

National Cooperative Soil Survey “New Opportunities”

Micheal L. Golden
Director
Soil Survey Division
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New Opportunities

TOPICS

- Soil Survey Division Staffing
- Meeting the Customer Needs
- NCSS Partnerships
- Expanded Roles
- Universal Soil Classification
- International Opportunities

New Opportunities

Leadership Vacancies

- National Leader – **World Soil Resources**
- National Leader – **Soil Ecology**
- National Leader – **Standards**
- National Leader – **Interpretations**
- National Leader – **Soil Business Systems**
David Hoover (Idaho)

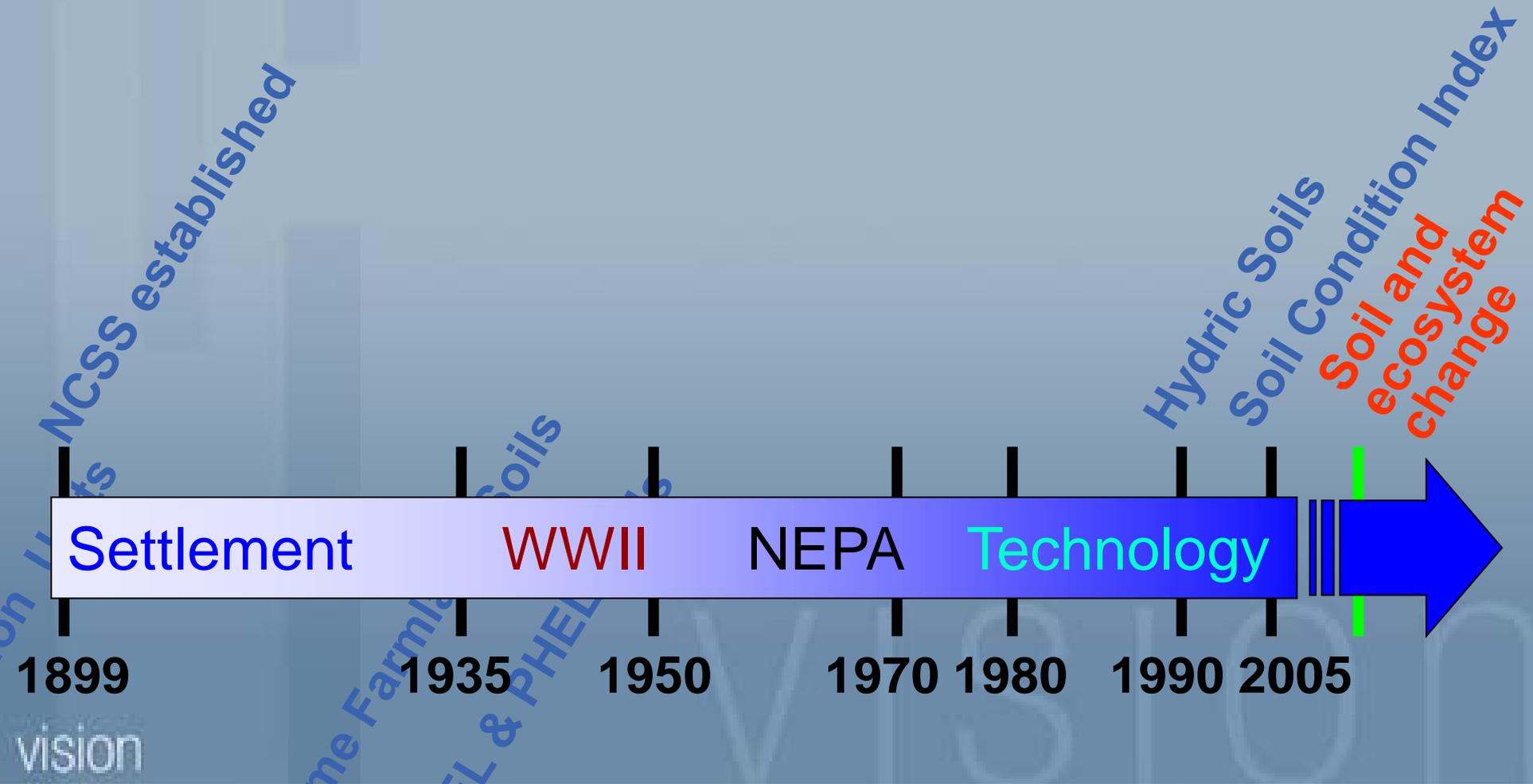
New Opportunities

NSSC Vacancies

- Standards : **2 Soil Classification Specialists**
- Interpretations: **Hydro-Pedologist**
- Research & Lab: **2 Research Soil Scientists**
- Ecology: **5 Discipline Specialists**
- Soil Business Systems: **GIS/Remote Sensing**



