

# Soil Business Area Analysis Group (SBAAG)

Southern Regional Cooperative  
Soil Survey Conference

July 15, 2008

Sharon W. Waltman, USDA-NRCS (Acting SBAAG Chair)  
National Geospatial Development Center  
Morgantown, WV

# Soil Business Area Analysis Group (SBAAG)

The function of the Soil Business Area Analysis Group (SBAAG) is to act as a forum to analyze and facilitate the integration of new soil survey technical and operational processes.

This includes helping to analyze the coordination among the National Centers and NCSS partners in order to assure that research, development, and delivery of soil survey products and services follow an overall system plan.

SBAAG's principal goal is improving the quality, the delivery of soil information, and the process by which that information is collected, managed, and presented.

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

# SBAAG Organization

## Executive Sponsor

**Micheal Golden, Director, Soil Survey Division, NRCS,  
Washington, DC**

## Rotating Members

**Jon Hempel, SBAAG Chair**

**Director, National Geospatial Development Center, Morgantown, WV**

**Dennis Williamson, Assistant State Soil Scientist, NRCS,  
Temple TX**

**Kit Paris, Soil Data Quality Specialist, Davis, CA**

**Charles Love, MO Leader, State Soil Scientist, Auburn, AL**

# Current SBAAG Members

## Liaisons

**Dorn Egley, Programmer, ITC, NRCS, Ft Collins, CO**

**Sam Brown, Soil Scientist, NCGC, NRCS, Ft. Worth, TX**

**Henry Ferguson, Soil Scientist, NGDC, NRCS, Morgantown, WV**

**Sharon Waltman, Soil Scientist, NGDC, NRCS, Morgantown, WV  
(Deputy SBAAG Chair)**

**Jim Fortner, Soil Scientist, NSSC, NRCS, Lincoln, NE**

**Darrell Kautz, Natural Resource Specialist, NGDC, NRCS,  
Morgantown, WV**

**Alan Price, Soil Scientist, NSSC, NRCS, Ft. Collins, CO**

# Current Members of SBAAG

## Ad Hoc Advisory Members

**Frank Geter, Project Manager, ITC, NRCS, Ft. Collins, CO**

**Dennis Lytle, Operations Branch Chief, ITC, NRCS, Ft. Collins, CO**

**Curtis Talbot, Rangeland Management Specialist, NSSC, NRCS,  
Lincoln, NE**

**David Lightle, Agronomist, NSSC, NRCS, Lincoln, NE**

**Dorsey Plunk, Physical Scientist, NRCS, Ft. Worth, TX**

**Pete Biggam, National Park Service**

**Bill Ypsilantis, Bureau of Land Management**

# Current Members of SBAAG

## Advisors

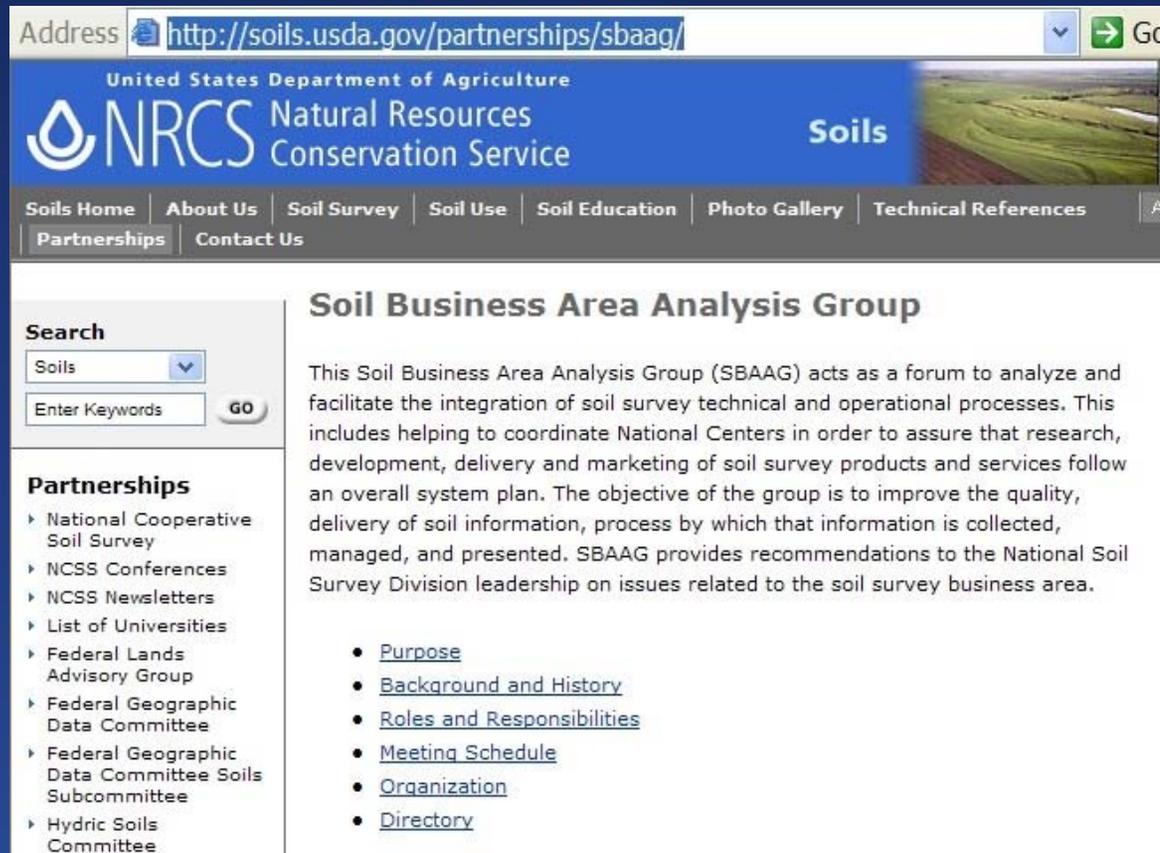
**Vacant , Director & CIO, Information Technology  
Division, NRCS, Beltsville, MD**

**Robert Ahrens, Director, NSSC, NRCS, Lincoln, NE**

**Christopher Smith, National Leader, Technical  
Services, NHQ, NRCS, Washington, DC**

# SBAAG Communications Public web site

<http://soils.usda.gov/partnerships/sbaag/>



The screenshot shows a web browser window with the address bar containing <http://soils.usda.gov/partnerships/sbaag/>. The page header features the USDA and NRCS logos, the text "United States Department of Agriculture Natural Resources Conservation Service", and a "Soils" link next to a landscape image. A navigation menu includes "Soils Home", "About Us", "Soil Survey", "Soil Use", "Soil Education", "Photo Gallery", "Technical References", "Partnerships", and "Contact Us".

