589	4589
SDJR - MLRA 95 - 044 Casco loam, 2 to 6 percent slopes, eroded	1900	1900
SDJR - MLRA 95 - 045 Casco loam, 6 to 12 percent slopes, eroded	9490	9490
SDJR - MLRA 95 - 046 Casco loam, 0 to 2 percent slopes	184	184
SDJR - MLRA 95 - 047 Casco loam, 12 to 20 percent slopes, eroded	3730	3730
SDJR - MLRA 95 - 048 Casco sandy loam, 2 to 6 percent slopes	1618	1618
SDJR - MLRA 95 - 049 Casco sandy loam, 2 to 6 percent slopes, eroded	437	437
SDJR - MLRA 95 - 050 Casco sandy loam, 6 to 12 perceent slopes, eroded	653	653
SDJR - MLRA 95 - 051 Casco-Rodman complex, 6 to 12 percent slopes, eroded	264	264
SDJR - MLRA 95 - 052 Casco-Rodman complex, 6 to 12 percent slopes	293	293
SDJR - MLRA 95 - 053 Casco-Rodman complex, 12 to 20 percent slopes, eroded	5674	5674
SDJR - MLRA 95 - 054 Casco-Rodman complex, 20 to 30 percent slopes	6509	6509

SDJR - MLRA 95 - 055 Casco-Rodman complex, 20 to 30 percent slopes, eroded	2197	2197
SDJR - MLRA 95 - 056 Casco-Rodman complex, 30 to 45 percent slopes	1494	1494
SDJR - MLRA 95 - 059 Palms mucky peat, 0 to 2 percent slopes	5439	5439
SDJR - MLRA 95 - 060 Palms muck, 0 to 2 percent slopes	16274	16274
SDJR - MLRA 95 - 061 Palms muck, ponded, 0 to 2 percent slopes	587	587
SDJR - MLRA 95 - 062 Colwood silt loam, 0 to 2 percent slopes	5594	5594
SDJR - MLRA 95 - 069 Plainfield loamy sand, till plain, 0 to 2 percent slopes	531	531
SDJR - MLRA 95 - 070 Plainfield loamy sand, till plain, 2 to 6 percent slopes	4203	4203
SDJR - MLRA 95 - 071 Plainfield loamy sand, till plain, 6 to 12 percent slopes	1544	1544
SDJR - MLRA 95 - 072 Plainfield loamy sand, till plain, 12 to 30 percent slopes	632	632
SDJR - MLRA 95 - 073 Plainfield loamy fine sand, 0 to 2 percent slopes	946	946
SDJR - MLRA 95 - 074 Plainfield loamy fine sand, 2 to 6 percent slopes	5116	5116
SDJR - MLRA 95 - 075 Plainfield loamy fine sand, 6 to12 percent slopes	2844	2844
SDJR - MLRA 95 - 078 Plainfield sand, till plain, 0 to 2 percent slopes	2427	2427
SDJR - MLRA 95 - 079 Plainfield sand, till plain, 2 to 6 percent slopes	8582	8582
SDJR - MLRA 95 - 080 Plainfield sand, till plain, 6 to 12 percent slopes	5838	5838
SDJR - MLRA 95 - 081 Plainfield sand, till plain, 12 to 30 percent slopes	4207	4207
SDJR - MLRA 95 - 082 St. Charles silt loam, 0 to 2 percent slopes	5896	5896
SDJR - MLRA 95 - 083 St. Charles silt loam, 12 to 20 percent slopes, eroded	468	468
SDJR - MLRA 95 - 084 St. Charles silt loam, 2 to 6 percent slopes	15438	15438
SDJR - MLRA 95 - 085 St. Charles silt loam, 6 to12 percent slopes, eroded	3254	3254
SDJR - MLRA 95 - 086 St. Charles silt loam, gravelly substratum, 0 to 2 percent slopes	3814	3814
SDJR - MLRA 95 - 087 St. Charles silt loam, moderately well drained, 0 to 2 percent slopes	10562	10562
SDJR - MLRA 95 - 088 St. Charles silt loam, gravelly substratum, 2 to 6 percent slopes	2562	2562
SDJR - MLRA 95 - 089 Fox silt loam, 2 to 6 percent slopes	16403	16403
SDJR - MLRA 95 - 092 Plano silt loam, 0 to 2 percent slopes	2797	2797
SDJR - MLRA 95 - 093 Plano silt loam, 2 to 5 percent slopes	5658	5658
SDJR - MLRA 95 - 094 Plano silt loam, 5 to 10 percent slopes, eroded	1616	1616
SDJR- MLRA 95 - 084_A St. Charles silt loam, 2 to 6 percent slopes, eroded	3451	3451

Table 14: SDJR GOALS for FY 2015 by Office as of 05/14/2015

Project Name	Goaled	Reported
SDJR - MLRA 95 - 002 Billett sandy loam, 0 to 2 percent slopes	3570	0
SDJR - MLRA 95 - 012 Coloma loamy sand, 2 to 6 percent slopes	1938	1938
SDJR - MLRA 95 - 013 Coloma loamy sand, 6 to 12 percent slopes	2877	2877
SDJR - MLRA 95 - 014 Colwood fine sandy loam, 0 to 2 percent slopes	1932	1932
SDJR - MLRA 95 - 015 Colwood loam, 0 to 2 percent slopes	105	105
SDJR - MLRA 95 - 016 Dodge silt loam, 0 to 2 percent slopes	1378	1378
SDJR - MLRA 95 - 017 Dodge silt loam, 2 to 6 percent slopes	13605	13605
SDJR - MLRA 95 - 018 Dodge silt loam, 2 to 6 percent slopes, eroded	1342	1342
SDJR - MLRA 95 - 018a Dodge silt loam, 6 to 12 percent slopes, eroded	4140	4140
SDJR - MLRA 95 - 019 Fox loam, 0 to 2 percent slopes	1231	0
SDJR - MLRA 95 - 020 Fox loam, 2 to 6 percent slopes	3061	0
SDJR - MLRA 95 - 021 Fox loam, 6 to 12 percent slopes, eroded	1936	0
SDJR - MLRA 95 - 022 Fox sandy loam, 2 to 6 percent slopes	974	0
SDJR - MLRA 95 - 023 Fox sandy loam, 6 to 12 percent slopes, eroded	345	0
SDJR - MLRA 95 - 024 Fox silt loam, 0 to 2 percent slopes	7023	0
SDJR - MLRA 95 - 025 Fox silt loam, 2 to 4 percent slopes	2067	0
SDJR - MLRA 95 - 026 Fox silt loam, 4 to 6 percent slopes, eroded	1370	0
SDJR - MLRA 95 - 027 Fox silt loam, 6 to 12 percent slopes, eroded	1670	0
SDJR - MLRA 95 - 028 Griswold loam, 12 to 20 percent slopes, eroded	563	563
SDJR - MLRA 95 - 029 Griswold loam, 2 to 4 percent slopes	1176	1176
SDJR - MLRA 95 - 030 Griswold loam, 2 to 6 percent slopes	611	611
SDJR - MLRA 95 - 030a Griswold loam, 2 to 6 percent slopes, eroded	1192	1192
SDJR - MLRA 95 - 031 Griswold loam, 4 to 6 percent slopes, eroded	1294	1294
SDJR - MLRA 95 - 032 Griswold loam, 6 to 12 percent slopes	1889	1889
SDJR - MLRA 95 - 033 Griswold loam, 6 to 12 percent slopes, eroded	5959	5959
SDJR - MLRA 95 - 034 Griswold silt loam, 2 to 6 percent slopes	581	581
SDJR - MLRA 95 - 034a Griswold silt loam, 2 to 6 percent slopes, eroded	1292	1292
SDJR - MLRA 95 - 035 Griswold silt loam, 6 to 12 percent slopes, eroded	1087	1087
SDJR - MLRA 95 - 036 Houghton muck, 0 to 2 percent slopes	47753	47753
SDJR - MLRA 95 - 037 Houghton mucky peat, 0 to 2 percent slopes	14534	0
SDJR - MLRA 95 - 038 Houghton peat, acid variant, 0 to 2 percent slopes	93	0
SDJR - MLRA 95 - 039 Houghton ponded, 0 to 2 percent slopes	3072	0
SDJR - MLRA 95 - 040 Kewaunee silt loam, 0 to 2 percent slopes	1523	1523
SDJR - MLRA 95 - 041 Kewaunee silt loam, 12 to 20 percent slopes, eroded	698	698
SDJR - MLRA 95 - 042 Kewaunee silt loam, 6 to 12 percent slopes, eroded	2776	2776

