

The National Picture

Implementing the “New Soil Survey”

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Director, Soil Survey Division

2006 NCSS Conference

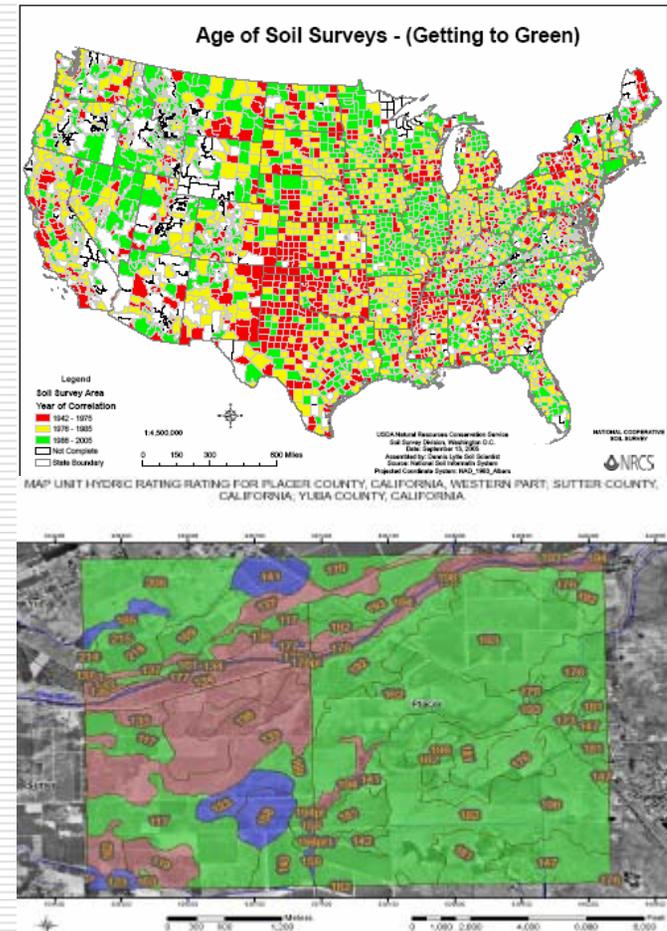
Bordentown, New Jersey

Soil Survey Division

- The Chief's Challenge – Find a better way to do Soil Survey's
- The vision is to develop and deliver an;
 - accurate and consistent,
 - always available,
 - always up-to-date,
 - seamless digital soil survey of the nation,and products that meet current and emerging user needs.

100 plus years of patch work

- Federal, State and Local contributions
 - Enabled lower cost and increased buy-in
- County by County approach
 - Resulted in inconsistency across administrative boundaries



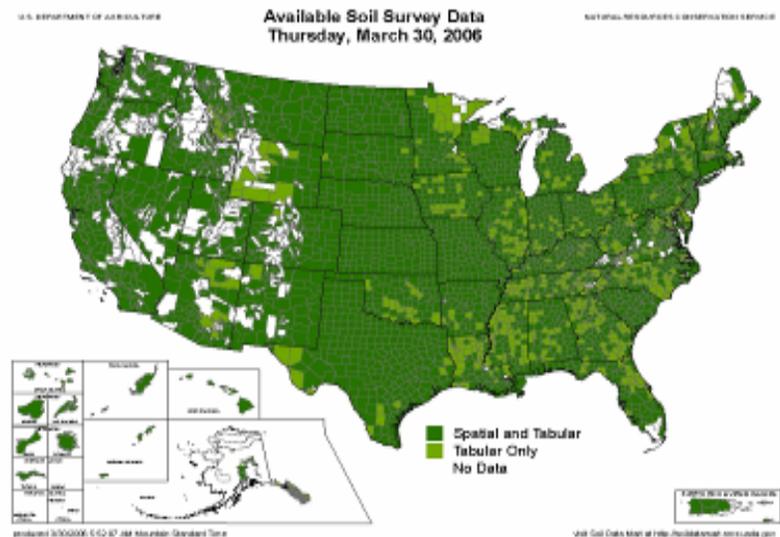
Initial Surveys and SSURGO Digitizing Remain

- Private and Tribal lands **61.2** million acres left

Land Owner	Total Acres	Acres Remaining to Map	% Left	Yrs Left
BLM	257,886,837	31,997,688	12%	38
USFS	192,730,805	58,017,503	30%	101
NPS	73,366,967	8,773,686	12%	71
Other Federal	118,310,239	10,201,642	9%	31
Native American	93,522,644	16,272,283	17%	14
Private Land	1,535,373,931	45,710,547	3%	14
Totals	2,271,191,423	170,973,349	8%	27