100+ Years of Meeting Customer Needs



Soil Ecology Branch

**National
Leader
Soil Ecology**

Joel Brown
Acting National
Leader

**Soil Quality &
Ecological Sites**

Agronomist

**Soil
Scientist**

**Range
Management
Specialist**

**Wildlife
Habitat
Specialist**

Forester

Ecologist

**Soil Micro
Biologist**

Soil Survey Direction

- Three key aspects
 1. Web Soil Survey - Seamless digital coverage of entire US (*Get the Information to Users*)
 2. New Technologies - Increase Efficiencies (*Landscape Analysis and Data Modeling, Pre-Mapping Tools*)
 3. MLRA Soil Survey Offices - 143 Permanent MLRA SSO's (*Keep the Inventory Current*)

Web Soil Survey Usage

- **Visits**
 - Over 6.2 million Visits total since 8/05
 - Over 180,000 visits per month
 - Up to 7,000 visits per day

MLRA SSO Long Range & Project Plans

Highest Priority

- Harmonize NASIS Database
 - Selected Soil Properties
- Identify Research Projects & Use
 - NCSS Cooperators &
 - NSSC Liaison
- Smooth & Join Spatial Layers
- Cover entire Area & Prioritize

New Opportunities

- Soil Moisture & Soil Temperature Models
 - Newhall (General)
 - Program from DOS to Windows - Penn State
 - EPIC (More Specific)
 - Enhanced model for Taxonomy - ARS Blackland Experiment Station & Texas A&M

New Opportunities

- NCSS Research (from SSD)
 - FY09 Three Projects Funded thru RFP's
 - FY10 Six Projects with Funds thru RFP's
 - 2 West
 - 2 South
 - 1 North Central
 - 1 North East
- Conservation Innovative Grants (CIG's)
 - FY10 Soil Research Component

New Opportunities

- NCSS-Dynamic Soil Properties (SQ & ESD)
 - Five funded projects
 - Kansas State University
 - Louisiana State University
 - University of California-Davis
 - University of Nebraska
 - Purdue University
- Deepwater Soil Interpretation Maps
 - Several New Interpretations Developed

New Opportunities

Expand Roles

- Soil Ecology
 - Soil Quality - Inventory & Interpretations
 - Ecological Sites – Inventory, Interpretation & Correlation
- Soil Climate
 - SCAN Sites – Evaluate existing sites & modernize

Technology

- Content Management
- National Soil Geographic Database
- Mobile Point Data Collection
- Mapping Tools (SIE, TEUI, RASP, etc;)

New Opportunities

- Ecological Site Inventory
 - SSRA to lead Inventory & Correlation
 - Ecological Site – Inventory & Soil Interpretations
 - S&T with States to lead Technology Transfer
 - Ecological Site - Management Interpretations
 - National Coordination
 - Establish National Leader & 4 Coordinators NSSC
 - Establish QA at 7 MO's (PD's Sent to States)
 - Establish QC at 19 SSO's (PD's Sent to States)

New Opportunities

Rapid Carbon Assessment

- Trained Soil Scientists for each MO Region
 - VNIR equipment & Sampling Procedures
 - Selection of Plots with Use & Management (Benchmark or Other Important Soils)
- NRI (PSU Segments) or New sites w/o data
- ARS (Gracenet Sites) or Other Federal Partner (BLM/FS)
- University (Research Plots) or Other Studied Sites

Goal is to have a statistically Valid Database for Base Stocks of Soil Carbon by September 30, 2011

New Opportunities

Universal Soil Classification System

- Most Natural Sciences have
 - Common Classification System
 - Botany
 - Anthropology
 - Astronomy
- Natural Classification Systems are
 - Accepted & used Globally
 - **“Soil Classification”** is viewed as a National System yet to have international acceptance

