

National State Soil Scientist Meeting
St. Joseph, Missouri
October 31, 2002

presented by
Chris Clarke

Data Management Direction and Drivers

Examples:

- Field Service Center Agency business needs
 - Limited financial and human capital
 - Need for reliable consistent data
- Advancement in technology - facilities sharing resources
- OMB Circulars A-130, A-16 etc.....
- Presidents Management Initiatives (E-government)
- Capital Resource Planning (data)
- System Architecture
 - Shared applications using industry standards

Data Management Direction and Drivers

- Homeland Security

- OMB Circular A-16

SUBJECT: Coordination of Geographic Information and Related Spatial Data Activities, August 19, 2002

http://www.whitehouse.gov/omb/circulars/a016/a016_rev.html#2

- NRCS General Manual Title 170 Part 400

Cartography, Remote Sensing, Global Positioning Systems and Geospatial Data

<http://policy.nrcs.usda.gov/scripts/lpsiis.dll/Main/home.htm>

- USDA E-government policy

<http://www.egov.gov/egovreport-3.cfm>

E-Government Geospatial One-Stop

- Office of Management and Budget E-Government initiative to improve the effectiveness, efficiency, and customer service throughout the Federal Government.
- Adopted by the President's Management Council (PMC) in October 2001 implements the "Expanding Electronic Government" reform outlined in the President's Management Agenda.
- The implementation of the Geospatial One-Stop will:
 - Provide standards and models for the geospatial framework data content;
 - Provide an interactive index to geospatial data holdings at the Federal and non-Federal levels;
 - Initiate interaction between Federal, state, and local agencies about existing and planned spatial data collections; and
 - Provide an online access point to geospatial data.

Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies (commonly referred to as the Data Quality Act)

OMB's guidelines require Federal agencies subject to the Paperwork Reduction Act (44 U.S.C. Chapter 35) to:

- (1) issue information quality guidelines for the information the agencies disseminate;
- (2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information disseminated by the agencies on or after October 1, 2002 that does not comply with OMB or agency guidelines; and
- (3) annually report to OMB the number and nature of complaints received by the agencies regarding agency compliance with OMB and agency guidelines and how such complaints were resolved.

http://www.ocio.usda.gov/irm/qi_guide/index.html

Sample Actions

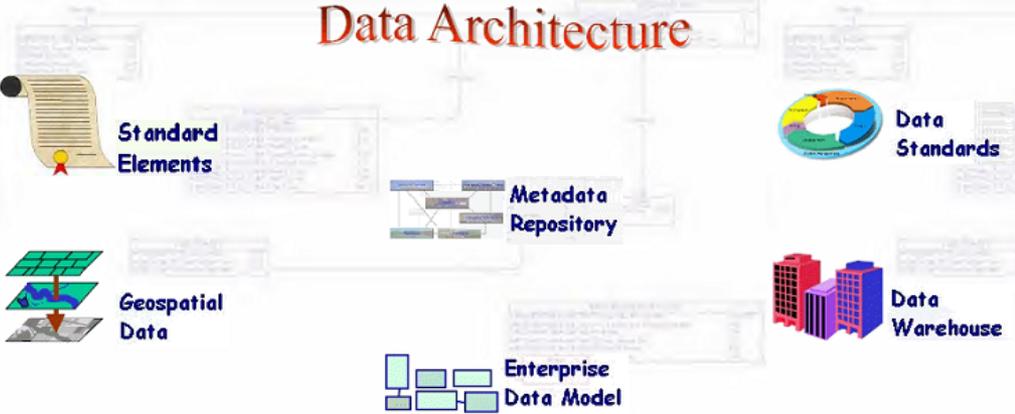
- Develop Geodata Naming Conventions
- Develop and conduct geodata migration to central servers
- Identify Service Center Agency Geodata Administrators
- Procure data and application servers
- Increase telecommunications
- Integrate GPS and PDA tools into daily business practices
- Identify needed Service Center Agency geospatial related training needs.
- Integrate geospatial data requirements into system architecture

SCA Standards



United States Department of Agriculture
Service Center Data Management

Data Architecture



Documents and Presentations

Area: All Tabular Geospatial Warehousing Metadata

Users: Data Stewards Data Managers Database Administrators All Search

Sort: Title Date

[Standards, Policy & Guidelines](#) | [Other Documents](#) | [Theme Outlines](#) | [Web Sites](#) | [Presentations](#)