SDJR - MLRA 95 - 043 Kewaunee silty clay loam, 12 to 20 percent slopes, eroded	406	406
SDJR - MLRA 95 - 044 Kewaunee silty clay loam, 2 to 6 percent slopes, eroded	7611	7611
SDJR - MLRA 95 - 045 Kewaunee silty clay loam, 6 to 12 percent slopes, eroded	4546	4546
SDJR - MLRA 95 - 046 Kewaunee silty clay, 12 to 20 percent slopes, severely eroded	563	563
SDJR - MLRA 95 - 047 Kewaunee silty clay, 6 to 12 percent slopes, severely eroded	875	875
SDJR - MLRA 95 - 049 Kidder loam, 12 to 20 percent slopes, eroded	4407	0
SDJR - MLRA 95 - 049a Kidder loam, 20 to 30 percent slopes, eroded	600	0
SDJR - MLRA 95 - 050 Kidder loam, 2 to 4 percent slopes	548	0
SDJR - MLRA 95 - 051 Kidder loam, 2 to 6 percent slopes	3589	0
SDJR - MLRA 95 - 052 Kidder loam, 4 to 6 percent slopes	411	0
SDJR - MLRA 95 - 053 Kidder loam, 4 to 6 percent slopes, eroded	2585	0
SDJR - MLRA 95 - 054 Kidder loam, 6 to 12 percent slopes, eroded	8382	0
SDJR - MLRA 95 - 069 Mayville silt loam, 0 to 2 percent slopes	2506	2506
SDJR - MLRA 95 - 071 Mayville silt loam, 2 to 5 percent slopes	2478	2478
SDJR - MLRA 95 - 072 Mayville silt loam, 2 to 6 percent slopes	5626	5626
SDJR - MLRA 95 - 073 Mayville silt loam, 5 to 10 percent slopes, eroded	466	466
SDJR - MLRA 95 - 074 Mchenry silt loam, 12 to 20 percent slopes, eroded	3352	0
SDJR - MLRA 95 - 075 McHenry silt loam, 2 to 4 percent slopes	2944	0
SDJR - MLRA 95 - 076 McHenry silt loam, 2 to 6 percent slopes	9479	0
SDJR - MLRA 95 - 077 McHenry silt loam, 2 to 6 percent slopes, eroded	1625	0
SDJR - MLRA 95 - 078 McHenry silt loam, 6 to 12 percent slopes, eroded	12728	0
SDJR - MLRA 95 - 081 Mundelein silt loam, 0 to 3 percent slopes	3432	3432
SDJR - MLRA 95 - 086 Warsaw loam, 0 to 2 percent slopes	4195	4195
SDJR - MLRA 95 - 087 Warsaw loam, 2 to 4 percent slopes	1844	1844
SDJR - MLRA 95 - 088 Warsaw loam, 2 to 6 percent slopes	534	534
SDJR - MLRA 95 - 089 Warsaw loam, 4 to 6 percent slopes, eroded	421	421
SDJR - MLRA 95 - 090 Warsaw loam, 6 to 12 percent slopes, eroded	126	126
SDJR - MLRA 95 - 091 Warsaw silt loam, 0 to 2 percent slopes	4716	4716
SDJR - MLRA 95 - 092 Warsaw silt loam, 2 to 6 percent slopes	3260	3260
SDJR - MLRA 95 - 093 Warsaw silt loam, 6 to 12 percent slopes, eroded	5276	5276
SDJR - MLRA 95 - 024a Fox silt loam, 2 to 6 percent slopes, eroded	759	0

Grand Rapids, MI MLRA Office

Table 15: SDJR PROGRESS for FY 2014 by Office as of 05/14/2015

Project Name	Goaled	Reported
ES - MLRA 97 - Sandy Lake Plain Project	360523	360523
ES - MLRA 97 - Wet Acidic Sandy Flatwoods Project	11074	15438
SDJR - MLRA 98 - Houghton-Adrian mucks	16659	16659

Table 16: SDJR GOALS for FY 2015 by Office as of 05/14/2015

Project Name	Goaled	Reported
ES - MLRA 97 - Moist Sandy Lake Plain Project	106306	0
SDJR - MLRA 98 - Coloma loamy sand, 0 to 6 percent slopes	13804	0
SDJR - MLRA 98 - Coloma loamy sand, 12 to 18 percent slopes	2719	0
SDJR - MLRA 98 - Coloma loamy sand, 6 to 12 percent slopes	6426	0
SDJR - MLRA 98 - Coloma sand, 0 to 6 percent slopes	28041	0
SDJR - MLRA 98 - Coloma sand, 18 to 35 percent slopes	2475	0
SDJR - MLRA 98 - Coloma sand, 6 to 12 percent slopes	10100	0
SDJR - MLRA 98 - Coloma sand, 6 to 18 percent slopes	8874	0
SDJR - MLRA 98 - Gilford fine sandy loam, 0 to 2 percent slopes	16423	16423
SDJR - MLRA 98 - Gilford mucky sandy loam, 0 to 1 percent slopes	2590	2590
SDJR - MLRA 98 - Gilford sandy loam, 0 to 2 percent slopes	27316	27316
SDJR - MLRA 98 - Plainfield sand, 0 to 2 percent slopes	1668	1668
SDJR - MLRA 98 - Plainfield sand, 0 to 6 percent slopes	75830	75830
SDJR - MLRA 98 - Plainfield sand, 2 to 6 percent slopes	5179	5179
SDJR - MLRA 98 - Plainfield sand, 6 to 12 percent slopes	4547	4547
SDJR - MLRA 98 - Plainfield sand, 6 to 18 percent slopes	13281	13281

Owensboro, KY MLRA Office

Table 17: SDJR PROGRESS for FY 2014 by Office as of 05/14/2015

Project Name	Goaled	Reported
ES - MLRA 121 - Moderately Deep Interbedded Limestone-Shale Backslopes	1575757	1575757
SDJR - MLRA 120 - 22Newark silty clay loam, 0 to 2% slopes, frequently flooded	256	256
SDJR - MLRA 120A - 25Newark silt loam, 0 to 2% slopes, occasionally flooded	7313	7313
SDJR - MLRA 120A - 27Belknap silt loam, 0 to 2% slopes, occasionally flooded	53195	53195
SDJR - MLRA 120A - 28Zanesville silt loam, 2 to 6 % slopes	30433	30433

SDJR - MLRA 120A - 29Zanesville silt loam, 2 to 6% slopes, eroded	10161	10161
SDJR - MLRA 120A - 30Zanesville silt loam, 6-12% slopes	19081	19081
SDJR - MLRA 120A - 31Zanesville silt loam, 6 to 12% slopes, eroded	15726	15726
SDJR - MLRA 120A - 32Zanesville silt loam, 6 to 12% slopes, severely eroded	33108	33108
SDJR - MLRA 120B - 20Newark silt loam, 0 to 2% slopes, frequently flooded	655	655
SDJR - MLRA 121 - 19Nolin silt loam, 0 to 2% slopes, occasionally flooded	12318	12318
SDJR - MLRA 121 - 21Newark silt loam, 0 to 2% slopes, frequently flooded	1780	1780
SDJR - MLRA 121 - 26Newark silt loam, 0 to 2% slopes, occasionally flooded	2544	2544
SDJR - MLRA 121 - 34Nolin silt loam, 0 to 2 % slopes, frequently flooded	12408	12408
SDJR - MLRA 122 - 23Newark silt loam, 0 to 2% slopes, frequently flooded	6315	6315
SDJR - MLRA 122 - 24Newark silt loam, 0 to 2% slopes,occasionally flooded	1753	1753
SDJR - MLRA 122 - 35Nolin silt loam, 0 to 2% slopes, frequently flooded	5772	5772

Table 18: SDJR GOALS for FY 2015 by Office as of 05/14/2015

Project Name	Goaled	Reported
MLRA 120A - Northeast MLRA 120 Mine Soils Updating Project	1000	0
SDJR - MLRA 120 - 51BKarnak silty clay, 0 to 2% slopes, occasionally flooded	6401	6401
SDJR - MLRA 120 - 51Karnak silty clay, 0 to 2% slopes, frequently flooded	7161	7161
SDJR - MLRA 120 - 52Karnak silty clay, 0 to 2% slopes, rarely flooded	2135	2135
SDJR - MLRA 120 - 53Wakeland silt loam, 0 to 2% slopes, occasionally flooded	8118	8118
SDJR - MLRA 120 - 54Bonnie silt loam, 0 to 2% slopes, occasionally flooded	16934	16934
SDJR - MLRA 120 - 62McGary silt loam, 0 to 2 percent slopes, rarely flooded	4281	0
SDJR - MLRA 120 - 72Hosmer silt loam, 2 to 6 percent slopes, eroded	5078	5078
SDJR - MLRA 120A - 64Wellston silt loam, 12 to 30 percent slopes, severely eroded	8782	0
SDJR - MLRA 120A - 65Wellston silt loam, 6 to 12 percent slopes	11626	0
SDJR - MLRA 120A - 67Wellston silt loam, 6 to 12 percent slopes, eroded	6201	0
SDJR - MLRA 120A - 70Haymond silt loam, 0 to 2 percent slopes, occasionally flooded	830	830
SDJR - MLRA 120A - 73Wellston silt loam, 12 to 20 percent slopes	6656	0
SDJR - MLRA 120B - 63Wellston silt loam, 12 to 18 percent slopes, severely eroded	10951	0
SDJR - MLRA 120B - 66Wellston silt loam, 6 to 12 percent slopes	1405	0
SDJR - MLRA 120B - 77Zanesville silt loam, 2 to 6 percent slopes	6059	0
SDJR - MLRA 120C - 71Berks-Weikert complex, 25 to 75 percent slopes, very flaggy	18432	0
SDJR - MLRA 121 - 50Fairmount - Rock outcrop complex, 30 to 60 percent slopes	17516	17516

Milan, TN MLRA Office

Table 19: SDJR PROGRESS for FY 2014 by Office as of 05/14/2015

Project Name	Goaled	

Table 20: SDJR GOALS for FY 2015 by Office as of 05/14/2015

Project Name	Goaled	Reported
ES - MLRA 134 - Northern Deep Loess Backslope	242703	0

FUTURE PROJECTS

Potential Projects Identified in Evaluations on Hold carry over through SDJR future projects?
Projects for all offices planned to start in FY 13 or later on Hold
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.