**Search**

Soils [v]  
Enter Keywords [GO]

**Partnerships**

- ▶ National Cooperative Soil Survey
- ▶ NCSS Conferences
- ▶ NCSS Newsletters
- ▶ List of Universities
- ▶ Federal Lands Advisory Group
- ▶ Federal Geographic Data Committee
- ▶ Federal Geographic Data Committee Soils Subcommittee
- ▶ Hydric Soils Committee

### Soil Business Area Analysis Group

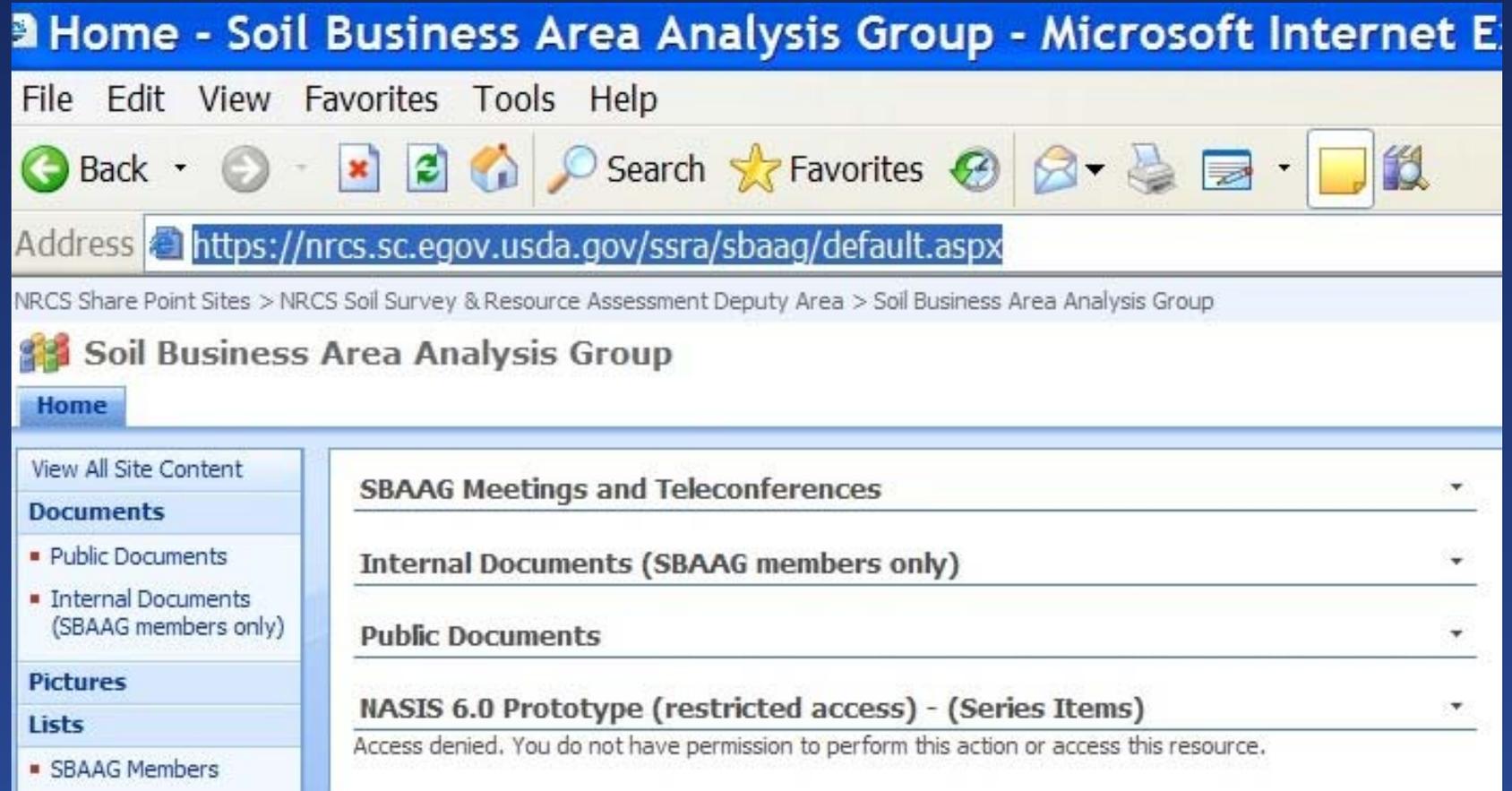
This Soil Business Area Analysis Group (SBAAG) acts as a forum to analyze and facilitate the integration of soil survey technical and operational processes. This includes helping to coordinate National Centers in order to assure that research, development, delivery and marketing of soil survey products and services follow an overall system plan. The objective of the group is to improve the quality, delivery of soil information, process by which that information is collected, managed, and presented. SBAAG provides recommendations to the National Soil Survey Division leadership on issues related to the soil survey business area.

- [Purpose](#)
- [Background and History](#)
- [Roles and Responsibilities](#)
- [Meeting Schedule](#)
- [Organization](#)
- [Directory](#)

# SBAAG Communications

## New SharePoint Site

<https://nracs.sc.egov.usda.gov/ssra/sbaag/default.aspx>



Home - Soil Business Area Analysis Group - Microsoft Internet E...

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Recycle Mail Print Taskbar

Address <https://nracs.sc.egov.usda.gov/ssra/sbaag/default.aspx>

NRCS Share Point Sites > NRCS Soil Survey & Resource Assessment Deputy Area > Soil Business Area Analysis Group

### Soil Business Area Analysis Group

Home

View All Site Content

**Documents**

- Public Documents
- Internal Documents (SBAAG members only)

**Pictures**

**Lists**

- SBAAG Members

**SBAAG Meetings and Teleconferences**

**Internal Documents (SBAAG members only)**

**Public Documents**

**NASIS 6.0 Prototype (restricted access) - (Series Items)**

Access denied. You do not have permission to perform this action or access this resource.

## **Recent/Upcoming Meetings:**

**Raleigh North Carolina 10/23/-25/2007**

**Tucson Arizona 3/25-27/2008**

**To Be Determined 9/2008**

# Active Ad hoc Teams

**National Soil Geospatial Database**

**Topology and Edit Work Flow (new 4/2008)**

**Soil Survey Schedule**

**Content Management**

**Cooperator Laboratory Data**

**Digital Soil Mapping**

**Dynamic Soil Properties**

**Delivering National and Regional SSURGO datasets**

# National Soil Geospatial Database with Check Out/Check In function

Members: Sharon Waltman (Leader), Jennifer Sweet, Paul Fukuhara, Darrell Kautz, Dwain Daniels, Tony Kimmet, Steve Peaslee, Amanda Moore, Dan MacDonald (Vistronix) [Fred Minzenmayer, Iris Porta, Rob Vreeland – former members]

## Business Requirements

## Transactional-National Soil Geospatial Database (Transact-NSGD)

USDA-Natural Resources Conservation Service  
Soil Survey Division

April 2008

Geospatial Data Aggregation or "Scaling" Requirement

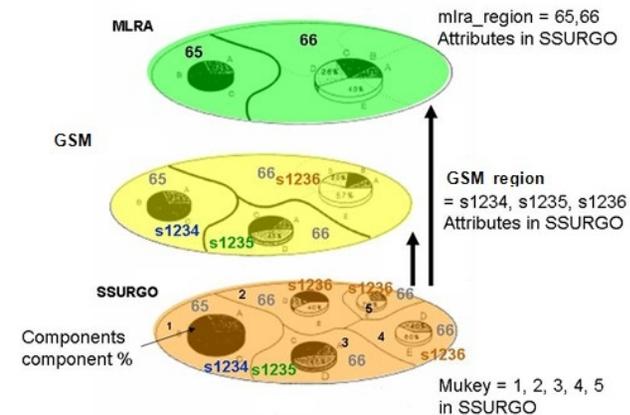


Figure 1. Geospatial Data Aggregation or "Scaling" Requirement, updated from 1993 NASIS DRS document.