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Standards, Policy & Guidelines		
Area	Title	Date
Geospatial, Tabular, Warehousing	Geospatial Change Control Policy for Geospatial Data Directory Structure and File Naming Conventions	April 12, 1999
Metadata	Guide for Delimited File Format for Service Center Repository Metadata	April 14, 2000
Metadata	Guide For Developing Service Center Initiative Web Pages	December 21, 1999
Geospatial, Tabular, Warehousing	Interim Policy for Data Management	September 10, 1999
Metadata, Tabular	SCDT Standards & Documents Development Process	December 08, 1998
Geospatial	Standard for Geospatial Data	January 04, 2000
Geospatial	Standard for Geospatial Data Set Metadata	August 31, 1999
Geospatial, Metadata	Standard For Geospatial Dataset File Naming	January 25, 2001
Geospatial, Tabular, Warehousing	Standard for Service Center Data Naming	August 06, 1999
Tabular, Warehousing	Standard for Service Center Tabular Metadata	September 01, 1999

Additional information:

- www.sci.usda.gov/standards/list.html
- dInt20.fsa.usda.gov/scdm/
- www.itc.nrcs.usda.gov/toolkit/IT_Updates.htm

- [Metadata Repository](#)
- [Glossary & Abbreviation](#)
- [Lookup Tables](#)
- [Standard Elements](#)
- [Page Map](#)
- [USDA Service Centers](#)

SCA Supporting Documents

GIS Data and Data Management

- Common Land Unit Standard (12/98)
- Geospatial Change Control Policy for Geospatial Data Directory Structure and File Naming Conventions (4/99)
- Standard for Service Center Data Naming (8/99)
- Geospatial Data Theme Inventory (8/99)
- Geospatial Data Acquisition, Integration, and Delivery National Implementation Strategy Plan (9/99)
- Geospatial Data Stewards (9/99)
- Standard for Geospatial Data (01/00)
- Geospatial Data Management Requirements ((05/00)
- Standard for Geospatial Data Set Metadata (8/00)
- Standard for Geospatial Data Set File Naming (8/00)

SCA Supporting Documents

GIS Data and Data Management

- Geospatial Data Requirement Document (04/00)
- Improving Federal Geospatial Data Coordination (05/00)
- Security Analysis of Network Design Architecture Alternatives for Delivery of Data from USDA Data Centers (10/00)
- Implementation of Geospatial Data Warehouses (12/00)
- USDA Geodata Business Plan (01/01)

GIS Training

- USDA GIS National Training Strategy (6/99)
- Introduction to ArcView for USDA Service Center Agencies (6/99)

Strategy

Service Center GIS Strategy 2001, documents short and long term goals for critical infrastructure items required to support GIS in the SCAs. Budget requirements to meet each milestone is included.



Farm Service Agency
Natural Resources Conservation Service
Rural Development

USDA Service Center Agencies Geographic Information System (GIS) Strategy



<http://www.ftw.nrcs.usda.gov/remote.html>

December 2001

Training

NCGC provides ESRI designed and customized GIS/GPS training to fit user needs. SCA staff are revisiting training needs and will update to reflect present environment and user needs.



www.ftw.nrcs.usda.gov/gistraining/index.htm

Geodata Provisioning

Developed to expedite the migration of existing geodata to centralized servers and support data sharing by SCA staff. Products include standard naming conventions and migration tools.

IT Updates - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit

Address http://www.itc.nrcs.usda.gov/toolkit/IT_Updates.htm Go Links >>

Search: Web Shopping Travel Dictionary Encyclopedia Fun



Customer Service Toolkit

IT Updates

This information is primarily for computer specialists and others responsible for software installation and maintenance in USDA Service Centers and field offices.