12-GRR Grand Rapids, Michigan
11-AUR, 11-SPR, 11-MAN (formerly 11-CAR) Aurora, Springfield, Marion; Illinois
11-UNI, Union, Missouri; 11-JUE Juneau, Wisconsin
10-ONA Onalaska, Wisconsin
7-MIL Milan, Tennessee
6-OWN Owensboro, Kentucky

DATA DELIVERY AND ACQUISITION

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

Title 430 - Soil Survey

NB 430-15-5 SOI – Comment Period for National Soil Survey Handbook Changes
NB 430-15-4 SOI – Distribution of Fiscal Year (FY) 2014 Technical Soil Services...
NB 430-15-3 SOI – Publication of National Instruction (NI) 430-305, Third Edition
NB 430-15-2 SOI – National Cooperative Soil Survey (NCSS) 2015 Awards
NB 430-15-1 SOI – FY2015 Priorities for Soil Science Division
NB 430-14-12 SOI – Request for National Soil Survey Center Assistance – Fiscal YR15
NB 430-14-11 SOI – October 2014 Official Web Soil Survey Refresh Requirements
NB 430-14-10 SOI - Availability of Keys to Soil Taxonomy, 12th Edition

Title 170 - Cartography and Geographic Information Systems

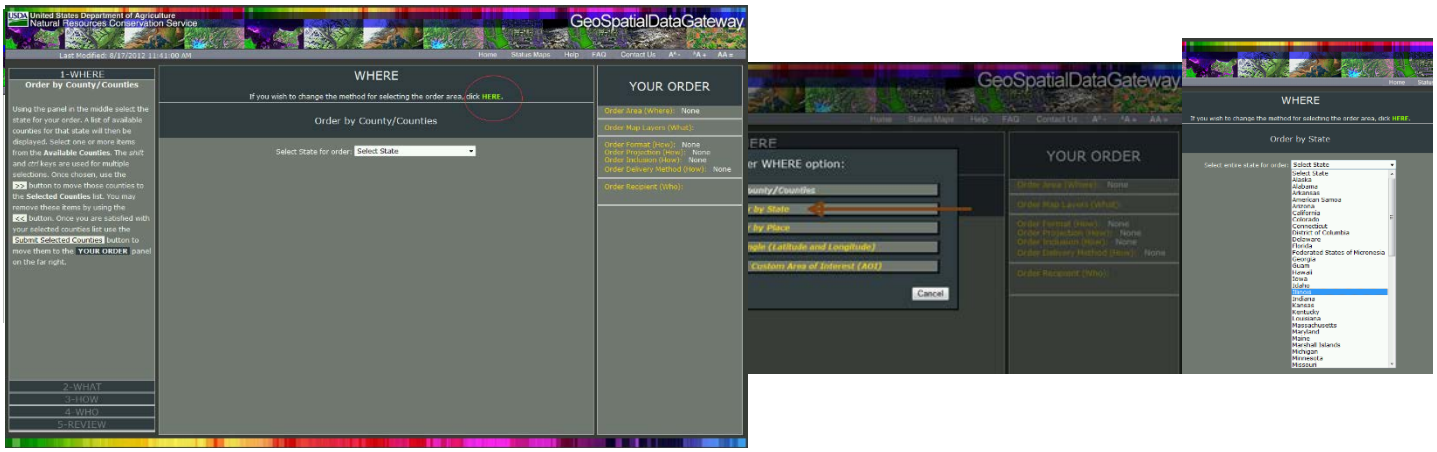
NB 170-15-1 CGI – High Resolution Elevation Data
NB 170-14-2 CGI – Request for Comments on the Draft Subpart Additions to the cur...
NB 170-14-1 CGI – State and Local Geospatial Services to support Toolkit and GIS...

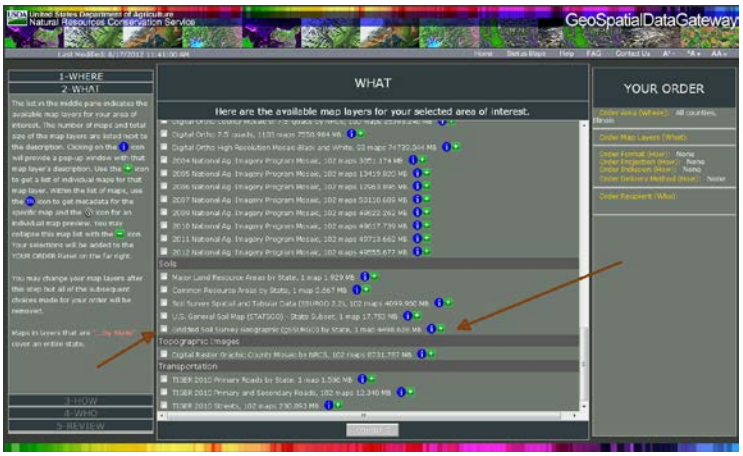
gSSURGO A statewide seamless coverage was developed and is available upon request to the Illinois State Office. Old school. OR downloaded from the

Geospatial Data Gateway. New School. http://datagateway.nrcs.usda.gov/

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.

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.



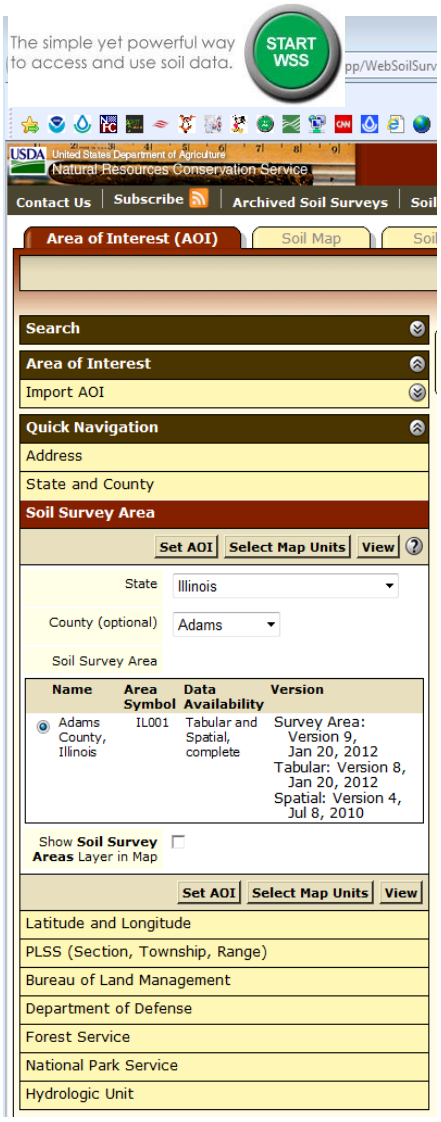


Check what you want and hit continue to follow the registration and to continue your order.
Data sets can be loaded into the base geodatabase and linked to maps. This will allow interpretive maps and informational maps similar to the "Illinois suite of maps" found on the Illinois NRCS web site.
REQUIREMENT: 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.

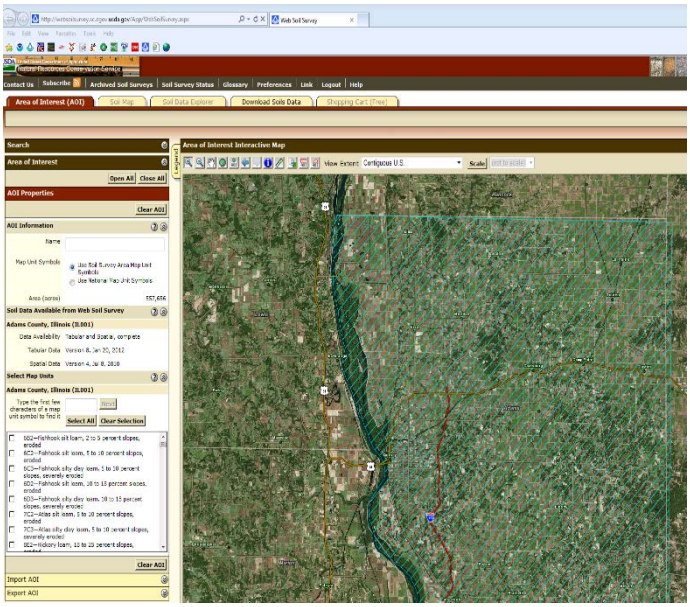


Click on the Green Button "Start WSS"
http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

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).

