

Soil Survey Center: Update and Status

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**Soil Survey Investigations
National Soil Survey Center**

Lincoln, NE



Topics

- “News”
- Mission
- Mission-related events
- Goals for this meeting



News

Personnel

- Russ Kelsea
- Carol Franks

Feasibility study

- Request for information (RFI)
- First phase completion Dec. '06
- If outsource – 18 months

Ag Hdbk 296 – printing late summer

Field indicators for hydric soils – print late summer



Division Strategic Plan

- **Enhance the cooperator network.**
- **Predict soil behavior and make interpretations on local, regional or national scales in crisis situations.**
- **Develop display systems that help users visualize soil and water behavior across and through landscapes over time.**



Division Strategic Plan

- **Identify and implement time-variant and use-dependent soil properties necessary to address environmental concerns such as resource sustainability and soil, water, and air quality.**
- **Develop and implement interpretive techniques that consider the relationships among individual soils on the landscape and integrate soil characteristics with other features such as geomorphology, climate, land cover, hydrology, roads, and buildings.**



Soil Survey Investigations Staff

13 soil scientists.

- 2 remotely assigned – GPR, EMI
- Physics, pedology, geomorphology, hydrology, chemistry, geochemistry, climatology.



Investigations Staff Functions

- Field assistance for soil sampling
- Geomorphic studies
- Technical reports
- Watershed studies
- Heavy/trace metals
- Soil climate monitoring
- GPR and EMI training and assistance
- Field sampling methods and descriptive techniques
- Field manuals



Laboratory Functions

- Laboratory support – full chemical, mineralogical and physical.
- Acknowledged leader in developing analytical methods – development and “vetting.”
- Quality assurance methods.
- Production and maintenance of methods manuals.
- Automated sample tracking (LIMS), data storage nightly, verified data tied to NASIS.



Working for the Future

- Link Research Priorities Committee (Cooperator) network more closely to Investigations staff.
- Be creative in finding ways to increase the Soil Survey Laboratory efficiencies to meet future needs.
- Evolve interactions with the cooperator network to assist young faculty.
- Create grant and tracking system (first proposals being reviewed).
- Ensure relevance to interpretations – co-evolve with changing needs.



Research Priorities Committee

- National in scope
- **Includes cooperating agencies at all levels.**
- Develop projects which engage partners.
- Focus on needs for interpretations.
- **Link with RFP process.**



Increasing Laboratory Efficiencies

- Priorities relevant to needs
- Efficient sampling design
- Analytical Efficiency – **Dr. Richard Ferguson**
 - Cross-training
 - Smooth flow
 - Automation
- Give technicians partnership in process



Liaison Committee

- Coordinate investigations/requests for assistance within and among regions.
- Work closely with State Soil Scientists and MO leaders on region-specific projects.
- Work with laboratory priorities committee.
- Network with cooperators.



Historical Structure of Cooperator Network

- Cooperate with field soil survey
- Technical support – genesis and classification studies
- Laboratory support for state effort
- Student internships



New Activities for Cooperator Network

- Cooperative research at process scales.
- Active student identification and recruitment.
- Proposal reviews.
- Model development and refinement (SoLIM, watersheds).
- Some assistance with routine analyses.
- Transfer of thesis/dissertation data.



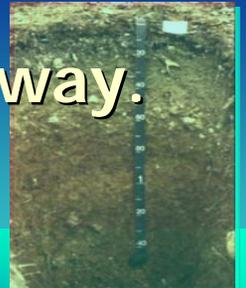
Current Major Long-Term Projects

- **Watershed studies (It's a soil and water survey).**
- **Use-dependent soil properties.**
- **Gypsiferous soils.**
- **Trace/heavy metals.**



Database committee

- Determine the quality of archived data.
- Determine the completeness of archived data.
- Ensure that all benchmark soils are represented.
- Design sampling strategy to complete data base.
- Coordinate integration of university/cooperator soil data bases in a systematic and consistent way.



Northeast Research Needs

1. Runoff / infiltration / Ksat esp. at soil / bedrock interface.
2. Urban storm water runoff management.
3. Data base integration – all data into one accessible location / format.
4. Better tools for field data collection.
5. Improve statistical processes – How to make an observation “count as much as possible and be defensible.” *From Ed White*