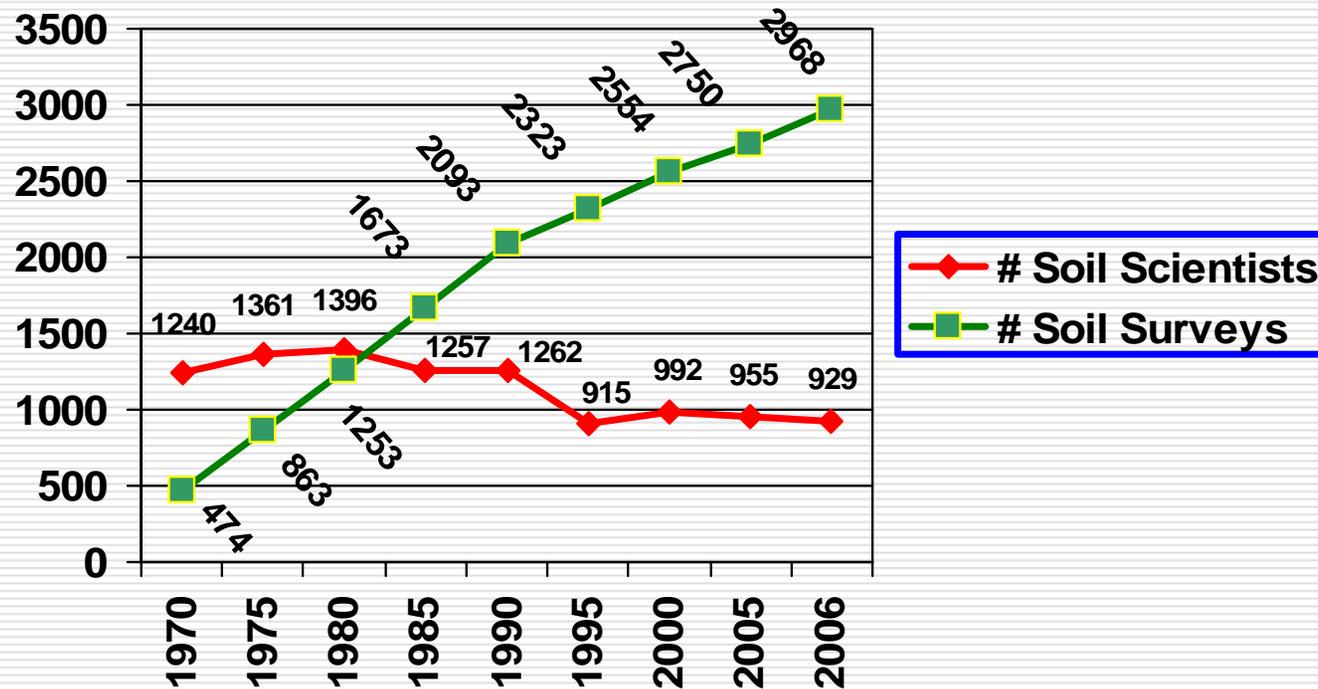
➤ SSURGO

- Complete on **2,463** Survey Areas
- **500** to go by the end of 2007



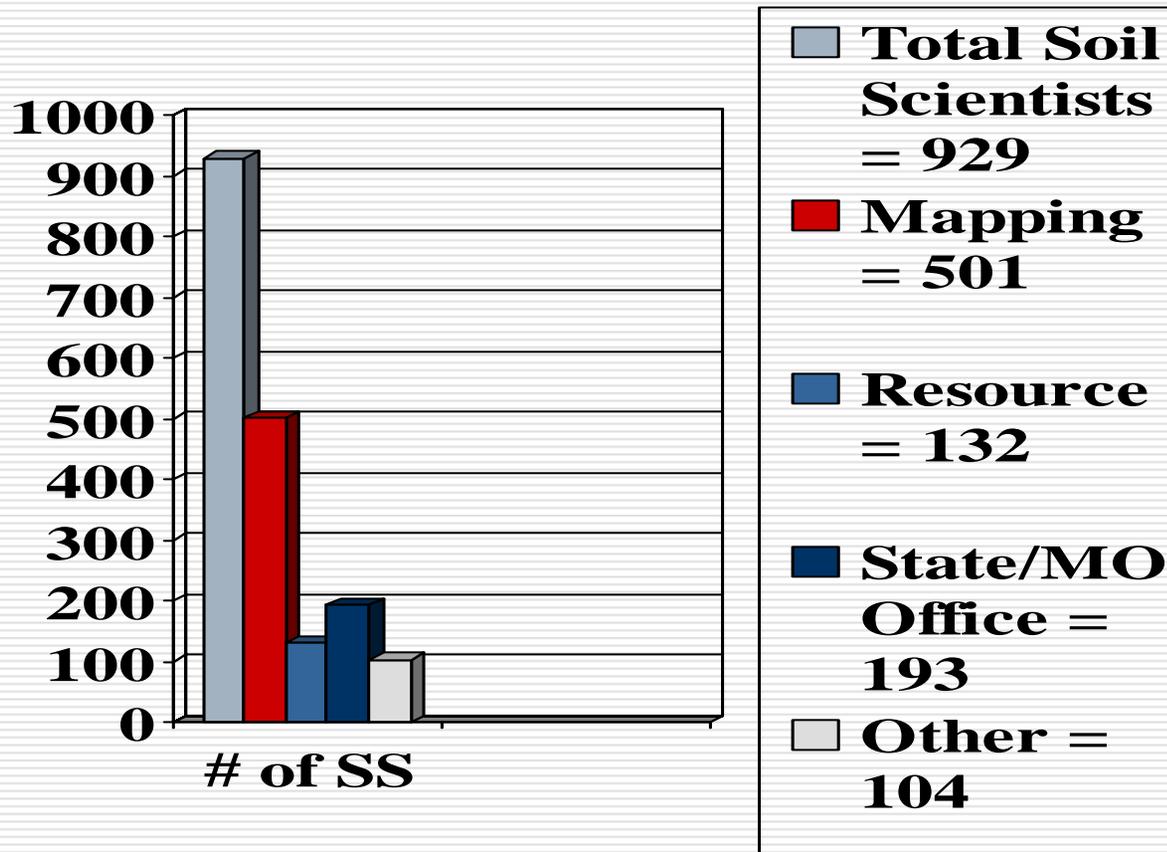
Soil Scientists and Workload

**Declining Number of Soil Scientists and
Increasing Number of Soil Survey's to Maintain**



Note: The number of SS devoted to field mapping has decreased from 875 in 1983 to 501 in 2006 due to shift in Technical Soil Services

NRCS Soil Scientist Numbers



NRCS has 929 Total Soil Scientists in all programs. They make up about 8.0 percent of the NRCS staff.

Establish The “New Soil Survey” by Major Land Resource Areas

To increase productivity and consistency (quality)
of the Soil Survey

1. Establish 125 - 150 Permanent areas and offices
 - Review and revise policy in NSSH
 - Implement a new CO-02 fund allocation process
2. Implement New Technologies
 - Landscape predictive models to improve productivity and consistency
 - Standard HW/SW configuration
3. Publish to the Web Soil Survey
 - Implement a paperless soil survey, start to finish

Federal Lands Advisory Group

- 1. Bill Ypslantis, BLM**
- 2. Pete Biggam, Park Service**
- 3. Randy Davis, USFS**
- 4. George Teachman, DOD**
- 5. Dennis Lytle, NRCS**
- 6. BIA**

Chair - Micheal Golden

Activities for Initial soil mapping on “ALL” Lands

NCSS Advisory Group

- Toby O'Geen, University of California, Davis
- Cynthia Stiles, University of Wisconsin, Madison
- Mary Collins, University of Florida, Gainesville
- Joey Shaw, Auburn University, Auburn
- Mickey Ransom, Kansas State University, Manhattan
- Jim Thompson, West Virginia University, Morgantown
- Curtis Monger, New Mexico State, Las Cruces

- Ad Hoc - Dick Arnold, Retired

Visionary Look:

How should “Soil Survey” change for the Future?