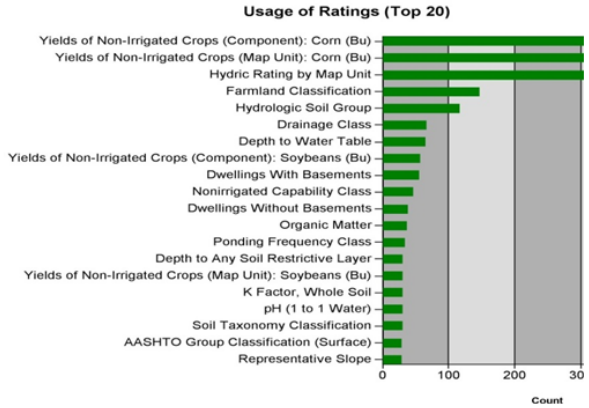
From here, you have the 3 choices:

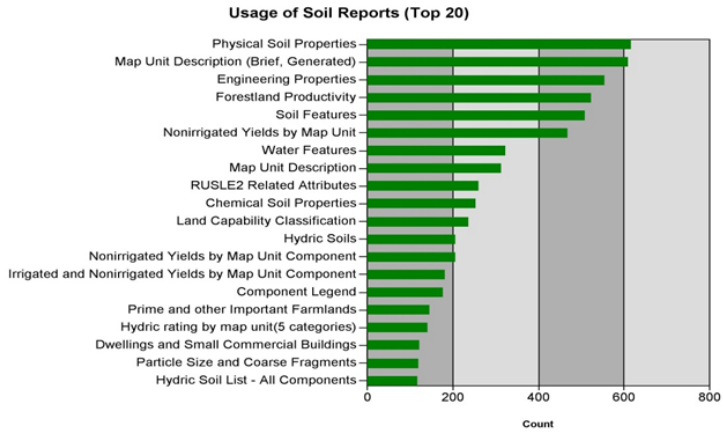
1. **"Set AOI"** (Area of interest) of the entire county. This will allow you to use tabs at the top of WSS to produce interpretive maps based on the reports you select –this option also loads the soil map for viewing which is not available if you choose to select only the tabular data using "Select 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.

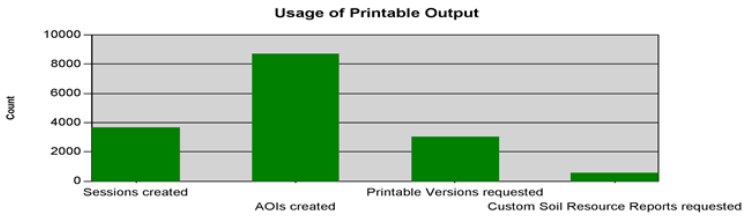


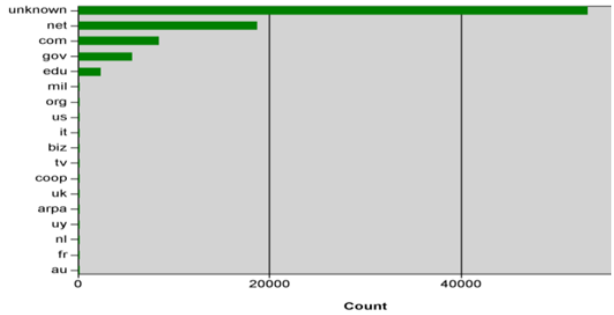
In the interim of this phase of soil survey, new future projects are identified and several changes have occurred for the delivery of some soil information. Some statewide lists, like productivity and yield indices, were populated in eFOTG http://efotg.sc.egov.usda.gov/efotg_locator.aspx for access by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

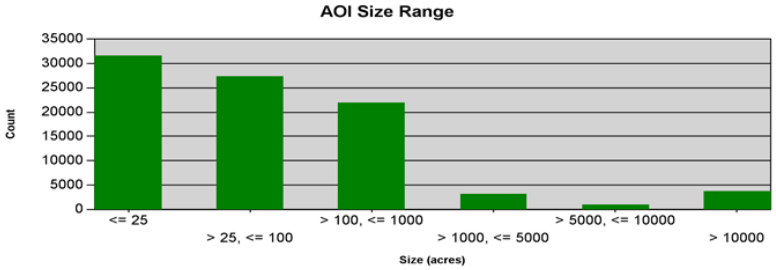
WEB SOIL SURVEY METRICS FY 2014









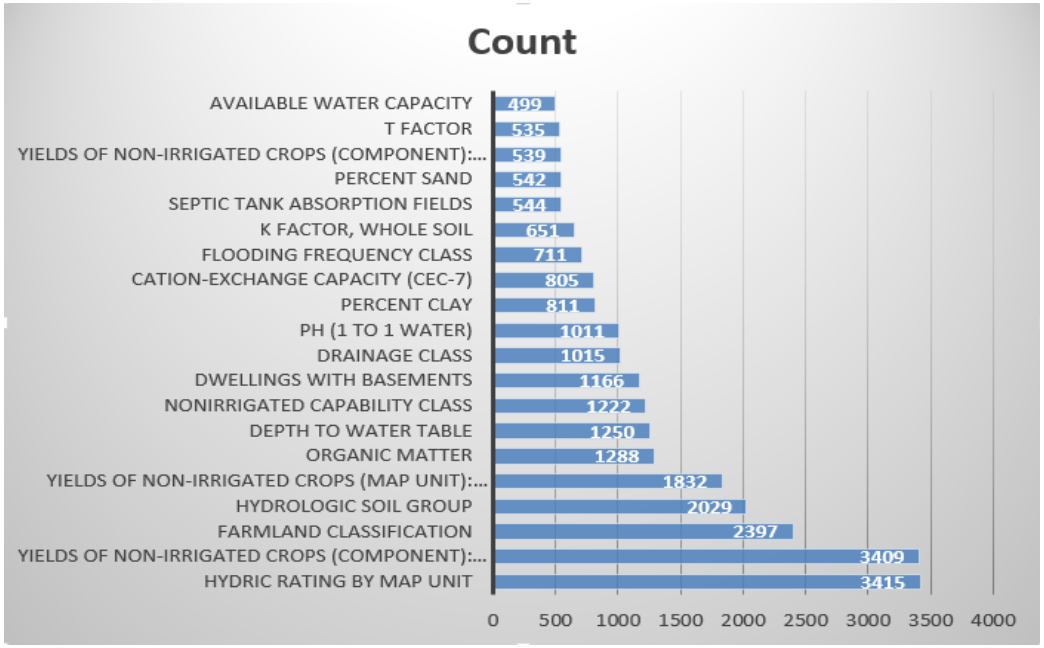


Total Usage of Ratings: **2691**

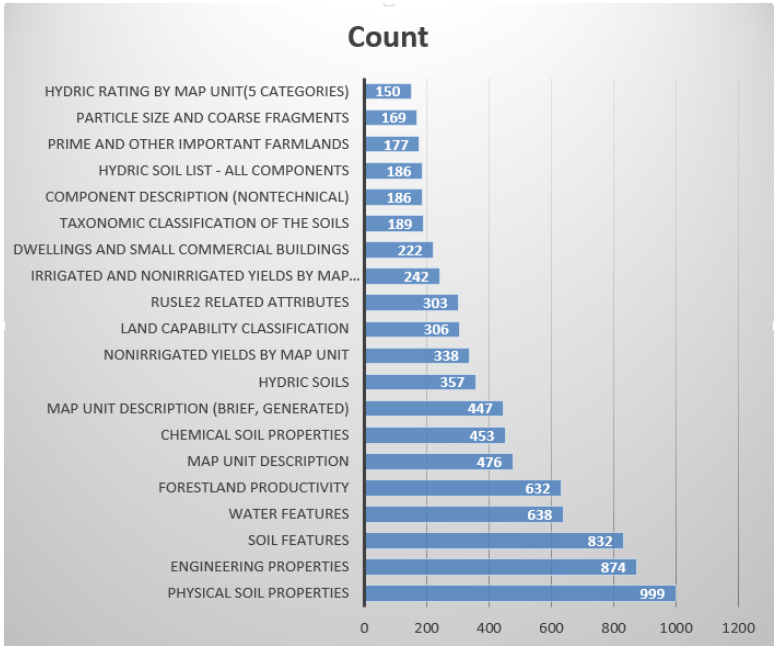
Total AOI's created **89019**
Total Soil Reports: **7041**