File Edit View Insert Selection Tools Window Help

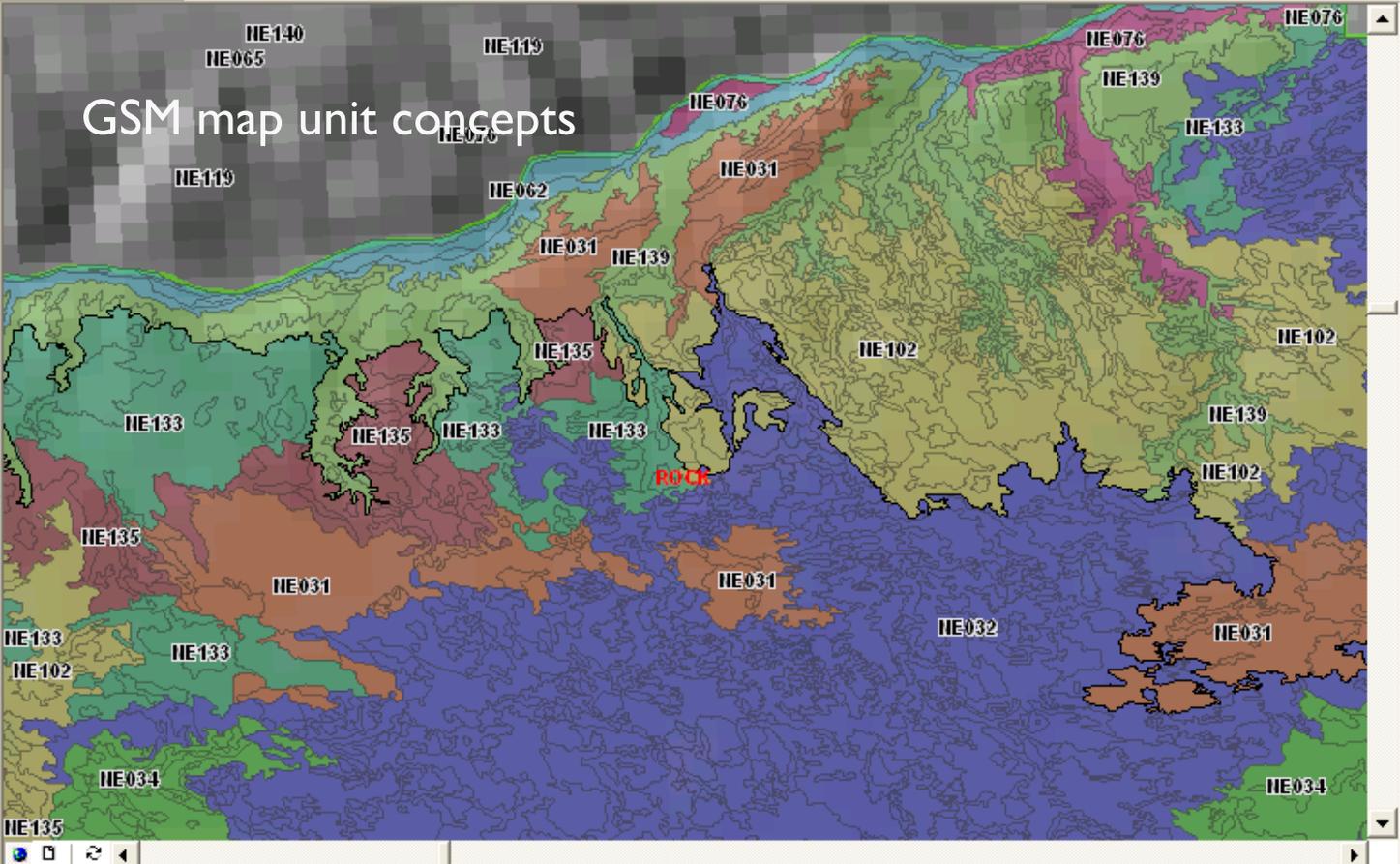
Spatial Analyst Layer: us\_hillshade

Geostatistical Analyst 3D Analyst Layer: us\_hillshade

Editor Task: Create New Feature Target:

1:192,170

- state100\_wrd polygon
- ne149\_a\_alb83 polygon
- ne149\_a\_alb83 polygon
  - <all other values>
  - MLRA\_REG\_SYMBOL
  - 638
  - 65
  - 66
- ne149\_a\_polygon\_sdm\_ssi
  - <all other values>
  - muaoverlap\_ne149.LA
  - 12281
  - 12282
  - 12283
- us48mualb83 polygon
- ne149\_a\_alb83 polygon
  - <all other values>
  - MUID
  - NE031
  - NE032
  - NE034
  - NE062