For an explanation of the versioning and dating system for documents, click [Versioning](#)

- A new document, **Manual for Managing Geospatial Datasets in Service Centers**, has been written to provide both background information and specific instructions regarding consolidation and migration of geospatial data from workstations to network servers. This document outlines both a manual and an automated process for data migration. The document includes a User's Guide for the GeoData Conversion Utility, developed by NRCS ITC, to enable you to migrate the geospatial data using the automated process.
 - View or download the [Manual for Managing Geospatial Datasets in Service Centers](#). (PDF file; 368 KB)
 - Download the GeoData Conversion Utility ([GeoDataSetup.exe](#); 6.5 MB). Installation procedures are found in the User's Guide, located in Appendix E of the Manual for Managing Geospatial Datasets in Service Centers (above).
 - Download the self-extracting configuration package for Microsoft MDAC Version 2.6. This may be needed for installation of the Geodata Conversion Utility on non-CCE computers running Windows 2000 or NT. After downloading the

Internet

Geodata Provisioning -Training Objective

- Provide a framework and methodology for *consolidating, migrating, and managing shared geodata* for Service Center Implementation.
- All states participated, including Guam and Puerto Rico.
- 98% participation was from NRCS, 77% FSA and 71% RD
- Training completed October, 2002 by K. Green, ITC

Establishing Shared Geospatial Data at Service Centers

- Standardizing geodata directory structure
- Standardizing file names for geospatial data
- Migrating geospatial data at the Service Centers to the servers
 - Manual for Managing Geospatial Data Sets in Service Centers
 - Data Migration Tools

Vision of Geodata Management

- To provide turnkey access to trusted geospatial data for Service Center and state staff; thereby enabling them to focus on their work rather than on obtaining, validating, and managing geospatial data at the local level.

Purpose of the Geospatial Dataset Management Initiative

- Need for an enterprise geospatial system
- Need for new procedures due to technical nature, volume of data, security, and expense
- Need to ensure data currency, accuracy, completeness, authority, and objectivity
- Eliminate data redundancy

Data Management Implementation Path

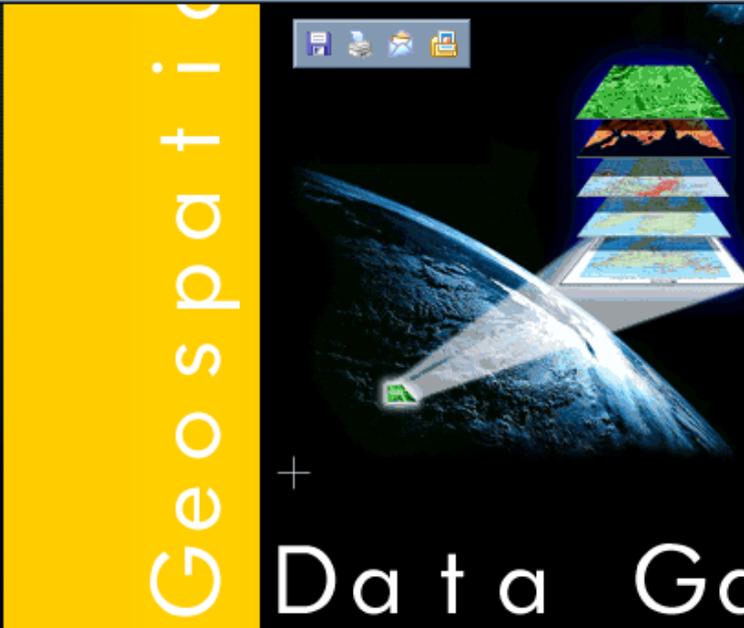
	<i>Past</i>	<i>Present</i>	<i>Future</i>
Data Management	<ul style="list-style-type: none"> •All data local • Project GIS 	<ul style="list-style-type: none"> •One-Stop- Shopping via Gateway •Migration to enterprise GIS 	<ul style="list-style-type: none"> • Centralized data management • Robust Geodata warehouses • Data marts provide web access • Data pushed to Service Centers • Geospatial One Stop
Staff	<ul style="list-style-type: none"> •Local staff need to know a great deal about data management 	<ul style="list-style-type: none"> •Local staff need to know a lot about data mngt 	<ul style="list-style-type: none"> •Local staff need to know minimal amount about data management
IT Technology	<ul style="list-style-type: none"> •Limited GIS licenses 	<ul style="list-style-type: none"> •Enterprise GIS licenses 	<ul style="list-style-type: none"> •T1 Telecommunications • Migration to ArcGIS • SDE • GIS web applications

USDA:NRCS:Geospatial Data Gateway:home - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://lighthouse.nrcs.usda.gov/gateway/gatewayhome.html> Go Links



Geospatial + **Data Gateway**

The Geospatial Data Gateway provides One Stop Shopping for natural resources or environmental data at anytime, from anywhere, to anyone. **The Gateway** allows you to choose your area of interest, browse and select data from our catalog, customize the format, and have it downloaded or shipped on CD.