WSS METRICS FY 2015 April 30, 2014 to May 1, 2015

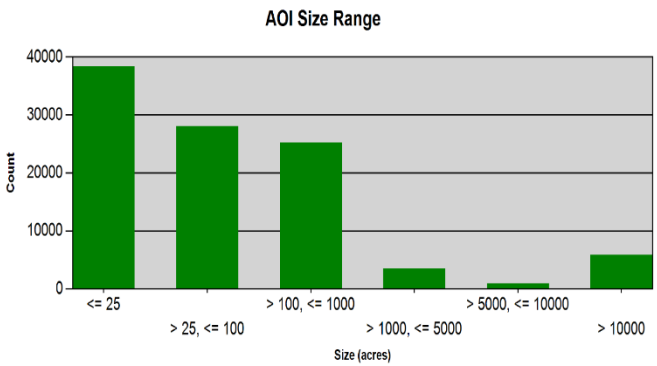
Usage of Ratings

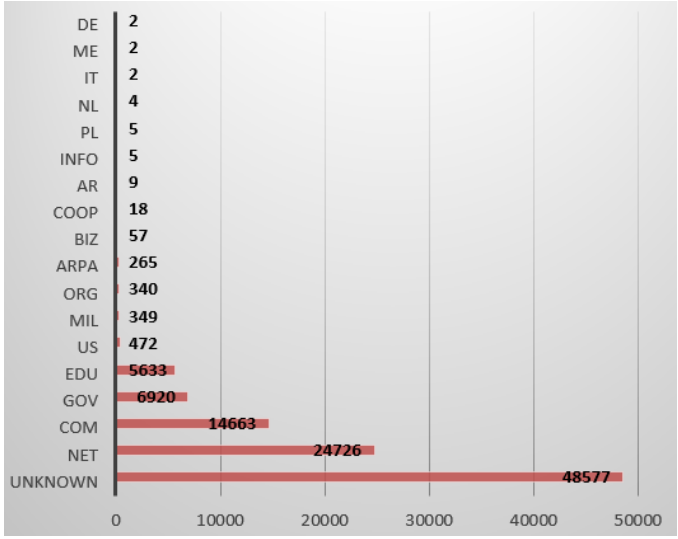


Usage of Soil Reports



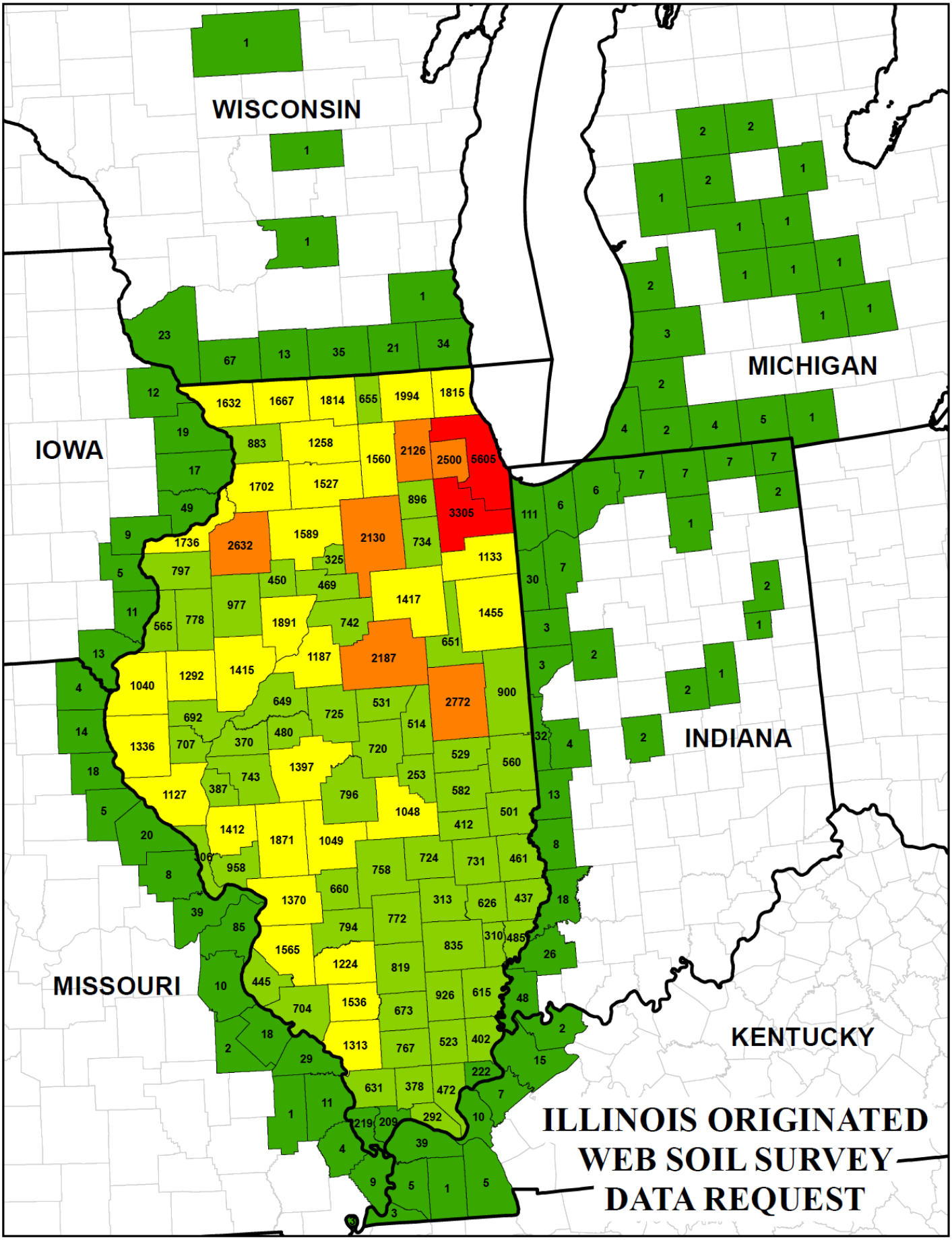
Domains of Origin of Requests





Total Usage of Ratings: **39922**

Total AOI's created **107183**
Total Soil Reports: **9876**


WISCONSIN
MICHIGAN
IOWA
INDIANA
MISSOURI
KENTUCKY
ILLINOIS ORIGINATED
WEB SOIL SURVEY
DATA REQUEST

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

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/limsreport.aspx?report_name=WEB-Masterlist

Masterlist for Management Reports

12-GRR Grand Rapids, Michigan: 11-AUR, 11-SPR, 11-MAN (formerly 11-CAR) Aurora, Springfield, Marion; Illinois: 11-UNI, Union, Missouri: 11-JUE Juneau, Wisconsin: 10-ONA Onalaska, Wisconsin: 7-MIL Milan, Tennessee: 6-OWN Owensboro, Kentucky

TSS reports

You must log into NASIS to run any of the Graphing reports for TSS in the KSSL folder because of mixed content and security issues.

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

State Soil Scientist Reports

Web Soil Survey Metrics This is the web link for the WSS metrics page. Placed here so you will remember to monitor your state metrics.

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 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 eFOTG website.

Project reports

Project Summary Report This is the best report for managers to use in monitoring projects. The report prompts for office or region, using % as a wildcard, and provides nine summary reports.

Project Goals and Progress This report prompts for the FY, office, type of project, and approval. It delivers the list of projects by office, SSRO, and summarizes the Total Goal and Total Reported for those projects delivered in the report. It displays the Region, 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

Ecological Site Projects

Project Goals and Progress This Ecological Site report prompts for the FY, office, type of project, and approval. It delivers the list of projects by office, SSRO, and summarizes the Total Goal and Total Reported for those projects delivered in the report. It displays the Region, 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

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.

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=redoximophic 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

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

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.

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

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. 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.

Captain Mine Plots U of I The Captain Mine and possibly the Denmark truck plots. 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. In addition to pit descriptions we would take soil samples to process.

Farmland Classification, Mine reclaimed lands, Inconsistencies in population

ACTIONS/STRATEGIES

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

Solicit Reports from MLRA and Regional offices for goals, accomplishments relative to SSD, SDJR, Mapping, and ESD Progress. These sections are better prepared and delivered by those doing the work with respect to Illinois and adjacent MLRAs.

2016 Illinois Hosts the Regional Planning Conference
Illinois will host the regional Cooperative Soil Survey Planning Conference. Ideas are being sought. Much planning is needed. Possibility of linking with Illinois Soil Classifiers "Soils of Illinois" Tour. Northern Illinois with potential to be in the DeKalb area??

Technical Users Conference? Would it be a good idea to host a GIS\Technical user's conference for the high end users and GIS specialists? Topics would include data usage, database structure, LIDAR acquisition, Derivatives, tools, modeling, WSS, etc.?—Tie into ILGISA??

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, geology, 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 form ICSS partners.

Landform map based on LIDAR.

Complete at more than one scale: GENERAL SOILS of ILLINOIS MAP

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/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/references/public/IL/Illinois_GIS_Plan_Executive_Summary.docx

Discussions on attrition and maintaining the Soils knowledge base in Agencies and at Universities. Collaboration and ideas. What is needed? What is available? Education and Expertise.

OPPORTUNITIES

USAJOBS! Changes in NRCS Hiring Process! Faster turn-a-round. Shorter term postings!
Re-organization of NRCS Administrative duties has led to National Teams and changes in the hiring processes. Batching of jobs and shortened posting terms are a result. Get resume and materials uploaded into USA JOBS if you are even considering a career with NRCS. The process takes a few hours to complete if all goes well.

2015
International
Year of Soils

http://www.fao.org/soils-2015/en/

The Food and Agriculture Organization (FAO) of the United Nations is heading up efforts along with the Global Soil Partnership http://www.fao.org/globalsoilpartnership/en/ .

Symphony of the Soil http://www.symphonyofthesoil.com/

Cooperative Ecosystem Study Units (CESUs)
The Cooperative Ecosystem Studies Units (CESU) Network is a national consortium of federal agencies, tribes, academic institutions, state and local governments, nongovernmental conservation organizations, and other partners working together to support informed public trust resource stewardship. 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.

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

NEON http://www.neoninc.org/ The National Ecological Observatory Network is a continental-scale observation system for examining ecological change over time.

NEON, funded by NSF, is a long term research project designed to allow the scientific community to address the major areas in environmental sciences, especially those aspects for which a coordinated national program of standardized observations and experiments is particularly effective.

Specific areas of interest for the project are factors that cause ecosystem change (climate change, land use change, and invasive species) and parameters that respond to change (biodiversity, biogeochemistry, ecohydrology, and infectious diseases).