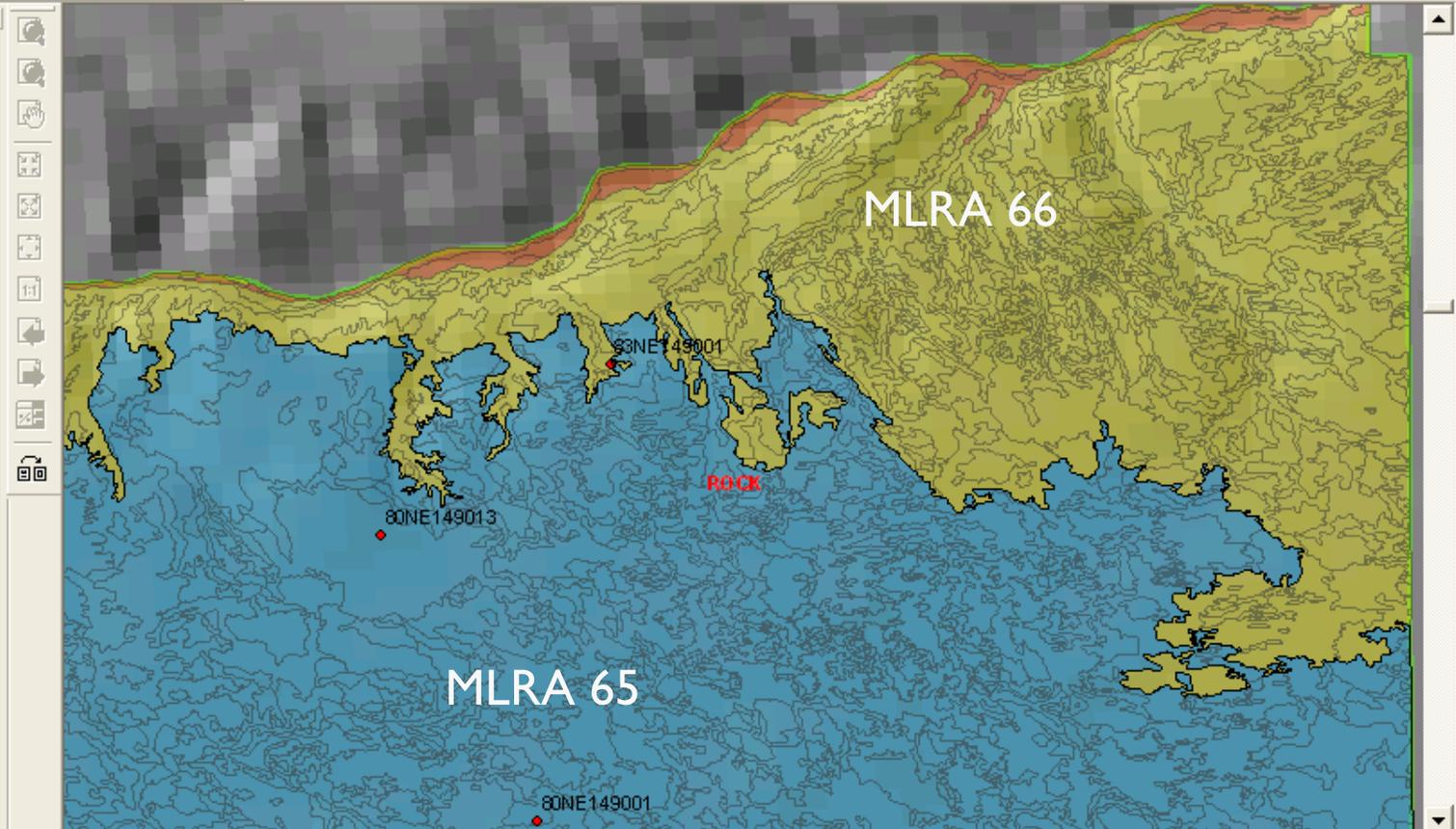


GSM map unit concepts

Drawing Arial 10 B I U

99°33'14.87"W 42°39'0.83"N

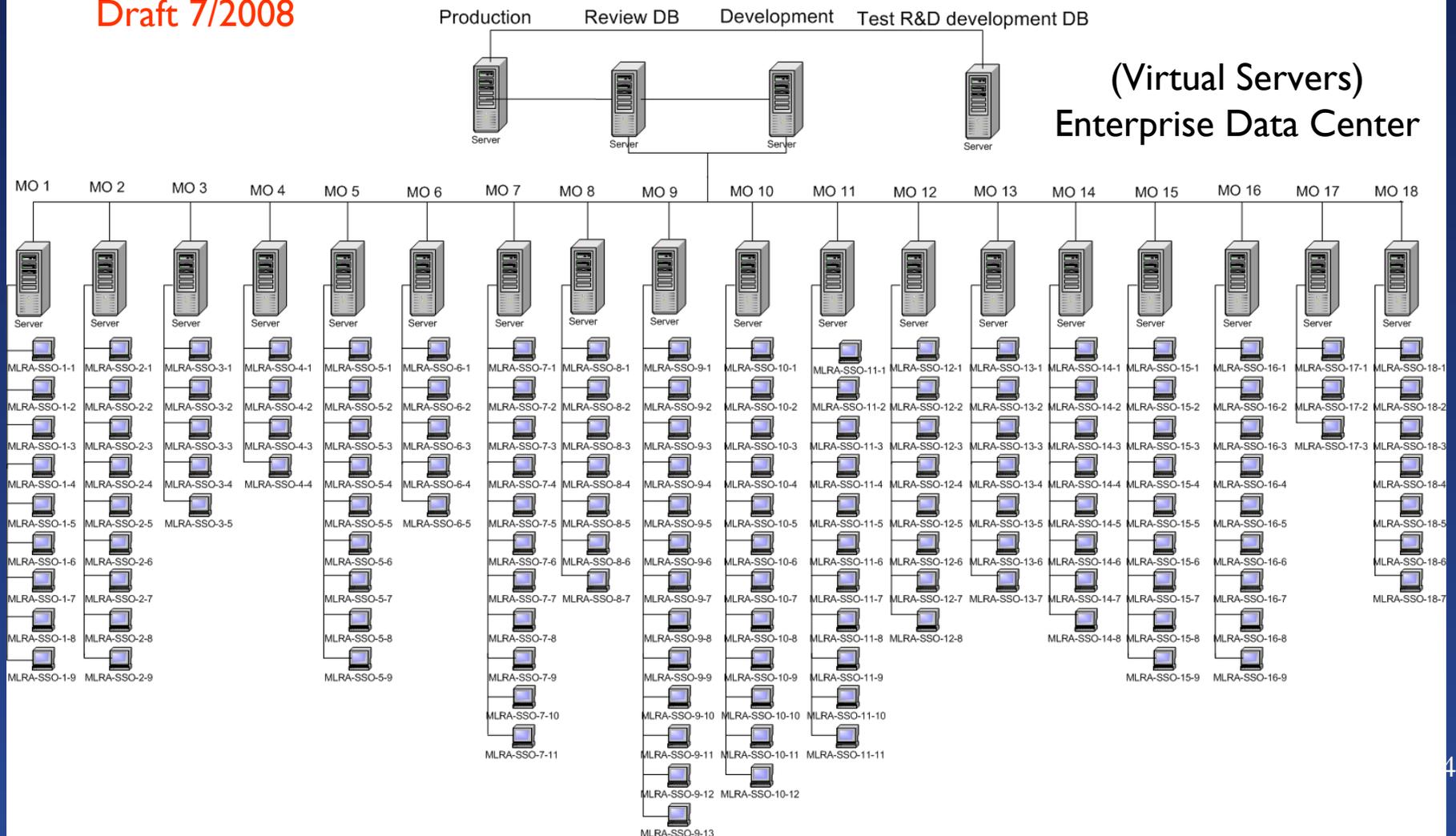
- Layers
  - cra\_nat\_us48 polygon
  - rock\_ne\_mlra\_reg\_65\_dis
  - Buffer\_of\_rock\_ne\_mlra\_r
  - rock\_ne\_mlra\_reg\_65
  - Buffer\_of\_mlra\_reg\_72
  - mlra\_reg\_72
  - Buffer\_of\_mlra\_reg\_65\_2
  - mlra\_reg\_65
  - SSLpedons
  - state100\_wrd polygon
  - ne149\_a\_alb83 polygon
  - ne149\_a\_alb83 polygon
  - <all other values>
  - MLRA\_REG\_SYMBOL



# National Soil Geospatial Database – Basic Architecture

Draft 7/2008

## Transactional-National Soil Geospatial Database (Transact-NSGD)



## Topology and Edit Work Flow (new 4/2008)

**Members: Sam Brown (Leader), Jon Gerken, Jennifer Sweet, Dennis Williamson, Caryl Radatz, Darrell Kautz, and Sharon Waltman**

National Soil Geospatial Database & Check Out / Check In > Documents > Topology and Edit Work Flow Team - SBAAG AdHoc Team

### Documents

This document library helps the site owner and members maintain a directory of technical documents.