New Opportunities

Universal Soil Classification System

- International Committees formed:
 - 1976 Low Activity Clays – (Alfisols, Ultisols, Oxisols)
 - 1978 Oxisol Order
 - 1978 Soil Moisture Regimes
 - 1980 Andisol Order
 - 1980 Aridisol Order
 - 1981 Vertisol Order
 - 1982 Aquic Moisture Regime
 - 1982 Spodosol Order
 - Their Intent was to:
 - Create a Universally Accepted System

Global Soil Regions

New Opportunities

USAID Project Proposals

- **Haiti - Soil Survey and Reconstruction**
- **Africa - Soil Training w/Global Soil Map**
- **Mexico - Soil Survey and Desertification**

Robinson Projection
Scale 1:130,000,000

Soil Orders

 Alfisols	 Entisols	 Inceptisols	 Spodosols	 Rocky Land
 Andisols	 Gelisols	 Mollisols	 Ultisols	 Shifting Sand
 Aridisols	 Histosols	 Oxisols	 Vertisols	 Ice/Glacier

New Opportunities

International Activity

- International Technical Exchange (2-4 weeks)
 - 8 NRCS Soil Scientists going this summer to:
 - Africa – Global Soil Map Training and Soil Sampling for Lab
 - Italy – GIS modeling
 - Hungary - Salinity and Universal Soil Classification
 - Spain – SM & ST and Universal Soil Classification

New Opportunities

International Activity

- Mexico Soil Survey & ESD
 - Three Soil Classification and Mapping workshops
 - Chapingo (August 2010)
- Soil Survey (WSS)
 - El Jabali Soil Survey (W of Laredo & NE Monterrey)
 - Converted to ST and built DB in NASIS

New Opportunities

International Activity

- Canada
 - Global soil map and harmonizing of maps & data
 - Possible Soil Climate Analysis Network (SCAN) sites
 - Carbon data collaboration
 - Continued Technical exchanges at NCSS Conferences

New Opportunities

International Authority

- Language submitted thru USDA – ON HOLD!!!

Universal Soil Classification (USC) System

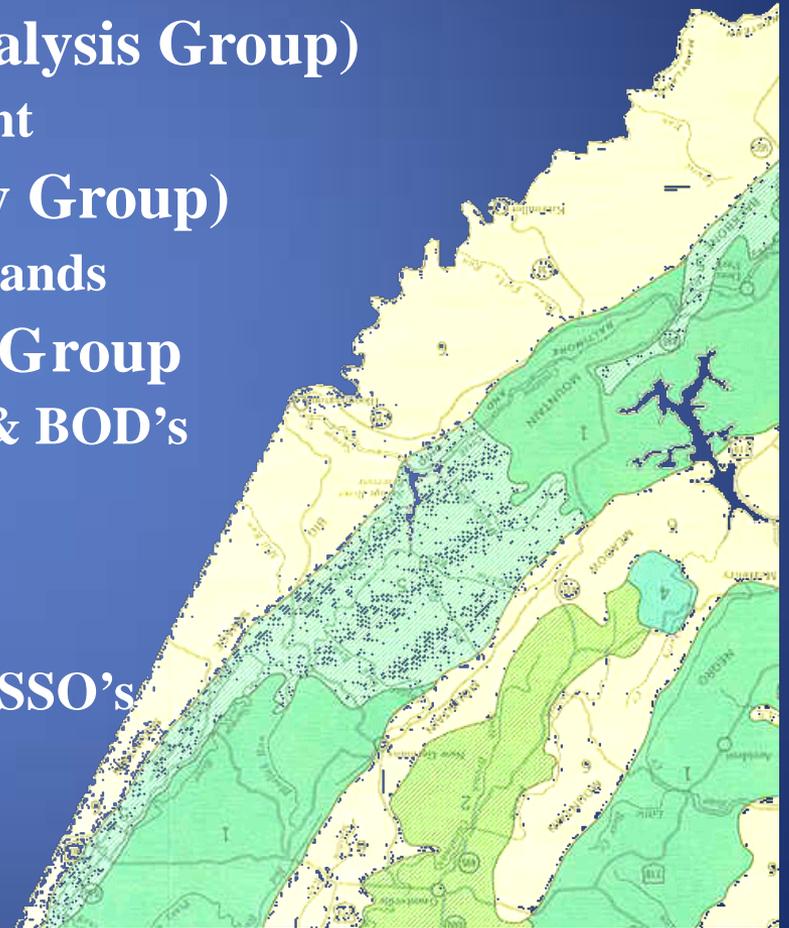
- IUSS Soil Classification Committee - Work Group
(Jon Hempel Chair with Erika Micheli – Vice Chair)
- Golden - Presenting paper at World Congress of Soil Science in Brisbane, Australia (Time for USC)
- John Galbraith US Lead in IUSS