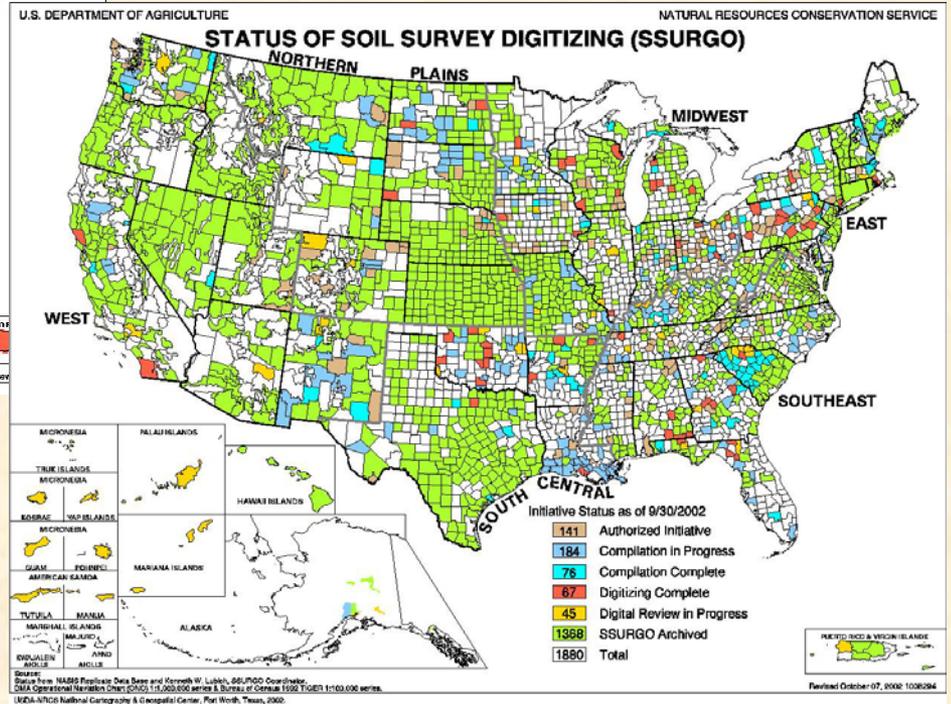
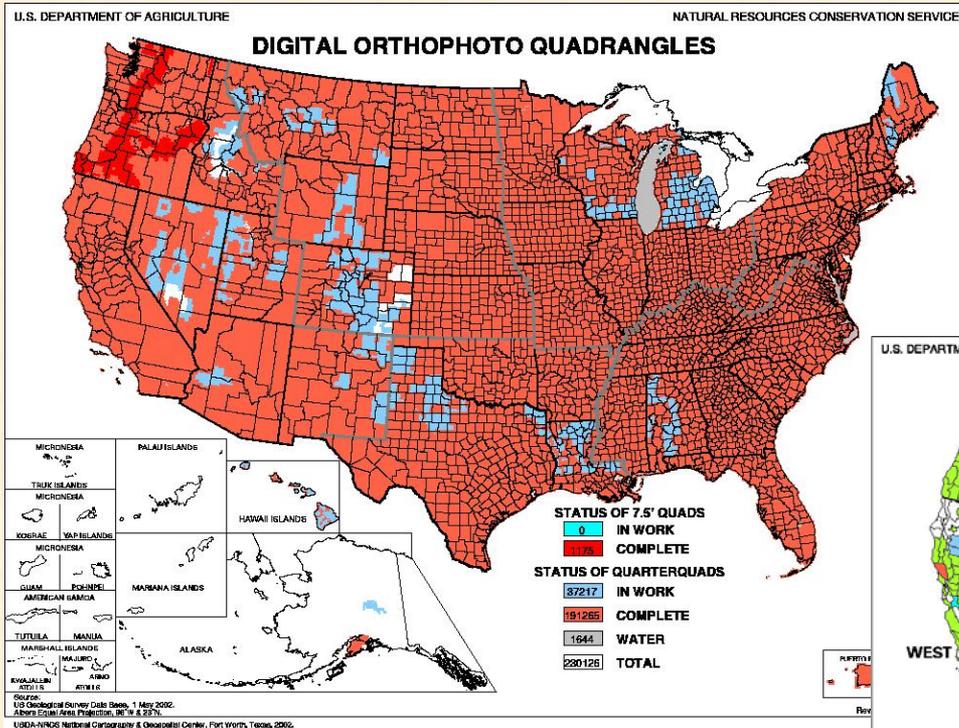
Minimum Requirements: Microsoft Internet Explorer 5.5 or Netscape Communicator 4.76 with Java enabled.

