Status of the National Soil Geographic Database (NSGD)

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National Soil Geographic Database

- Transactional subsystem
- National database
- Logically integrated with NASIS
  - Shared concepts
  - Logical relationships and linkages
- Quasi physically integrated with NASIS
  - ‘Access’ to NASIS data
## Analysis Team

<table>
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Objectives

- Document detailed requirements
  - What we want the system to do
  - Minimum capabilities for initial release
  - Future capabilities for future releases
- ‘Bridge’ to ITC
  - System analysis
  - Design and development
Business Processes

• Plan and manage projects
• Do projects
• Publish new versions of SSA data
  – Including progressive publication
• Track progress
Plan and Manage Projects

- Analyze existing data and resource conditions
- Define and setup projects
Plan and Manage Projects

- Analysis
  - Capability to export transactional spatial data for area of interest
    - One-way street: data out
  - Analysis environment
    - Local computer
Local Computer

• **Data**
  – Corresponding extent in NASIS local database
  – Local ancillary data and imagery

• **Analysis tools**
  – ArcMap, Access, SQL Management Studio, special purpose NASIS export reports, etc.
  – GIS and DSM models and technologies
Plan and Manage Projects

• Define and setup projects
  – Capability to digitize and store Project Areas
    • Where – location and extent of project
    • Linked to project record in NASIS
  – Capability to digitize and store Work Areas within a Project Area
    • Portion of Project Area
    • Where by planning period and/or by staff
Work Areas

• Mechanism/structure to manage edit authority to the fabric of soil map unit features
  – ‘NASIS Group’ with authority to check out and edit features
  – No spatial edits required ➔ no group assigned to Work Area
Update Soil Survey Project

Target_Map_Units
Project Area and Work Areas

• Track progress spatially

• Requirement of Soil Survey Schedule

Analysis Team

— “…designate on a map where activities ... occur. It is preferred that this be a national coverage so that progress can be summarized more efficiently.”
STATUS of Map Unit Features

• Track progress spatially
• Map unit feature level attribute
  – Track progress throughout the project and publication workflow
  – Trigger QC, QA, and publication processes
  – Identify publication-ready features
STATUS – Initial State

• UNMAP – not mapped

• NODIG – mapped but no digital spatial data
  – Current SDM ‘tabular-only’

• PUB – published mapping
  – Current SDM ‘tabular and spatial’

• DRAFT – current transactional data under development in SSOs and POs
STATUS – Initial Soil Survey

→ UNMAP

← PREMAP

← DRAFT  (linked to NASIS map unit)

← QC_READY  (QC_REJECT)

← QA_READY  (QA_REJECT)

← PUB_READY
STATUS – Update Soil Survey

→ PUB

⟷ DRAFT

⟷ QC_READY (QC_REJECT)

⟵ QA_READY (QA_REJECT)

⟵ PUB_READY
Track Progress Spatially

• Summarize progress by STATUS, Work Area, and Project Area
  – By planning period and/or staff
• Summarize progress by STATUS and SSA, State, MO, or other area types
Do Projects

• Create/update/replace spatial data
• QC/QA
• Communicate
Create/Edit/Replace Spatial Data

• Authority?
  – ‘NASIS Group’ assigned to the Work Area

• Available?
  – No overlapping check outs allowed

• Check Out
  – Two-way street: out, edit, check in
Create/Edit/Replace Spatial Data

• Edit environment
  – ArcMap on local computer
Create/Edit/Replace Spatial Data

• Track correlation decisions spatially
  – Progressive correlation history
  – Compliment/integrate with existing NASIS correlation tracking
QC/QA

• Logical quality of the spatial data
  – Soil science

• Analysis
  – Export capability
  – Analysis environment
Communicate

• Capability to record digital survey flags
  – Mapped points with categorized notes
    • Not point data
  – Communication
    • Within/between SSOs or POs
    • Between different levels of responsibility
TSS and CTA

• Capability to record digital survey flags
  – Mapping errors or issues observed during field visits
  • Digital solution to the “official field office copy” of the soil survey manuscript
  – Communication between users and makers
Publish New Version of SSA Data

- QC/QA
- Publication processing
QC/QA

• Physical quality of the spatial data
  – Geographic science
  – Standards vs. guidelines

• Errors and problems fixed in the transactional database
Publication Processing

• Current DU processes and tools

• Complexities due to not all features within a SSA being at the same STATUS
  – Progressive post of initial SSA
  – Multiple update projects within a SSA
STATUS – Post-publication

→ PUB_READY

← PUB

• Always know which transactional features represent the current published features
Timeline

• FY10 Q1: start Requirements phase of Software Development Lifecycle (SDLC)

• FY10 Q3-4: engage ITC system analysts and architects
  – Continuation of Requirements phase
  – Define scope of initial release

• FY11 Q1: begin Design phase of SDLC