New ▾ | Upload ▾ | Actions ▾

View: **Summary View** ▾

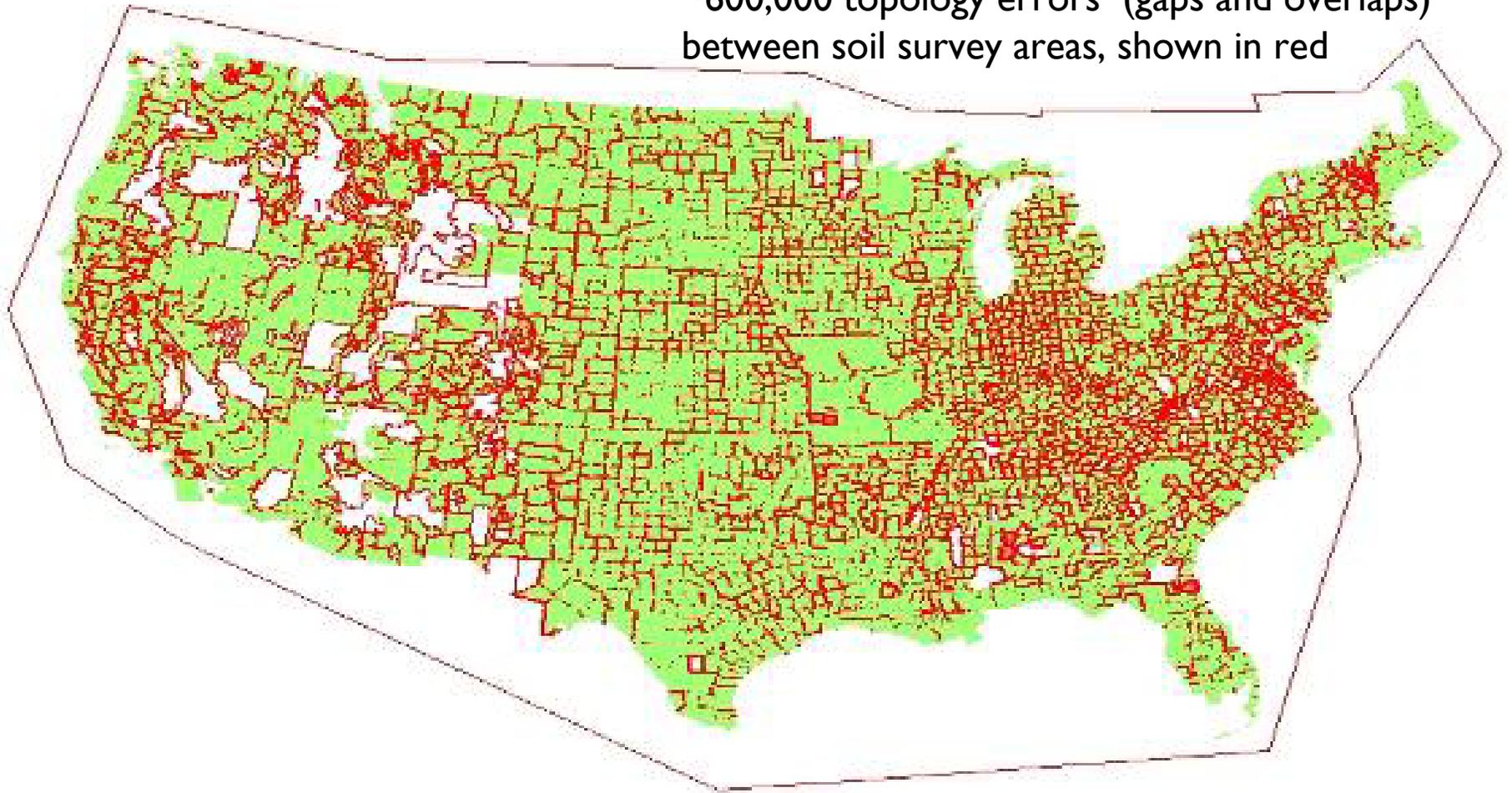
Type	Name	Author	Subject	Modified	Status	Checked Out To
	Minutes			6/5/2008 10:50 AM		
	Extent of MLRA SSA Edit Responsibility - Proposals			4/18/2008 12:01 PM		
	Work Flow			4/28/2008 11:40 AM		
	Project Plan			4/28/2008 1:45 PM		
	Team Charges and Tasks			4/29/2008 8:08 AM		
	Precursor transact-NSGD (NNA) NCGC Architecture			5/14/2008 9:55 AM		
	Business Process Models			5/16/2008 8:34 AM		
	Transactional Database Log			5/22/2008 10:42 AM		
	Design and Testing Document			6/18/2008 10:17 AM		
	New Definitions of Terms used in transact-NSGD			6/10/2008 7:14 PM		
	Pilot Test Sites			6/20/2008 1:18 PM		
	NASIS 6.0			7/8/2008 10:44 AM		

## Topology and Edit Work Flow (new 4/2008)

Team Charge: Determine a logical and effective means of repairing Topology and using the Check Out/Check In function (ArcGIS 9.2 SDE SQL Server 2005) to create and begin the use of a transactional-NSGD (no NASIS attributes, yet) by soil survey staff using the MLRA Approach by FY2010 Q2. This important task will lay the foundation for the geospatial integration of NASIS (beyond NASIS 6.0).