State Conservationist Advisory Group

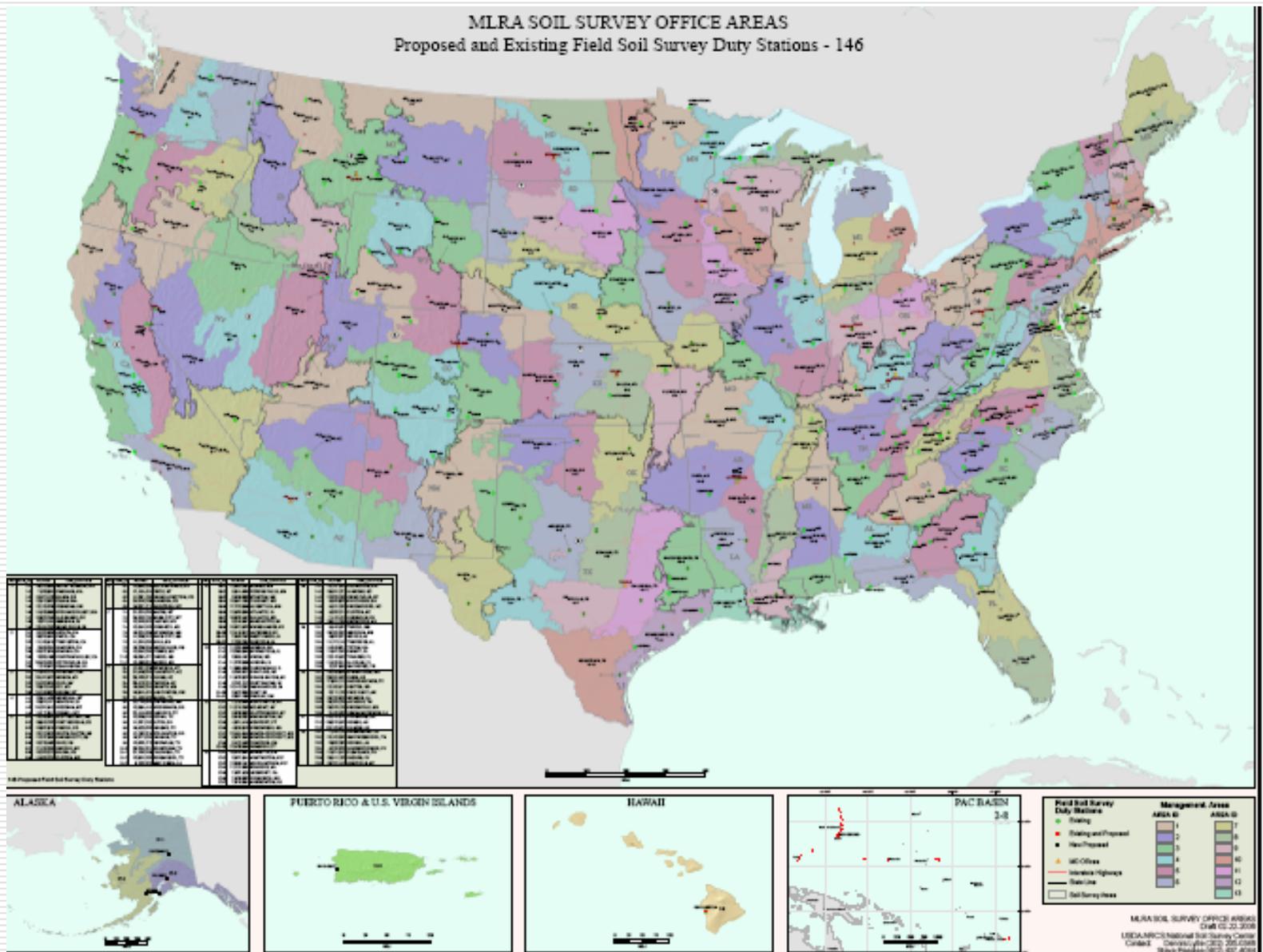
- Judy Doerner, Vermont**
- J.R. Flores, North Dakota**
- Don Gohmert, Louisiana**
- Allen Green, Colorado**
- Jane Hardisty, Indiana**
- Harold Klaege, Kansas**
- Richard Sims, Idaho**
- James Tillman, Georgia**

And Rosendo Trevino, Former State Conservationist, New Mexico

Other Advisory Groups to Director

- **National Soil Interpretation Advisory Group**
Chair - Karl Hipple
- **National Soil Business Advisory Group**
Chair - Dennis Lytle
- **National Research Needs Committee**
Chair - David Hammer

Recommended 147 Soil Survey Areas and Offices by States and MLRA Region Offices



MLRA Soil Survey "Field" Staff

New MLRA Soil Survey Staff **w/out Reimbursables**

Staff per Office									Total
	1	2	3	4	5	6	7		461 Staff
Number of Offices	17	29	48	30	18	4	1		147 Offices

Current Soil Survey Office Staff

										Total
Staff per Office	1	2	3	4	5	6	7	8		552 Staff
Number of Offices	104	71	46	18	5	8	1	2		255 Offices