Globalsoilmap.net (North American hub)

- Coordinate with Mexico and Canada

Advisory Groups

- **SBAAG (Soil Business Area Analysis Group)**
 - Issues dealing with IT Development
- **FLAG (Federal Lands Advisory Group)**
 - Issues dealing with Mapping All Lands
- **State Conservationist Advisory Group**
 - Issues dealing with Management & BOD's
 - MLRA Restructure
 - ESD Implementation
- **MLRA Region Office Leaders**
 - Issues dealing with managing 144 SSO's
 - Operations and Standards
- **NCSS Advisory Group**
 - Think Tank for Future Issues



Advisory Groups *Example*

NCSS Advisory Group - Think Tank for Future Issues

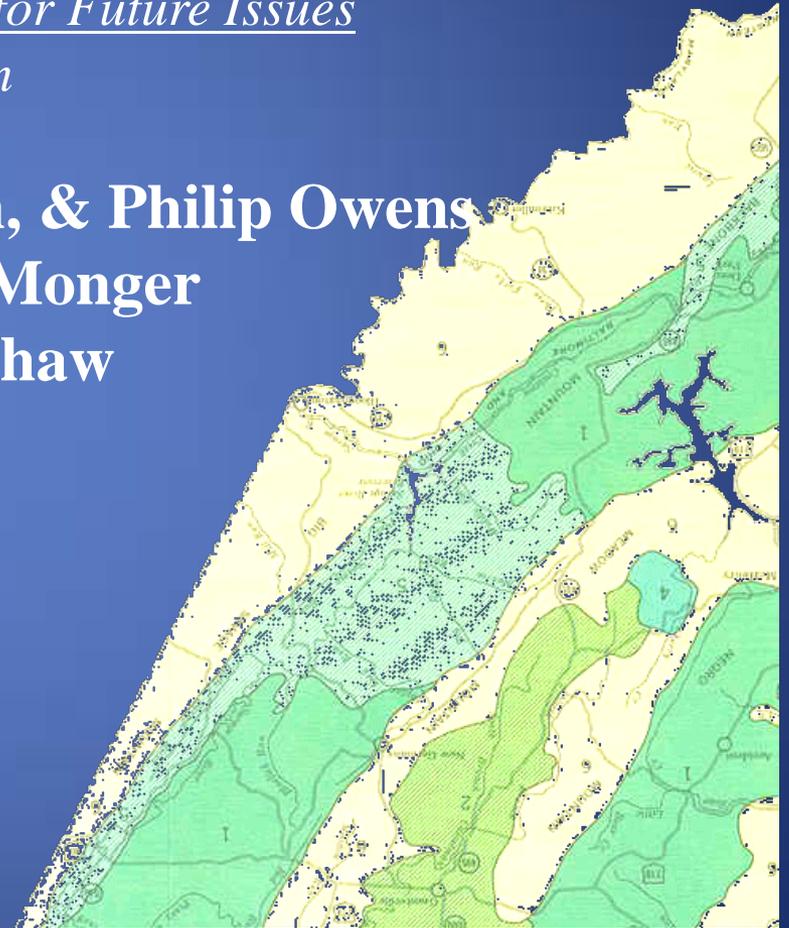
Coordination by Maxine Levin

- North Central – Micky Ransom, & Philip Owens
- West - Toby O’Geen, & Curtis Monger
- South – Mary Collins, & Joey Shaw
- North East – Jim Thompson