The goals of NEON are to:
- Enable understanding and forecasting of the impacts of climate change, land use change, and invasive species on aspects of continental-scale ecology such as biodiversity, biogeochemistry, infectious diseases, and ecohydrology
- Enable society and the scientific community to use ecological information and forecasts to understand and effectively address critical ecological questions and issues
- Provide physical and information infrastructure to support research, education, and land management.

Soils will be described and sampled to 1 m for NEON. However, SSD is encouraging field staff to use these plots as needed to enhance field projects if at all possible. Sampling to 2 m may be desirable in those situations.

Conservation Initiative Grants (CIG) NRCS provides funding opportunities 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/

FY2014 Awardees: **http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/office/ssr8/?cid=stelprdb1260847**

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.

Nationwide, there were 33 proposals sent in to the national team for review. Illinois had 4 entries. There were no selections made from Illinois. All were well written.

RCPP: Regional Conservation Partnership Program
The Regional Conservation Partnership Program (RCPP) promotes coordination between NRCS and its partners to deliver conservation assistance to producers and landowners. NRCS provides assistance to producers through partnership agreements and through program contracts or easement agreements.

RCPP combines the authorities of four former conservation programs – the Agricultural Water Enhancement Program, the Chesapeake Bay Watershed Program, the Cooperative Conservation Partnership Initiative and the Great Lakes Basin Program. Assistance is delivered in accordance with the rules of EQIP, CSP, ACEP and HFRP; and in certain areas the Watershed Operations and Flood Prevention Program.
http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/farmbill/rcpp/

USDA Now Accepting 2016 RCPP Proposals

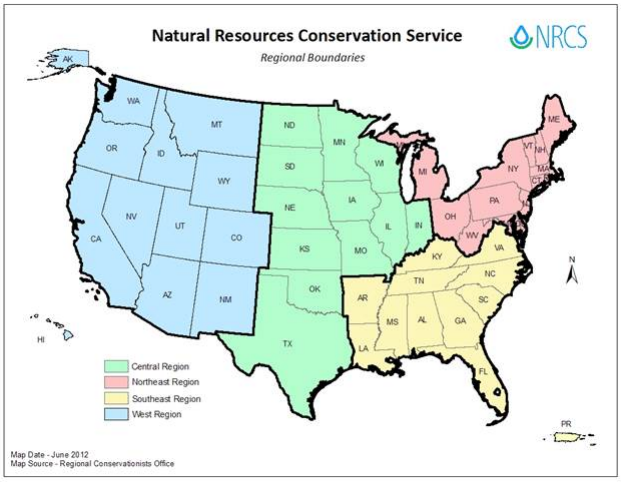
Farm Progress Show: September 1 through September 3, 2015. Decatur, IL. See you in the pit!

Illinois Soil Classifiers Association: www.illinoissoils.org

Volunteers Needed:
Opportunities exist at the NRCS state office.

- Currently we have archival scanning of documents and slides**.**
- Potential for presentation of NRCS soil materials to classrooms?
- Assistance with GIS programming (PYTHON, SQL,?)

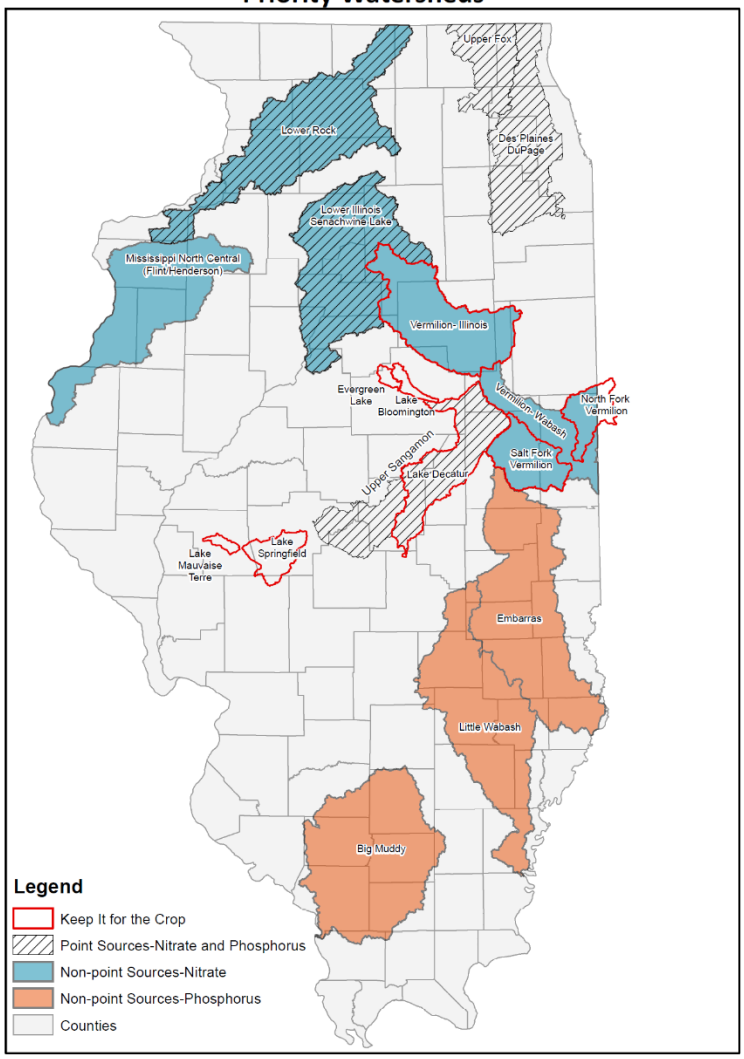
Map of NRCS Regions

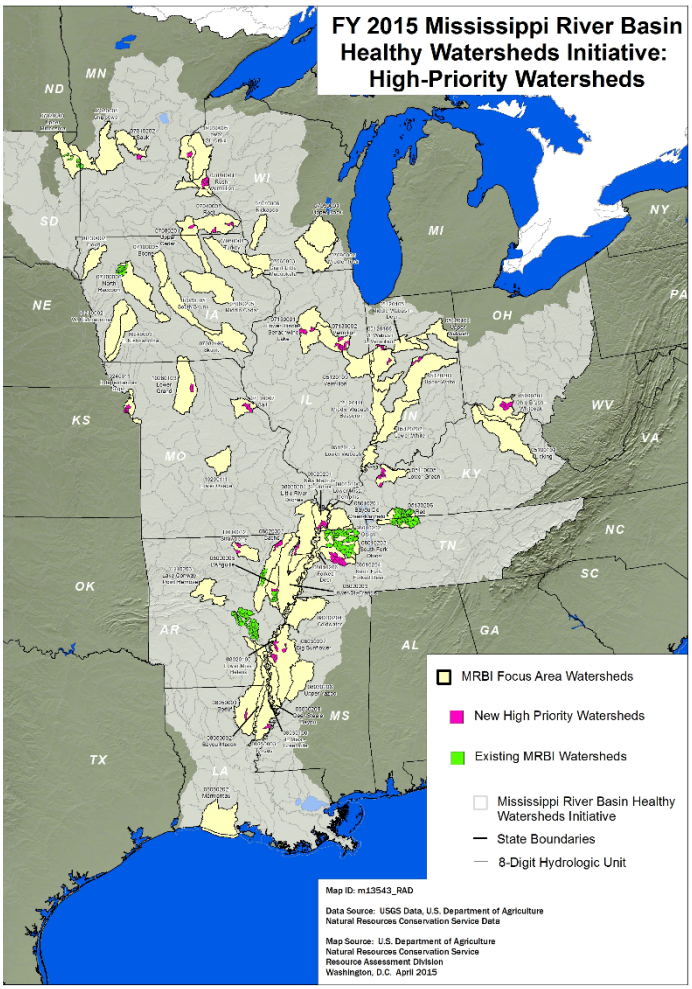


Illinois Nutrient Loss Reduction Strategy Priority Watersheds

"FY 2015 Mississippi River Basin Healthy Watersheds Initiative (MRBI): High-Priority Watersheds"
Data and Maps: The revised map can be found in the following link: http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/initiatives/?cid=stelprdb1048200 . RAD GIS Lab staff continue work with Meghan Wilson, the MRBI Initiatives Coordinator, on finalizing the FY2015 MRBI map, showing changes in focus areas and providing background data for these areas.