MLRA Regional Office "MO" Staff

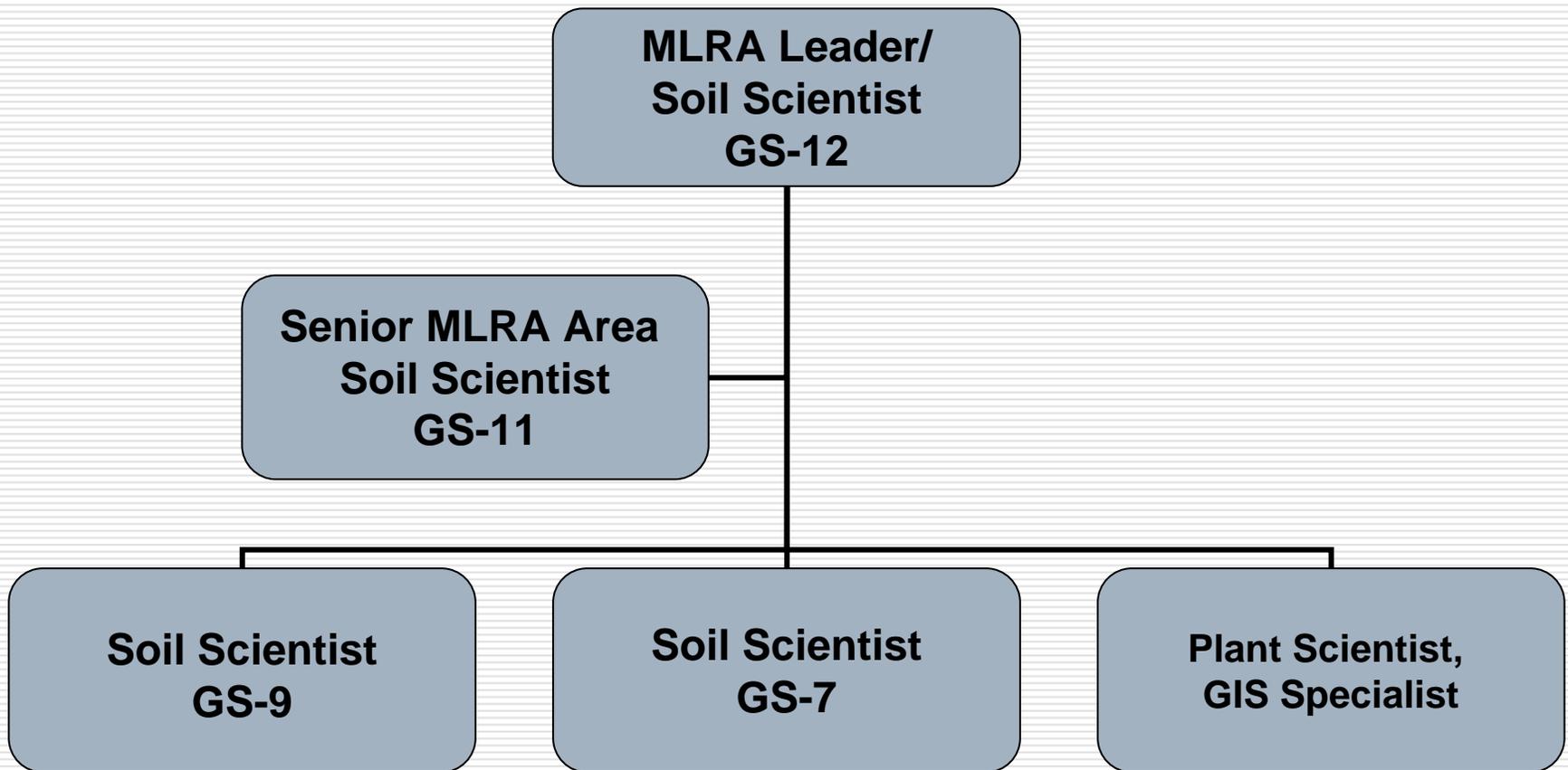
Current MO Staff

									Total
Staff per Office	4	5	6	7	8	9	10	13	126 Staff
Number of Offices	1	5	3	2	2	1	1	2	18 Offices