## Topology and Edit Work Flow (new 4/2008)

~600,000 topology errors (gaps and overlaps)  
between soil survey areas, shown in red



## Topology and Edit Work Flow (new 4/2008)

### Spatial Data Standard for the National Soil Geospatial Database

Prepared for:  
Michael L. Golden, Director  
Soil Survey Division, NRCS, USDA  
Washington, DC

Prepared by:  
Jennifer Sweet, Soil Scientist  
and  
Richard Crabtree, Cartographer  
National Cartography and Geospatial Center, NRCS, USDA  
Fort Worth, Texas

Topology Edit Work Flow Review DRAFT 7/2008

Document Version: 2.1

Date: May 13, 2008

Albers Equal Area Projection (USGS)

(4) Land Areas

- Conterminous US (PR/USVI)

- Alaska (Alaska Albers)

(NAD83 datum GRS80 spheroid)

- Hawaii and American Samoa

- Remaining Pacific Islands

(WGS84 datum WGS84 spheroid

Or HARN to be determined)

ArcSDE 9.2 High Precision

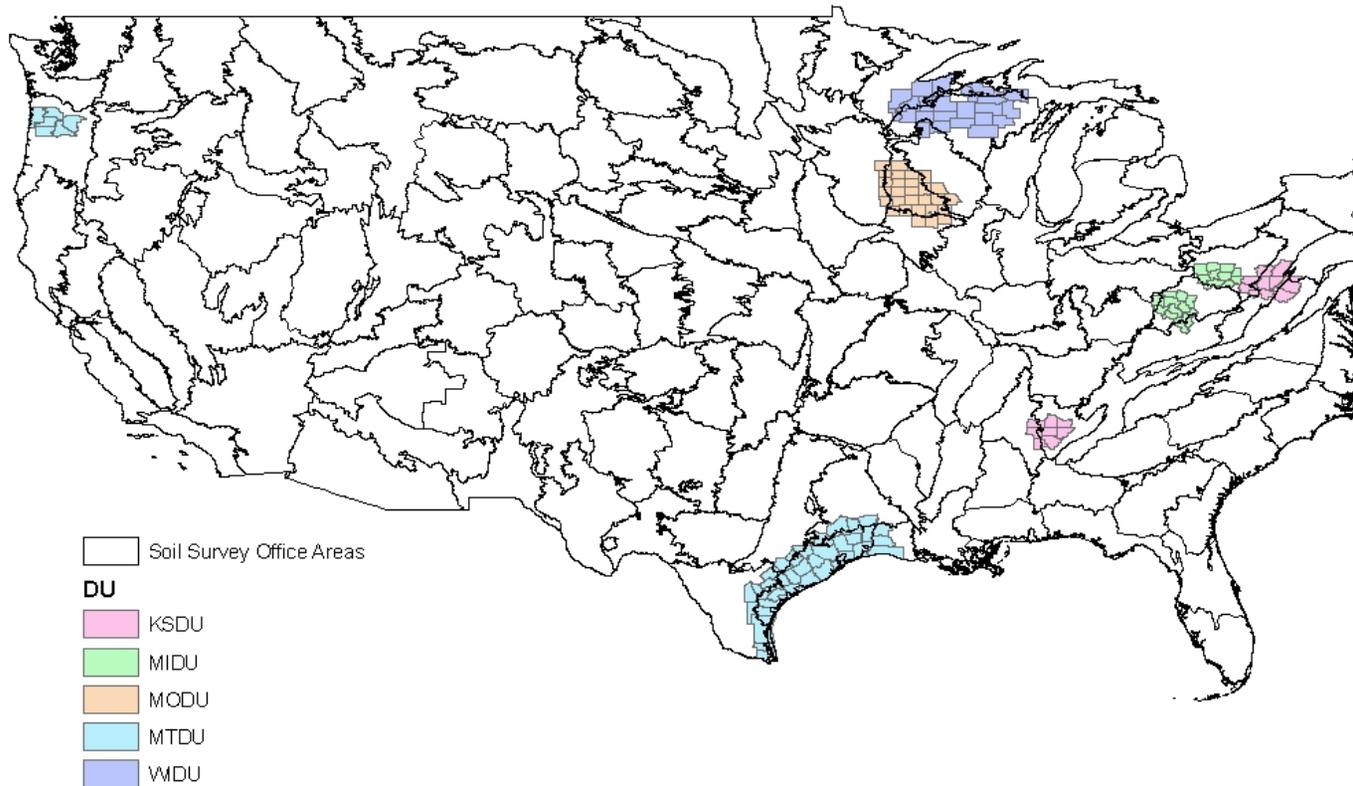
- X,Y tolerance .001 m

- X,Y resolution .0001 m

- Topology Object tolerance .1 m