Ad Hoc Advisory Members

- Larry Wilding & Dick Arnold

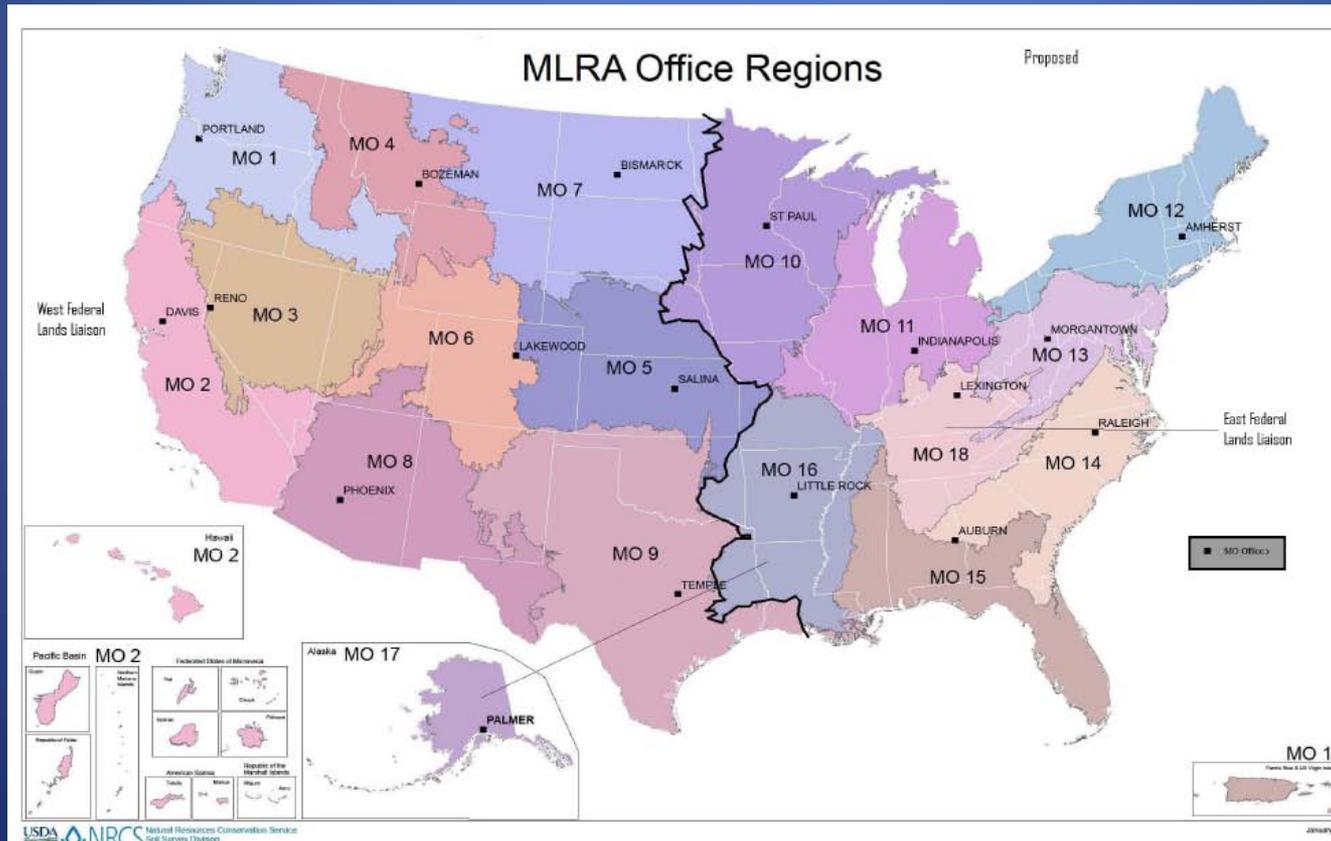
“Thank You”