NOTICE: You are entering an Official United States Government System, which may be used only for authorized purposes. Unauthorized modification of any information stored on this system may result in criminal prosecution. The Government may monitor and audit usage of this system, and all persons are hereby notified that use of this system constitutes consent to such monitoring.

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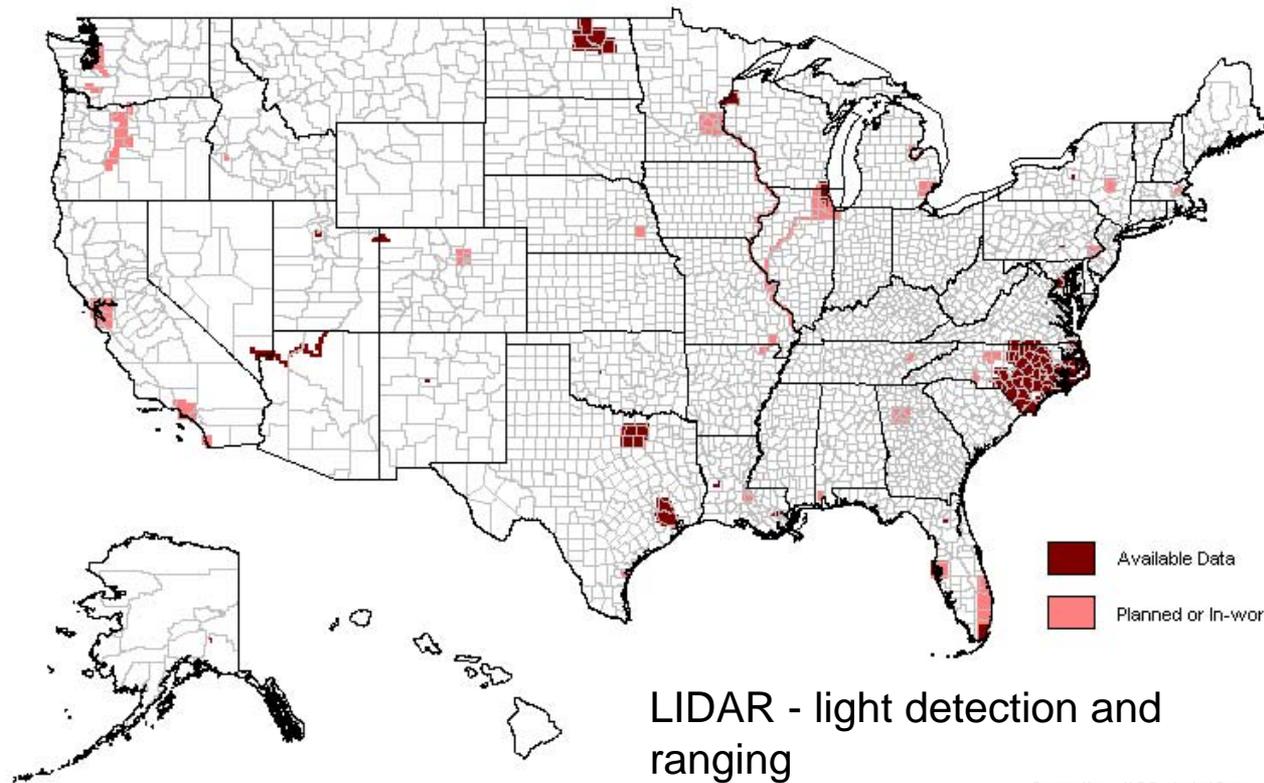
Start | Inbox - Microsoft ... | MOmeeting | USDA:NRCS:G... | 4:24 PM