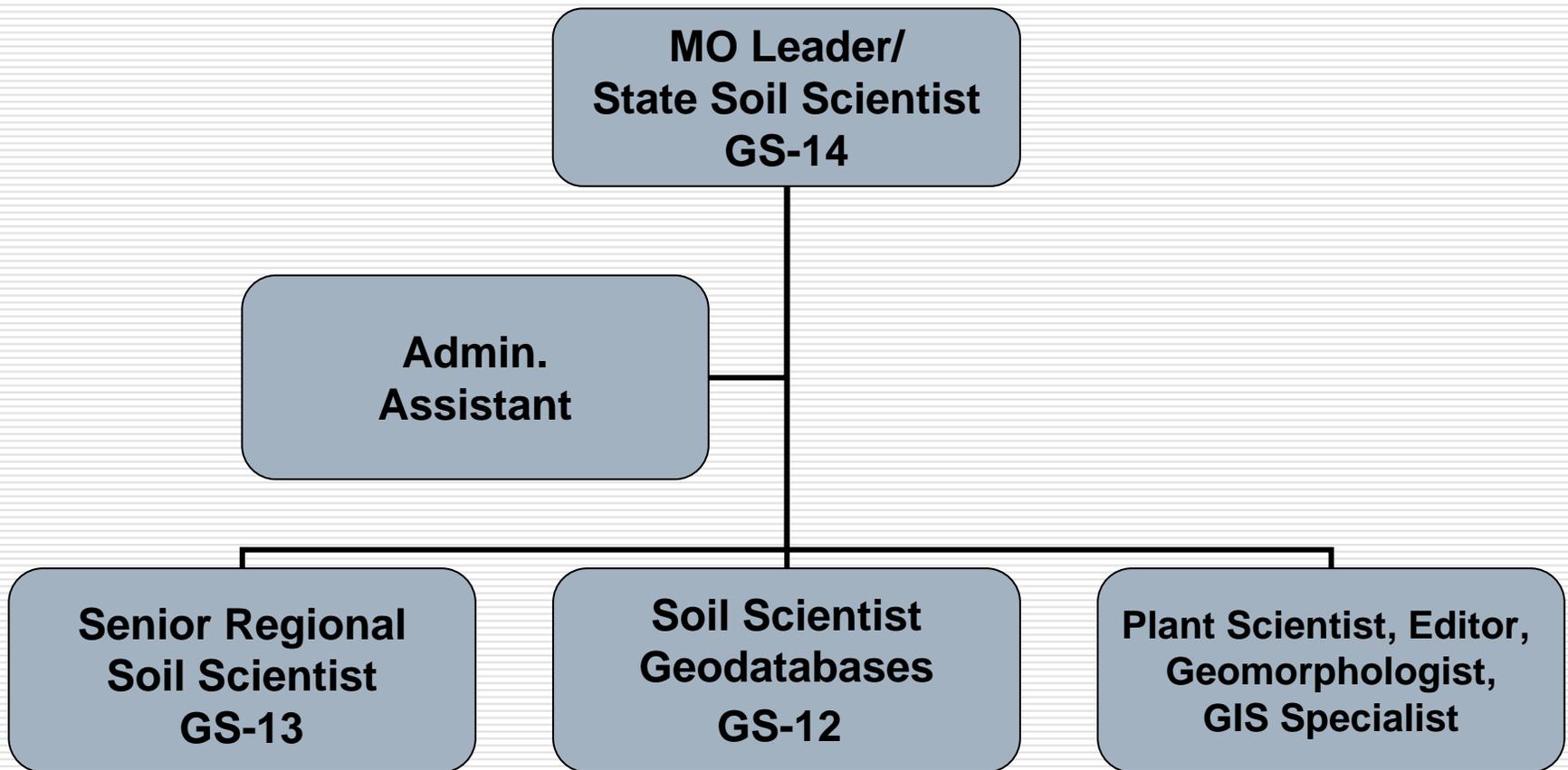
New MO Staff

Staff per Office				Total
	4	5	6	85 Staff
Number of Offices	7	9	2	18 Offices

New MLRA SSO Staffing Plan



New MLRA Regional Office Staffing Plan

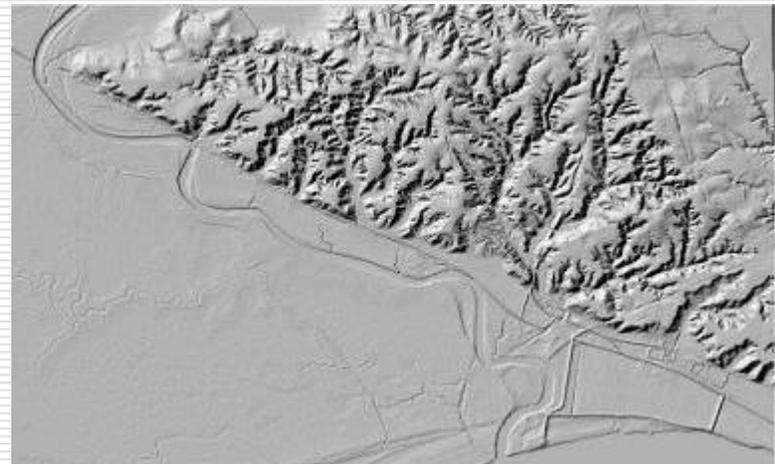
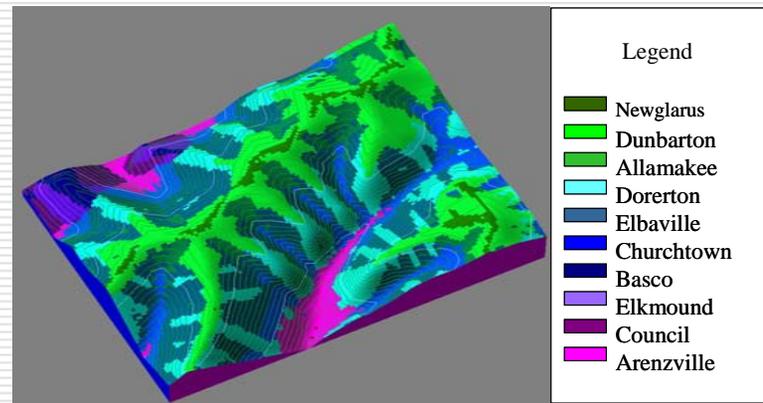


Soil Survey Staff Functions

- **MO** – Leadership in the production and quality assurance of soil survey's for assigned multi-state geographic area.
- **SO** – State-wide technical soil services to provide customer and programs support and provide production soil survey coordination.
- **MLRA SSO** – Leadership in the production and quality control of soil survey's for assigned multi-county/state geographic area.