Illinois Nutrient Loss Reduction Strategy Priority Watersheds





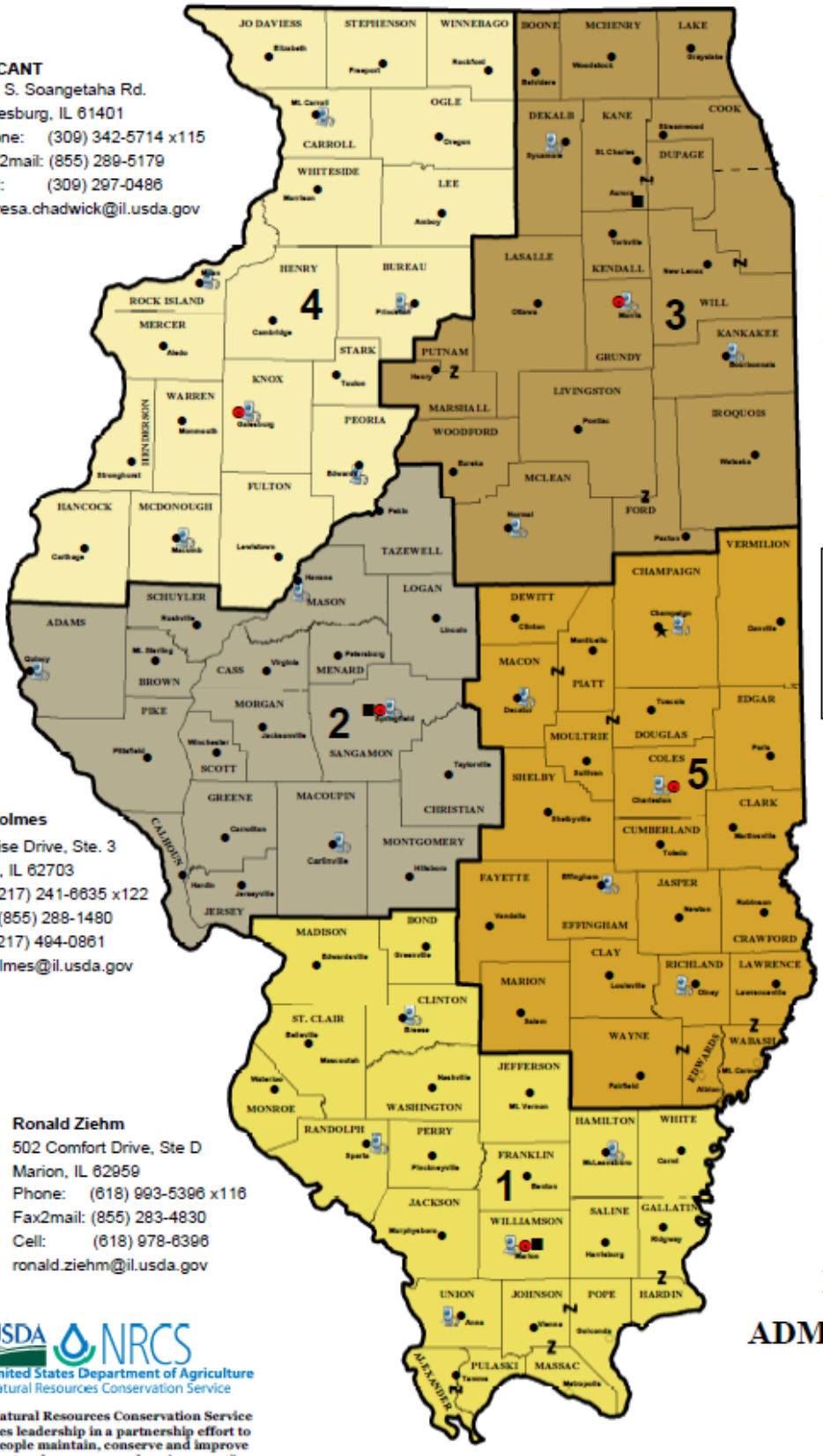
VACANT
233 S. Soangetaha Rd.
Galesburg, IL 61401
Phone: (309) 342-5714 x115
Fax2mail: (855) 289-5179
Cell: (309) 297-0486
theresa.chadwick@il.usda.gov

Theresa Chadwick
3605 North IL Route 47, Ste C
Morris IL 60450
Phone: (815) 942-0359 x120
Fax2mail: (855) 288-1478
Cell: (309) 297-0486
theresa.chadwick@il.usda.gov

Annette Holmes
2623 Sunrise Drive, Ste. 3
Springfield, IL 62703
Phone: (217) 241-6635 x122
Fax2mail: (855) 288-1480
Cell: (217) 494-0861
annette.holmes@il.usda.gov

VACANT
6021 Development Drive, Ste 3
Charleston, IL 61920
Phone: (217) 345-3901 x118
Fax2mail: (855) 486-1388
Cell: (217) 621-5421
angela.biggs@il.usda.gov

Ronald Ziehm
502 Comfort Drive, Ste D
Marion, IL 62959
Phone: (618) 993-5396 x116
Fax2mail: (855) 283-4830
Cell: (618) 978-6396
ronald.ziehm@il.usda.gov



ILLINOIS ADMINISTRATIVE AREAS

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"The Natural Resources Conservation Service provides leadership in a partnership effort to help people maintain, conserve and improve our natural resources and environment"

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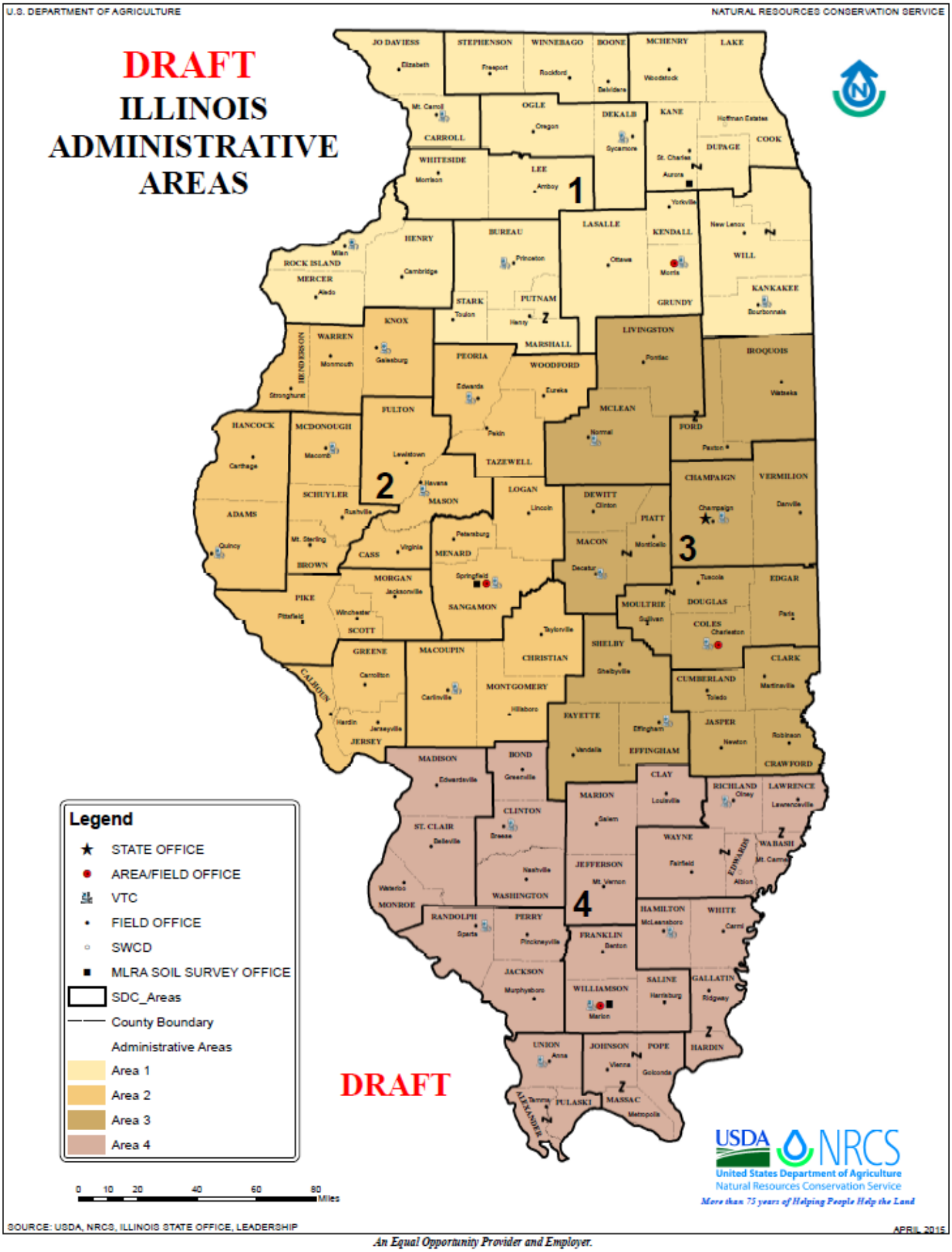

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VACANT
Resource Soil Scientist
3020 E. First Avenue
Milan, Illinois 61264
Ph: 309.764.1486 ext 114
Cel: 815.243.0995
Fax2mail: 855.289.5179