New Opportunities

- Federal Land Liaisons

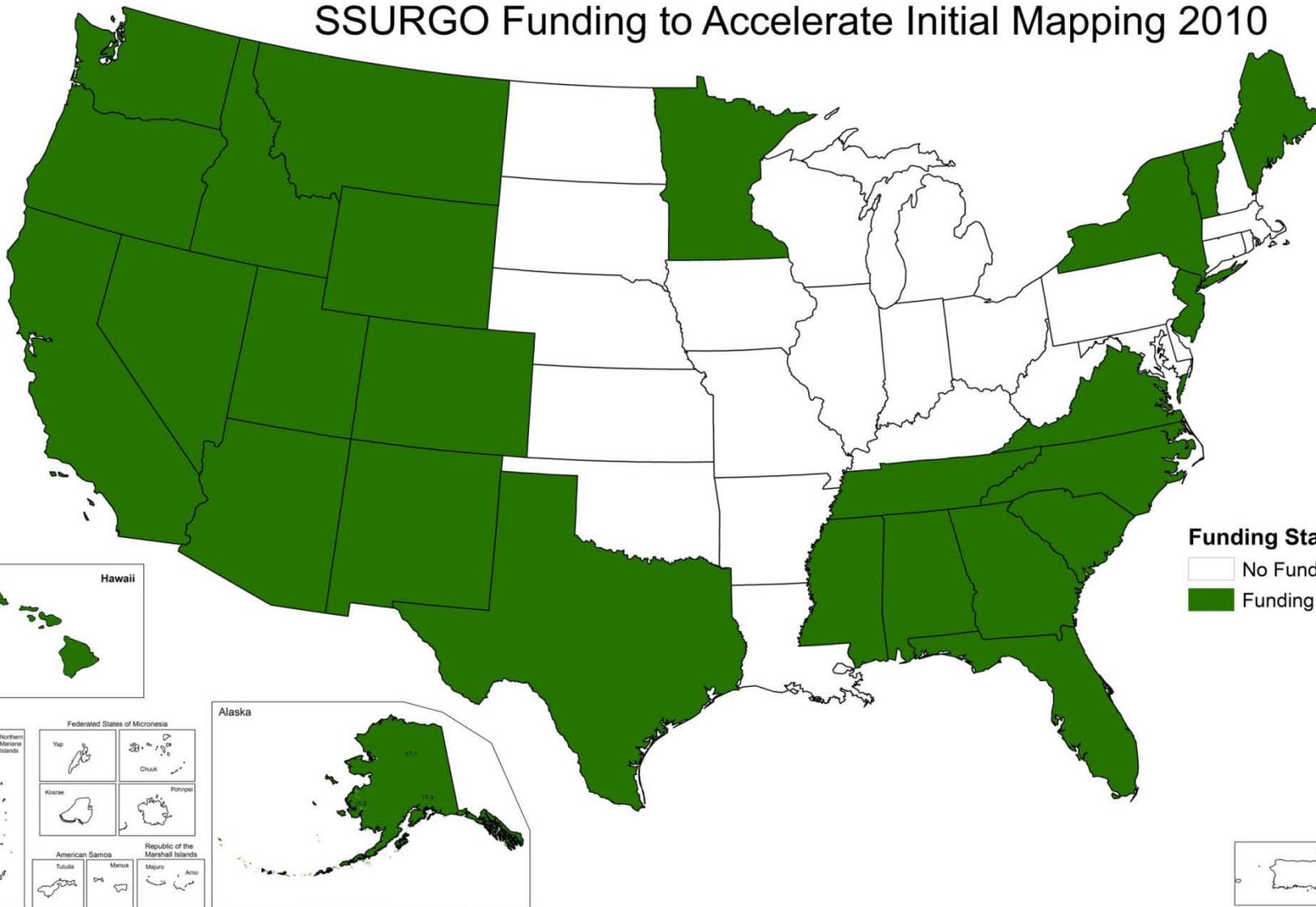
- Davis, CA - National Park Service (Sue Southard)
- Auburn, AL – Eastern FS, DOD, FWS, BIA (Vacant)
- Bozeman, MT – Western FS & BLM, DOD, FWS, BIA (Vacant)