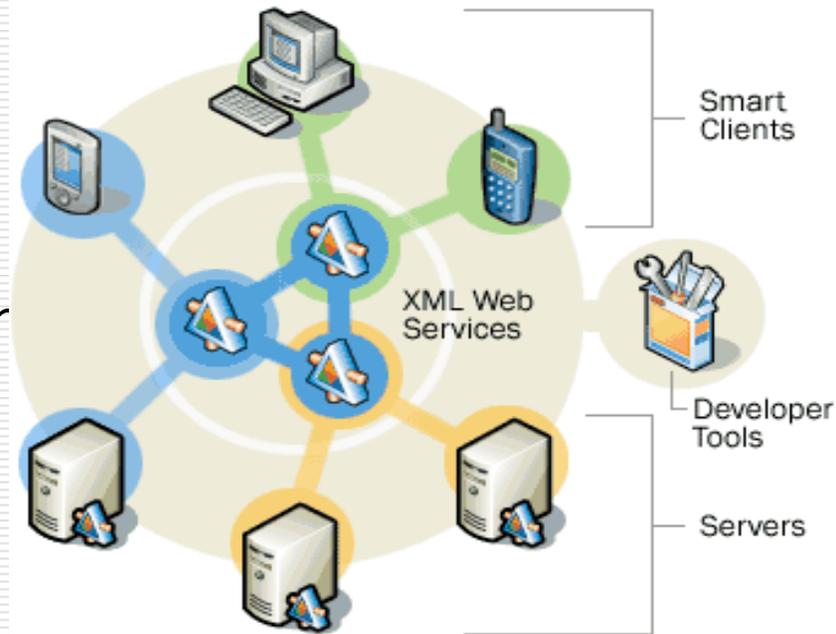
Aggressively Implement New Technologies to Increase Productivity and Consistency

- Soil Resource Inventory Toolbox
 - Field Data Collection
- Mobile Data Collection and Revision
 - National Geospatial Database (Checkout-Checkin)
- Soil Landscape Predictive Models
 - SoLIM, PURC, RASP
- Elevation Data
 - 10M, LIDAR, IFSAR

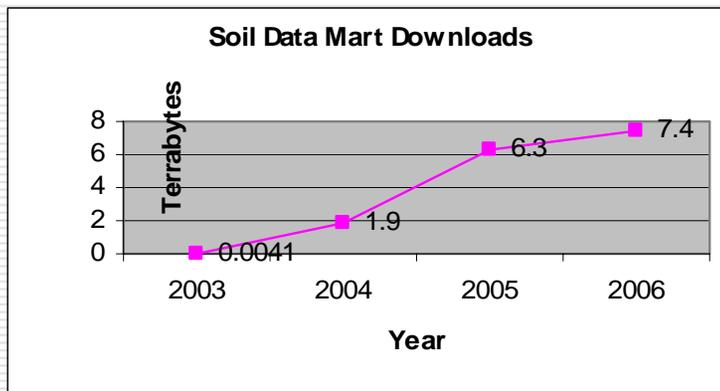
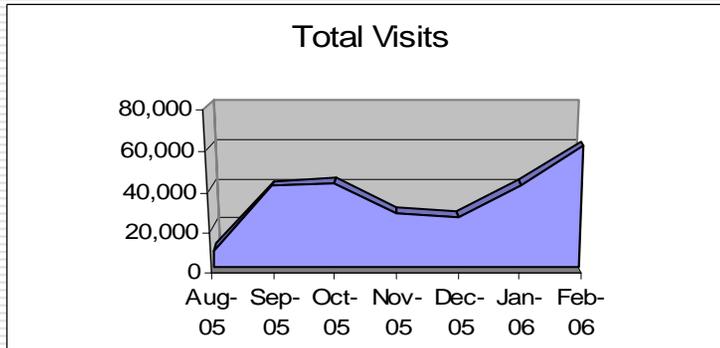