Historically Collaborative Efforts





High-Resolution Elevation Data
LIDAR Collection



Prepared by: U.S. Geological Survey
National Mapping Discipline
Cooperative Topographic Mapping
08-July-2002

Current NED Development

- Multi-resolution (nested layers)
 - 1-arc-second (30 meters)
 - 1/3-arc-second (10 meters)
 - 1/9-arc-second (3 meters)
- High resolution, “non-standard” source data
 - LIDAR - light detection and ranging
 - IFSAR - interferometric synthetic aperture radar
 - Photogrammetric
 - Cartographic

Multi-Resolution NED: Lincoln, Nebraska



30-meter resolution



10-meter resolution

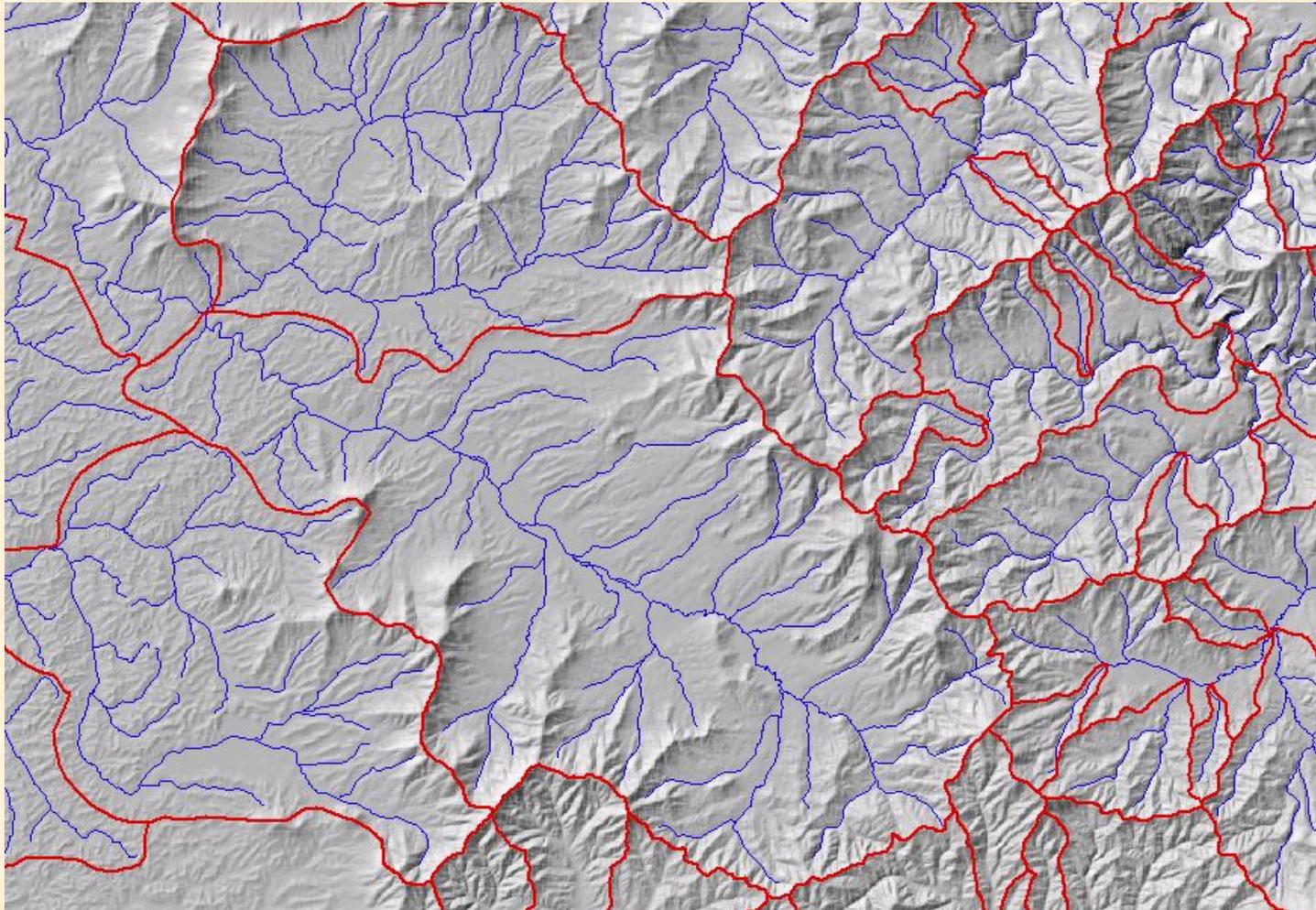


3-meter resolution

The Elevation Derivatives for National Applications (EDNA) (*previously known as NED-H*)