## Topology and Edit Work Flow (new 4/2008)

DU Assignments for NSGD Pilot Topology Repair  
July 2008



## Soil Survey Schedule

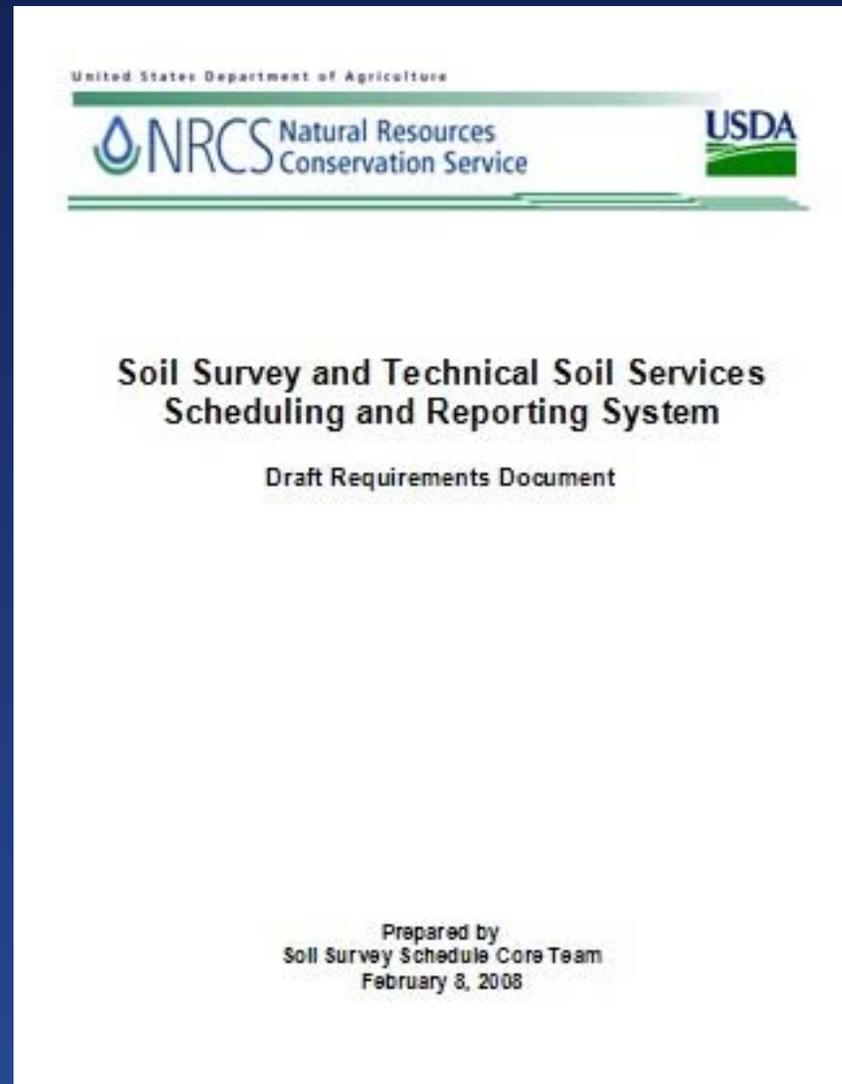
### Soil Survey Schedule Team Members

Ad-hoc team members

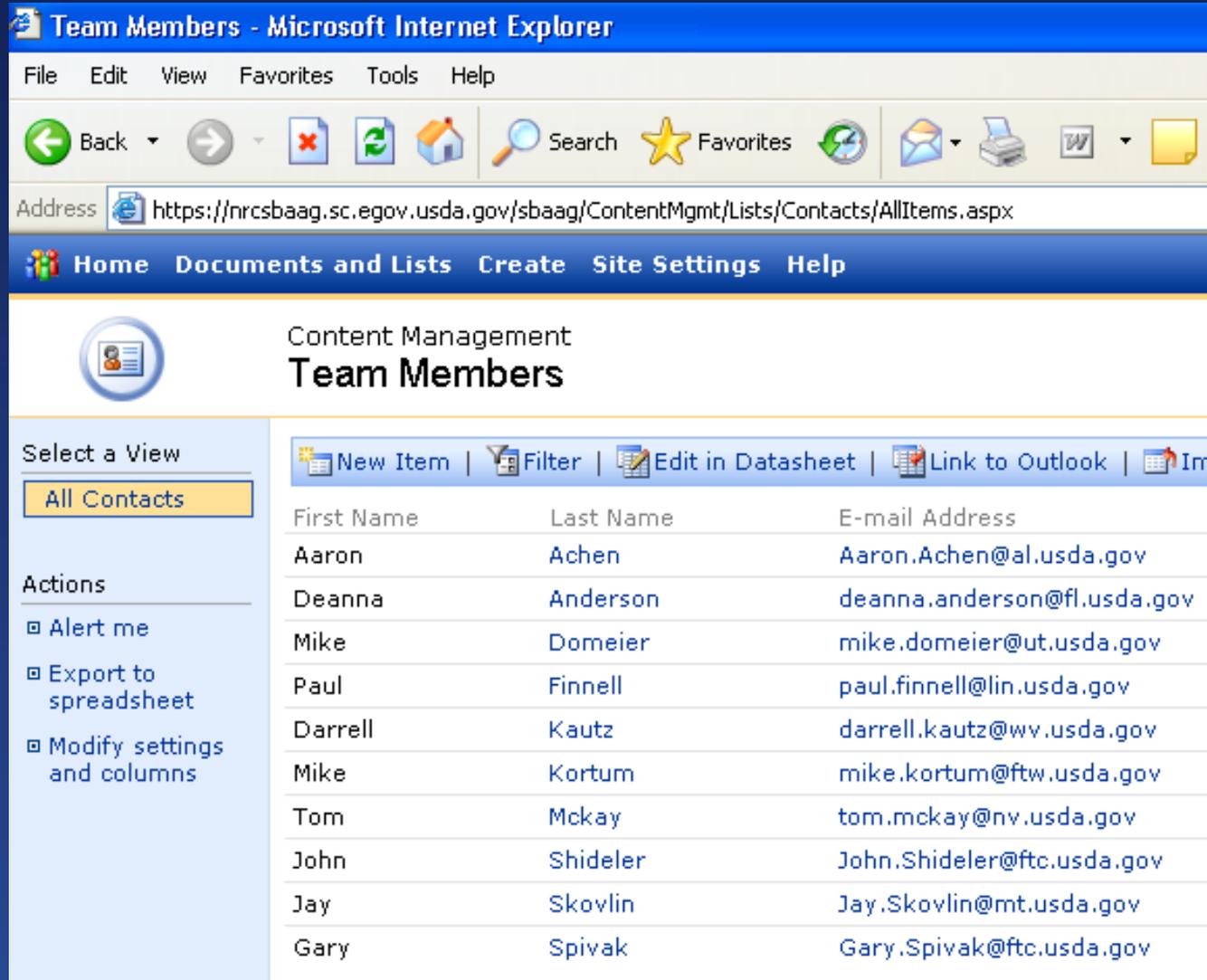
 New Item |  Filter |  Edit in Datasheet |  Link to Outlook

First Name	Last Name
Shawn	Finn
Jim	Fortner
Jon	Gerken
Cameron	Loerch
Charles	Love
Chad	McGrath
Dennis	Potter
ChristopherW	Smith
Pam	Thomas
Sharon	Waltman

## Soil Survey Schedule



# Content Management



Team Members - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Recycle Mail Print Wordpad

Address <https://nrscbaag.sc.egov.usda.gov/sbaag/ContentMgmt/Lists/Contacts/AllItems.aspx>

Home Documents and Lists Create Site Settings Help

 Content Management  
**Team Members**

Select a View

All Contacts

Actions

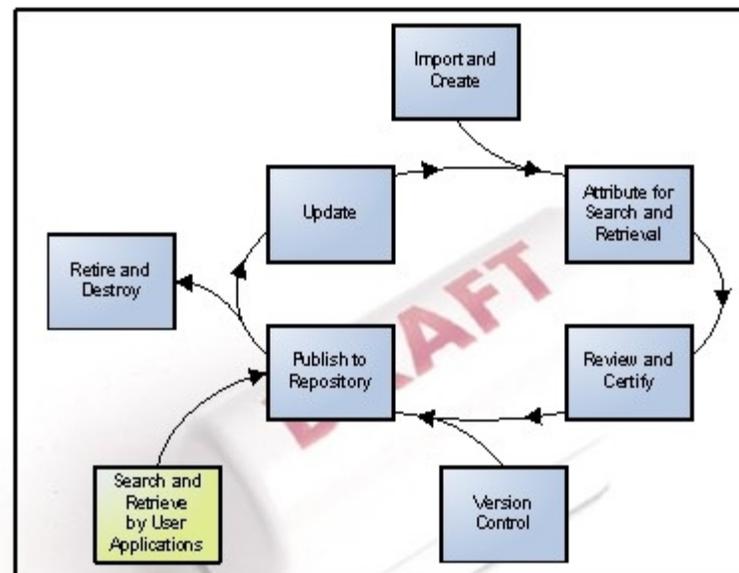
- Alert me
- Export to spreadsheet
- Modify settings and columns

New Item | Filter | Edit in Datasheet | Link to Outlook | Im...