New Opportunities

27 States Additional Funding thru 2011

SSURGO Funding to Accelerate Initial Mapping 2010



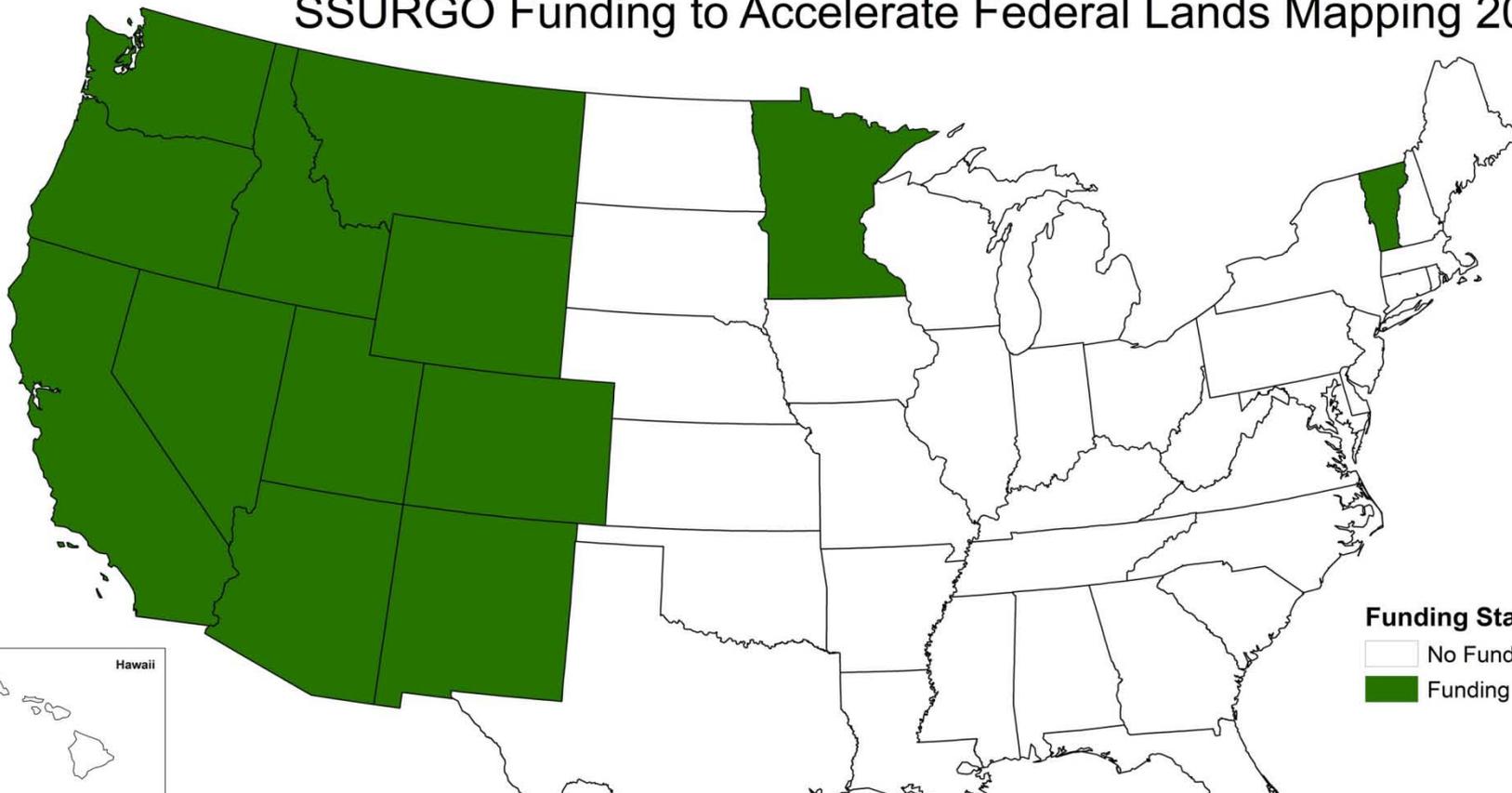
Funding Status

- No Funding
- Funding

New Opportunities

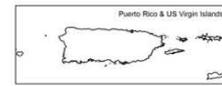
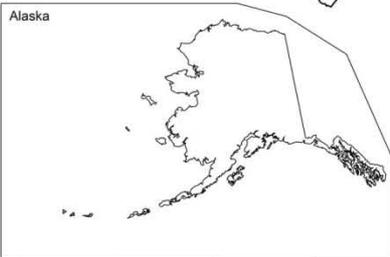
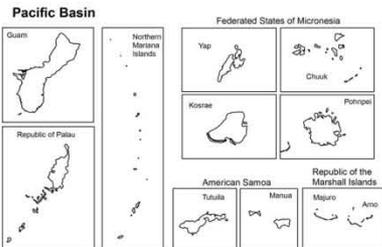
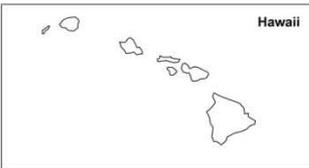
Soil Survey On ALL Lands -14 States Additional Funding

SSURGO Funding to Accelerate Federal Lands Mapping 2010



Funding Status

- No Funding
- Funding





Thank

YOU

for

Your

“Attention”

SSURGO Digitizing Units

Mike Hanson
Coordinator
Bozeman, MT

Missouri

Michigan

Wisconsin

Kansas

Montana

SSRA/Soil Survey Division – Organization Chart