- An interagency effort with its goal the development of a hydrologically correct version of the [National Elevation Dataset \(NED\)](#) and systematic derivation of standard hydrologic derivatives.
- The quality and wall-to-wall coverage of the high resolution digital elevation data, the development of the [National Hydrography Dataset \(NHD\)](#) and advances in GIS application of terrain modeling have made possible the development of these derivative data layers.

Watershed and Subwatershed Hydrologic Units



Mobile Data Computing Device Team



TAKING GIS TO THE FIELD-USING ARC PAD 6.0

The **Introduction to ArcGIS I Course** offered at NCGC has additional training supplement modules developed for specific NRCS applications available for selection by the students. One of the recent supplement additions is a 2 day session on using ArcPad 6.0 for Field Data Collection.

**Course objectives: Introduction to ArcPad and PDA Use
Integration of GPS data into GIS
Creation of specific Edit-Forms for Attribute data collection**

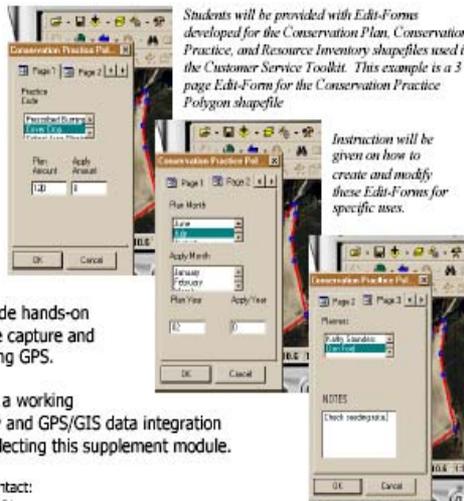


This session will provide hands-on training in GIS feature capture and attribution on-site using GPS.

Students should have a working knowledge of ArcView and GPS/GIS data integration experience prior to selecting this supplement module.

For further information contact:
Patsy Hudson 817.509.3361
Dwain Daniels 817.509.3358

Class schedules are available at:
http://www.ftw.nrcs.usda.gov/gis/training/training_courses.htm



Students will be provided with Edit-Forms developed for the Conservation Plan, Conservation Practice, and Resource Inventory shapefiles used in the Customer Service Toolkit. This example is a 3 page Edit-Form for the Conservation Practice Polygon shapefile

Instruction will be given on how to create and modify these Edit-Forms for specific uses.

- Service Center Agency effort
- Goal: capture agency business needs for the use of field devices.
- Requirements used to support CCE procurement of hardware and software.
- Timeline:
 - procure devices October
 - capture business needs by January
 - develop contract avenue for agencies by spring
- Team lead: Frank Geter, ITC

MDCD Requirements collection sites

- Cultural Resource Compliance - Vermont
- Field Collection and Surveying - Survey Grade GPS and ArcView - Arkansas
- National Resources Inventory - Connecticut
- Soil Survey - South Dakota and Texas
- Conservation Planning - Michigan and Texas
- Wetland Reserve Program - Missouri

USDA ESRI Agreement

Federal Government -- ESRI and USDA - Microsoft Internet Explorer

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www.esri.com/industries/federal/esri_usda.html

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[USDA Agency-Wide Site](#)

ESRI and USDA

This Web site has been created to facilitate and inform United States Department of Agriculture (USDA) agencies on the use and key elements of the recently signed [USDA Department-wide Site License](#) for ESRI GIS Products.