First Name	Last Name	E-mail Address
Aaron	Achen	Aaron.Achen@al.usda.gov
Deanna	Anderson	deanna.anderson@fl.usda.gov
Mike	Domeier	mike.domeier@ut.usda.gov
Paul	Finnell	paul.finnell@lin.usda.gov
Darrell	Kautz	darrell.kautz@wv.usda.gov
Mike	Kortum	mike.kortum@ftw.usda.gov
Tom	Mckay	tom.mckay@nv.usda.gov
John	Shideler	John.Shideler@ftc.usda.gov
Jay	Skovlin	Jay.Skovlin@mt.usda.gov
Gary	Spivak	Gary.Spivak@ftc.usda.gov

# Content Management

## Priority Content Management and Delivery Needs within the National Soil Information System



Draft Requirements Statement

March 2008

## Cooperator Laboratory Data

**Cooperator & MLRA Soil Survey Office Laboratory Data  
Acquisition, Storage, Management and Delivery**

**Draft Requirements Statement  
Document**

Prepared by  
Cooperator Lab Data Team  
May 2008

# Digital Soil Mapping – Lead by Amanda Moore

Home - Digital Soil Mapping in the National Cooperative Soil Survey - Microsoft Internet Explorer

Address: [https://sharepoint.ngdc.wvu.edu/sites/digital\\_soils/default.aspx](https://sharepoint.ngdc.wvu.edu/sites/digital_soils/default.aspx)

Digital Soil Mapping in the National Cooperative Soil Survey

Welcome Sharon Waltman

**DIGITAL SOIL MAPPING**

Sharepoint site for DSM applications and research within the National Cooperative Soil Survey.

**Sites**

- Mojave Desert DSM Project

**Documents**

- DSM WG Information
- DSM Reference Library
- DSM Tips, Tricks, and Methods
- DSM Data
- DSM Tools
- Shared Documents
- DSM Wiki

**Lists**

- Calendar
- DSM Contacts
- Positions Available
- Positions Sought
- Research Funding Opportunities

**Discussions**

- DSM Tools and Methods

**Announcements**

**3rd Global Workshop on Digital Soil Mapping** 1/22/2008 11:53 AM  
by Amanda Moore  
The 3rd Global Workshop on Digital Soil Mapping will be held 30 September - 3 October, 2008 in at Utah State University in Logan, Utah! See attachment for more information.

**Welcome to the NCCS DSM SharePoint Site!** 1/17/2008 11:41 AM  
by Amanda Moore  
Welcome to the NCCS Digital Soil Mapping SharePoint Site! The purpose of this site is to provide a place for the DSM community in the US (and hopefully around the world) to share ideas, data, and methods. We're just getting started, so please check...

**Disable Username/Password screen within SharePoint** 5/29/2007 11:29 AM  
by Amanda Moore  
To disable the Username/Password screen that pops up each time you access a document in SharePoint, try the following:  
In Internet Explorer, click Tools>Options, then click on the Security tab. Select Trusted Sites, then click on Sites. Add [https://sharepoint.ngdc.wvu.edu/sites/digital\\_soils...](https://sharepoint.ngdc.wvu.edu/sites/digital_soils...)

**SharePoint Overview** 5/29/2007 11:22 AM  
by Amanda Moore  
Visit <http://www.microsoft.com/technet/windowsserver/sharepoint/technfo/overview.mspx> for an overview of MS SharePoint functionality.

**Suggestions**

Subject

Site Feedback

Add new discussion

**Change Password**

User Name (domain\username)

Current Password

New Password

Confirm New Password

Change

**Links**

- Natural Resources Conservation Service
- NRCS Soil Survey Division
- Soil Science Society of America
- IUSS Commission on Pedometrics
- IUSS Working Group on Digital Soil Mapping
- GlobalSoilMap.net Project Homepage

## Dynamic Soil Properties

### Dynamic Soil Properties Team Members

Ad-hoc team members.

 New Item |  Filter |  Edit in Datasheet |  Link to Outlook |  Import Contacts

First Name	Last Name	E-mail Address
Susan	Andrews	susan.andrews@gnb.usda.gov
Karl	Hipple	karl.hipple@lin.usda.gov
Darrell	Kautz	darrell.kautz@wv.usda.gov
George	Peacock	george.peacock@ftw.usda.gov
Alan	Price	alan.price@lin.usda.gov
Arlene	Tugel	arlene.tugel@lin.usda.gov

# Delivering National and Regional SSURGO datasets

## Delivering National and Regional SSURGO dataset Team Members



Use the Team Members list for information about people that your team works with.

 New Item |  Filter |  Edit in Datasheet |  Link to Outlook |  Import Contacts

 Last Name	First Name	Business Phone	E-mail Address
Brown	Sam	817-509-3401	<a href="mailto:Sam.Brown@ftw.usda.gov">Sam.Brown@ftw.usda.gov</a>
Ferguson	Henry	304-293-8232	<a href="mailto:henry.ferguson@wv.usda.gov">henry.ferguson@wv.usda.gov</a>
Finnell	Paul	402-437-4136	<a href="mailto:paul.finnell@lin.usda.gov">paul.finnell@lin.usda.gov</a>
Fortner	Jim	402-437-5755	<a href="mailto:jim.fortner@lin.usda.gov">jim.fortner@lin.usda.gov</a>
Waltman	Sharon	304-293-8232	<a href="mailto:Sharon.Waltman@wv.usda.gov">Sharon.Waltman@wv.usda.gov</a>

## **Delivering National and Regional SSURGO datasets**

### **NetConference 6/2008 with National GIS Reps from**

- **USEPA**
- **USGS-Water Resources Division**
- **USDA-ARS**
- **RIAD and FSA absent but sent requirements**

### **Purpose:**

- **Share information on current NRCS Access Methods**
- **Gain better understanding of needs for national vector/grid (10 and 30 meter) SSURGO map layers – water quality and farm bill models**

## Additional SBAAG Work - GPS Standards for Soil Survey

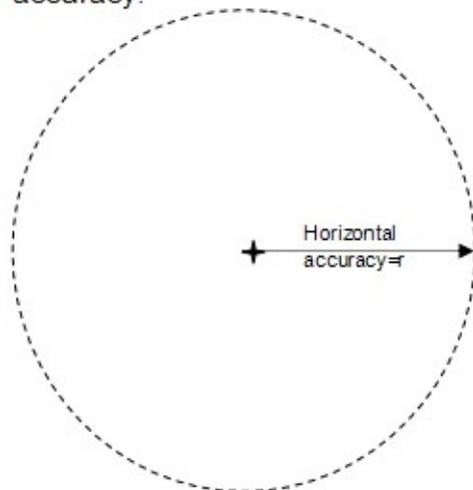
Lead by Alan Price – May 2008

### GPS accuracy and precision standards proposal for soil survey operations

USDA currently has one GPS standard of 1-2 meters horizontal (accuracy) and 98 percent of the time (precision), which requires earth based differential correction using National Differential GPS (NDGPS) beacon stations.

Differential correction needed to achieve the 1-2 meters accuracy requires expensive ( $\geq \$1500$ ), bulky equipment (pack with a mast or vehicle mount) that burdens many soil surveyors who must work away from a vehicle

The following illustration demonstrates what the implications are for horizontal accuracy:



If the center of the circle is the GPS coordinate location, then the horizontal accuracy equals the radius "r" that defines the circle (i.e., the true measured location may occur anywhere within the circle).



Existing Garmin Map76 GPS connected via Bluetooth module to a tablet:



Handheld PDA/GPS combo can display real time GIS data:



Overall SBAAG  
Recommendation:  
10 meters horizontal  
(accuracy) 95% of the  
time (precision)

- Questions?