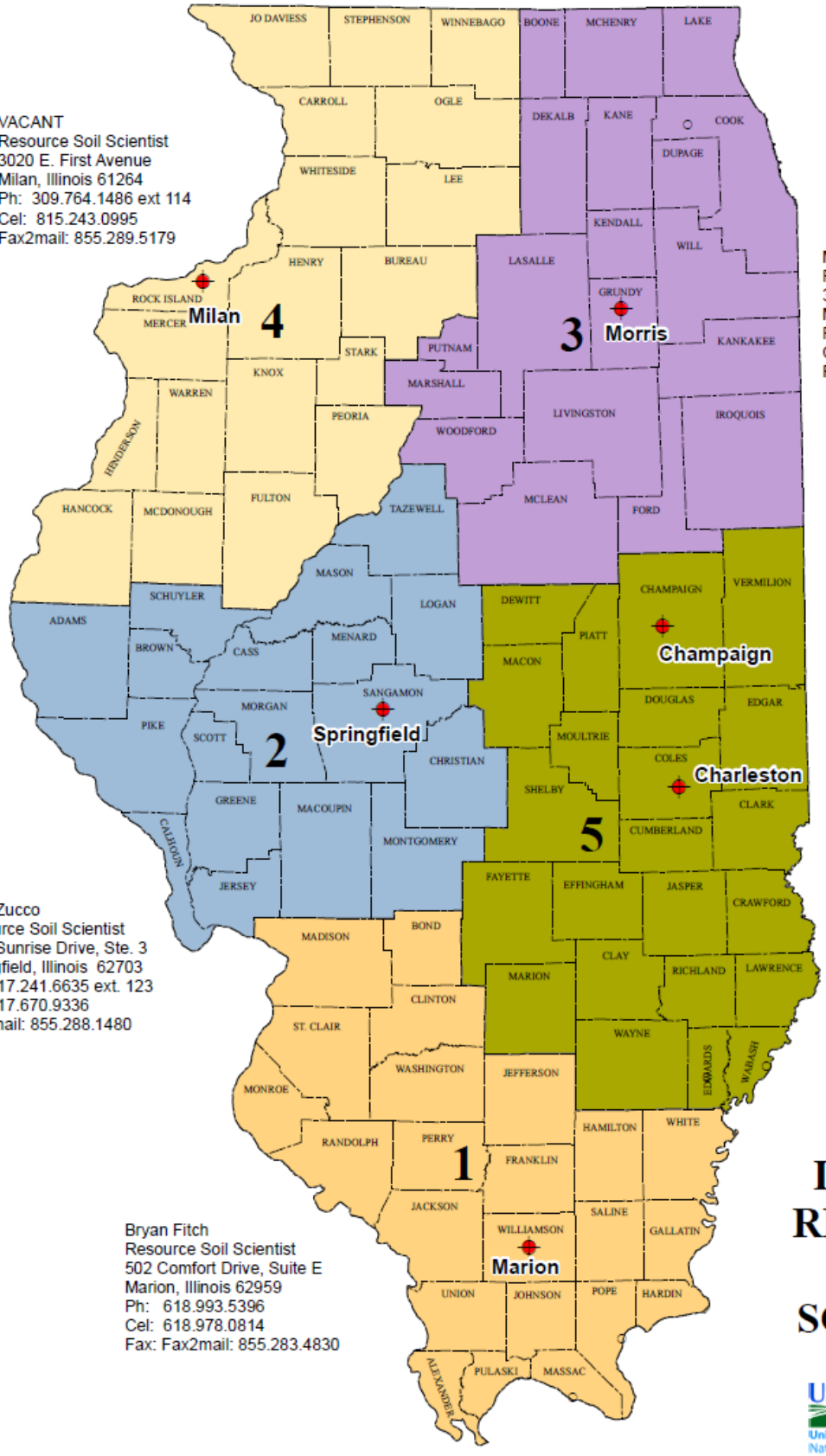
Mark Bramstedt
Resource Soil Scientist
3605 N. IL. Route 47, Suite C
Morris, Illinois 60450
Ph: 815.942.0359 ext. 106
Cel: 815.351.7845
Fax2mail: 855.288.1478

Roger Windhorn
Resource Soil Scientist/Geologist
2118 W. Park Court
Champaign, Illinois 61821
Ph: 217.353.6634
Cel: 217.841.3816
Voicemail: 6634
Fax2mail: 855.668.0601

Troy Fehrenbacher
Resource Soil Scientist
6021 Development Drive
Charleston, Illinois 61920
Ph: 217.345.3901 ext. 5
Cel: 217.621.8881
Fax2mail: 855.486.1388

Marc Zucco
Resource Soil Scientist
2623 Sunrise Drive, Ste. 3
Springfield, Illinois 62703
Ph: 217.241.6635 ext. 123
Cel: 217.670.9336
Fax2mail: 855.288.1480

Bryan Fitch
Resource Soil Scientist
502 Comfort Drive, Suite E
Marion, Illinois 62959
Ph: 618.993.5396
Cel: 618.978.0814
Fax: Fax2mail: 855.283.4830



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VACANT
Resource Soil Scientist
3020 E. First Avenue
Milan, Illinois 61264
Ph: 309.764.1486 ext 114
Cel: 815.243.0995
Fax2mail: 855.289.5179

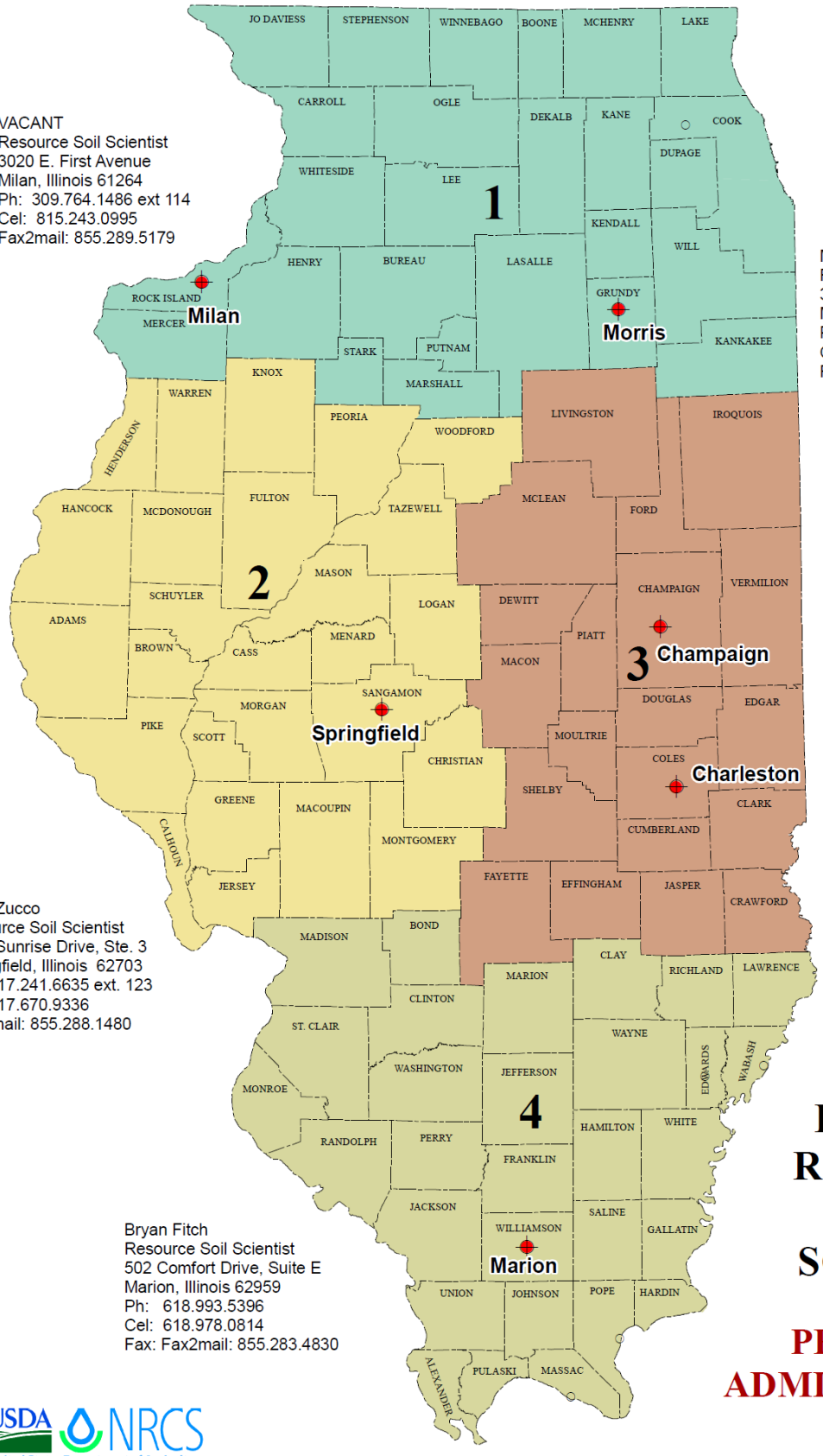
Mark Bramstedt
Resource Soil Scientist
3605 N. IL. Route 47, Suite C
Morris, Illinois 60450
Ph: 815.942.0359 ext. 106
Cel: 815.351.7845
Fax2mail: 855.288.1478

Roger Windhorn
Resource Soil Scientist/Geologist
2118 W. Park Court
Champaign, Illinois 61821
Ph: 217.353.6634
Cel: 217.841.3816
Voicemail: 6634
Fax2mail: 855.668.0601

Troy Fehrenbacher
Resource Soil Scientist
6021 Development Drive
Charleston, Illinois 61920
Ph: 217.345.3901 ext. 5
Cel: 217.621.8881
Fax2mail: 855.486.1388

Marc Zucco
Resource Soil Scientist
2623 Sunrise Drive, Ste. 3
Springfield, Illinois 62703
Ph: 217.241.6635 ext. 123
Cel: 217.670.9336
Fax2mail: 855.288.1480

Bryan Fitch
Resource Soil Scientist
502 Comfort Drive, Suite E
Marion, Illinois 62959
Ph: 618.993.5396
Cel: 618.978.0814
Fax: Fax2mail: 855.283.4830



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