General Information

Start | Inbox - Microsoft ... | MOmeeting | Federal Govern... | Internet | 4:34 PM

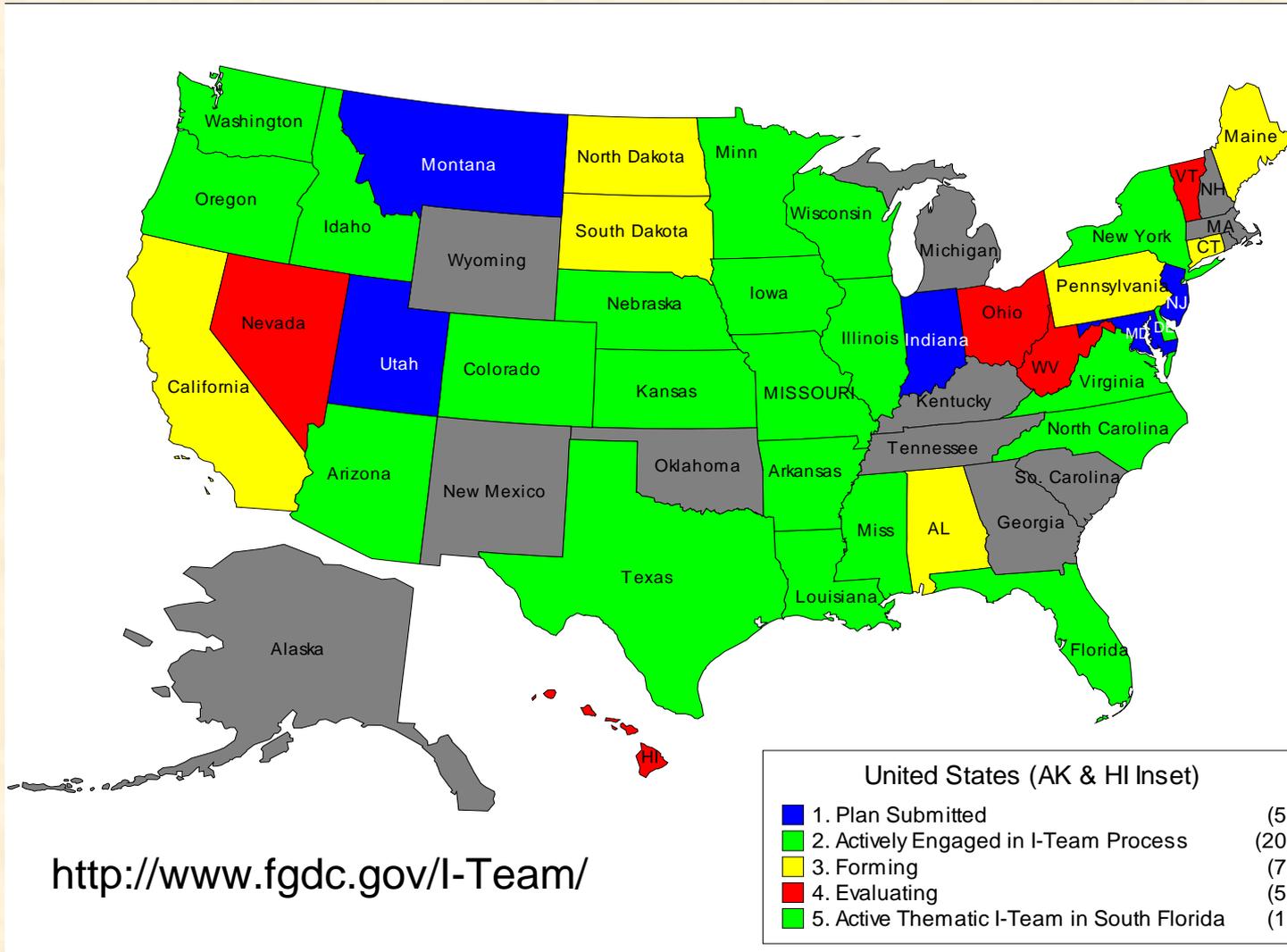
BPA Number: 45-3142-1-05349

GSA Contract Number: GS-35F-5086H

Term of Contract: August 27, 2001 through September 30, 2006

Authorized Buyers: All offices of the USDA

Status of I-Team Formation



NRCS GIS Listserv

Open to all

To Subscribe:

http://gis.itc.nrcs.usda.gov/discussion/subscribe_tool.html

To send message to all on list:

NRCS_GIS@lists.nrcs.usda.gov