Enabling eGov Web Services

- NRCS on-line and self service systems
- Conservation
 - TSP's
 - FSA – CRP
 - Researchers/Modelers
 - EPA, ARS, Universities
- Commercial Enterprises
 - Crop Insurance, Manager
 - Chemical/Fertilizer
- Disaster Preparation and Recovery
 - FEMA, USDA, NGA



Web Soil Survey and Data Mart will Deliver all Publications and Data



Web Soil Survey

United States Department of Agriculture
Natural Resources Conservation Service

Start WSS

- 1 Define.**
Area Of Interest
On the Area Of Interest tab, you must define the area that you are interested in. To do so, zoom in on a map and draw a box around your area, or use a choice list.
- 2 View.**
Soil Map
Next, click on the Soil Map tab to view and print a soil map of your area.
- 3 Explore.**
Soil Data Explorer
The Soil Data Explorer tab provides access to all of the soil data for your area of interest. Here you can determine the suitability of the soils in your area for a particular use.

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

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WWW.soils.usda.gov

NCSS Partnership

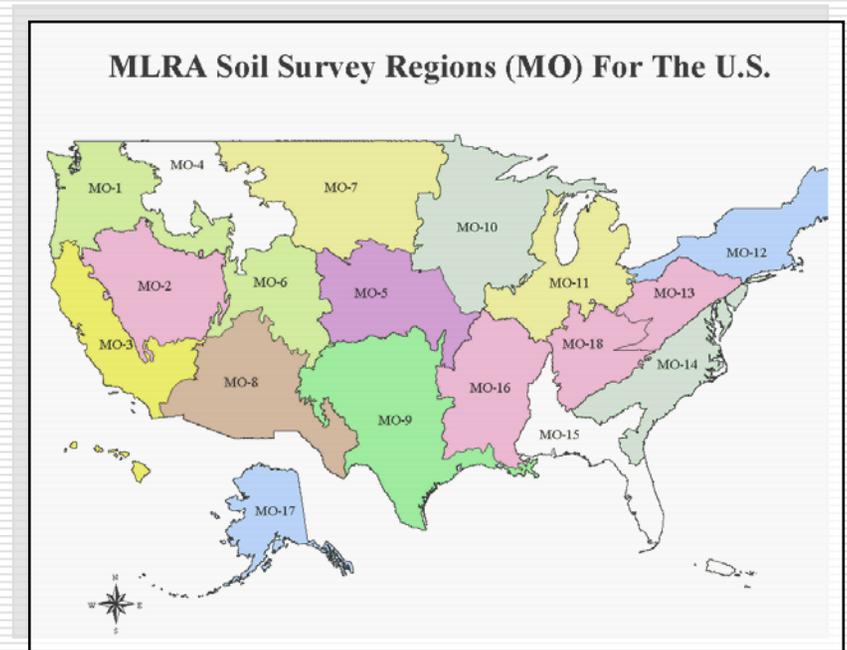
Planning

- Long Range Plans (147)
 - Identify Benchmark Landscape Catenas
 - Setting the Priorities
- Project Work Plan (1-5 Year)
 - Identify Thesis or other Work
 - Identify Lab Analysis Needs
 - Identify Documentation Needs
- Annual Business Plan
 - Work the plan

Recommendation

Reduce the
number of MO
office staff

From 126 to 84 to
reflect function
shift to field.



Recommendation

Complete the initial soil survey on:
Non Federal and Native American Lands, and
High Priority Federal Lands by December 2010.

- Detail 25 to 50 soil and plant scientists per year
- Take advantage of experienced field soil scientists before retirement
- Utilize New Soil Scientist Hires to gain Mapping Experience
- Utilize Contractors from Private Sector

Recommendation

Establish the MLRA Soil Survey Areas and Offices on **October 1, 2006**

6. Fully implement offices by **September 30, 2009.**

- 92 Existing offices are already in place
- 39 Offices in FY 08, 16 Offices in FY 09
- When Initial soil survey is completed
- When Funding is available
- When Space becomes available

Recommendation

Staff Placement Plan

- State Conservationists (BOD) implement according to their "Migration" plan during FY07 and FY08.
- Accommodate staff – enable them to plan their future, allow for attrition, allow for details.
- Formal Placement for remaining staff in FY09

Recommendation

Purchase Required Computers and Software

- Systems to analyze geospatial data across
 - MLRA Soil Survey Project Areas - 125 -150
 - MO Regions - 18
- Tablet PC's for data collection

Next Steps

1. Chief Approved Plan
 1. May 11, 2006
2. Finalize Nat'l Implementation Plan (Updates by BOD)
 - May 30, 2006
3. Brief NCSS Partnership at Regional Meetings
 - May and June, 2006
4. STC/MO offices submit a 3 year migration plan
 - July 30, 2006
5. Begin National Implementation
 - October 1, 2006

Thank You

Questions ???