ISSUE Work Group NCSS Conference

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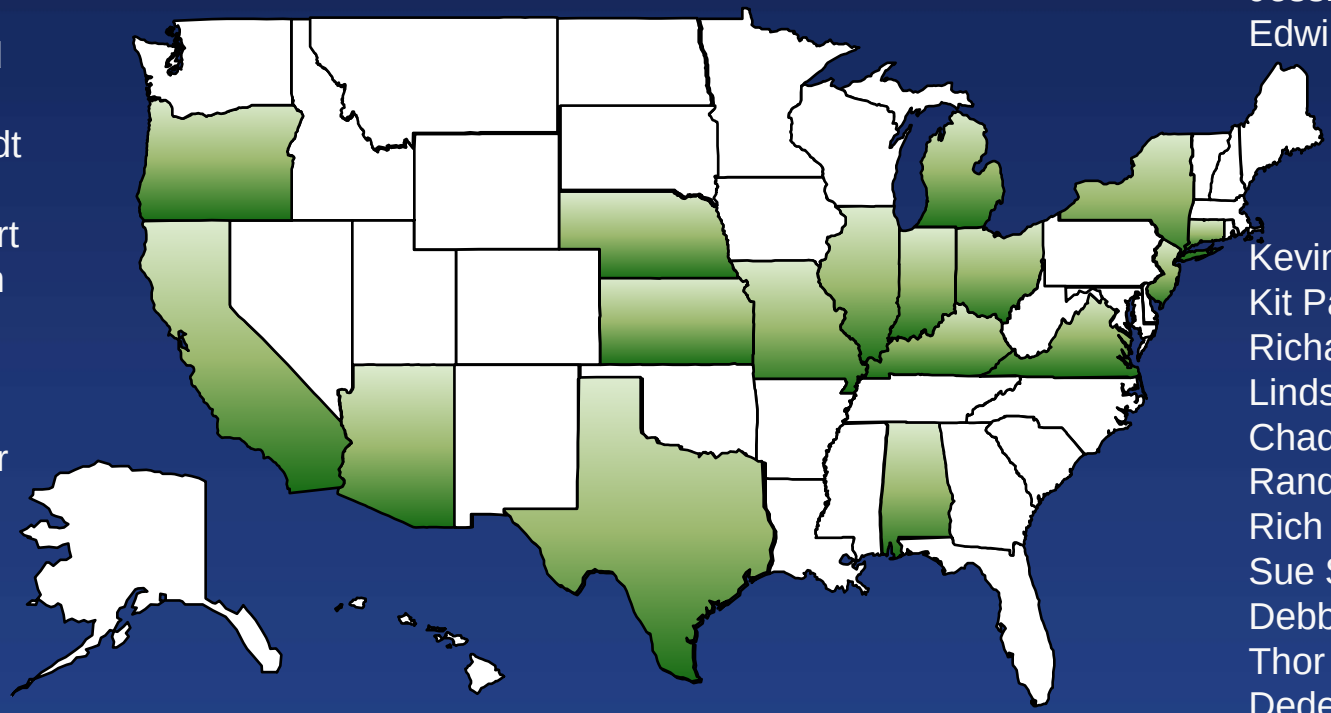

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Issues for Soil Survey in Urban Environments

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- First part of the presentation:
  - What is an Urban Soil
  - What is an Urban Interpretation
  - Grouping and Naming Interpretations
  - Standardization of National Interpretations
  - Site Specific Information Tool
  - Prime Farmland

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What is an Urban Soil?

An urban soil is one that is so altered by human activities that it is no longer recognizable as a soil that has developed under natural conditions due to transportation, mixing, compaction, and the additions or removal of materials (mineral or organic), can support plant growth, is not used for food or fiber production, and exists within the limits of a named population center.

The writings of Bockheim, Craul, Effland, Evans, Lehmann, Pouyat, and Starr were drawn upon during our discussions.

What is an Urban Interpretation?

For the want of a better term, urban interpretations, are those interpretations requested by both land use planners and individuals for a wide variety of uses and/or stresses placed on soil that are not related to large-scale food/fiber production. These interpretations may be applied to soils in both urban and suburban areas.

Voting Results

≅ 1920 primary interps (all NASIS sites)
≅ 1700 received votes
Final results yielded 116 primary interps. This includes, as one primary interp, all the multiple state versions of that primary interp.

Major Groups

Building Site Development (large area)
Building Site Development (small area)
Human Health
Infrastructure - Transportation
Infrastructure - Utilities
Recreation
Soil Health / Restoration
Stormwater Management
Vegetation Management
Waste Management Systems (large area)
Waste Management Systems (small area)

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Grouping and Naming Interpretations

- Phase out use of PREFIXES.
- The name of the Primary Interpretation should "stand on its own"
- Properties, evaluations, and subrules are developed independent of land use
- Rather than force the user to sift through a 100 or more interpretations for the 10 that affect the proposed landuse we should be looking at providing a 'suite' of interps for various landuses.

Scenario – Build a home and small business on a lot without access to municipal services

- ✓ Dwellings w/ Basements
- ✓ Local Roads and Streets
- ✓ Lawns and Landscaping
- ✓ Septic Tank Absorption Fields
- ✓ Small Commercial Buildings
- ✓ Shallow Pipelines
- ✓ Storm Water Management

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Standardization of National Interpretations

To make interpretation results easier for users to understand, and thus more likely to use, the work group proposes a flight path with five way points to follow in standardizing interpretations.

- Phase 1 – Reformat reports to make them easier to understand.
- Phase 2 – Display RVs as whole numbers in the tables
- Phase 3 – Redefine RVs so that higher numbers are always ‘gooder’
- Phase 4 – Convert limitation ratings to suitability ratings
- Phase 5 – Standardize reason terminology and round RV results down to the nearest multiple of 5

The full report, with figures and tables, is on the ISSUE SharePoint site.

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Site Specific Information Tool

This task has been put on hold for the time being.

I want to express my thanks for all the work the ISSUE work group has done. I had wanted to do more but the work was overcome by events, namely RaCA, DSP, and ABC

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Prime Farmland

- There has been some interest in identifying what was prime farmland prior to urban encroachment.
  - As I understand it
- Multiple documents were reviewed and several discussions held with Ray Sinclair

Conclusions:

- The only way to identify prime farmland soils in urban complexes is by changing the laws regarding it.
- If you have any further questions please contact Ray Sinclair at the National Soil Survey Center.

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Urban standards discussions

- DMU development
  - Component properties
  - Prior use information
- Map unit design
  - Slope
  - Phase names
- Documentation standards
- Mapping/map development procedures
- Correlation process

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Results of urban standards discussions

- DMU development
  - Soil properties to be assigned to a component
    - Driven by interpretations
  - Capturing prior use information
    - Construction history map

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Results of urban standards discussions

- Map unit design
  - Slope
    - Consider continuous slope layer based on DEM/LIDAR
    - Provide urban soil property layers in addition to traditional soil survey products
  - Standardize map unit phase names
    - Use substratum phase when known
    - Use physiographic phase
  - Component phase naming
    - Classify to at least the Great Group level
    - Buried Soil Technical Note

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Results of urban standards discussions

- Documentation standards
  - Minimums based on taxa level
  - Geophysical tools
- Mapping/map development procedures
  - MO12/NYC Soil Survey Guidance
  - MO18 Urban Mapping Procedures Guidance
    - Instructional guide to ensure consistency
  - CBYD
- Correlation process
  - No different than existing standards

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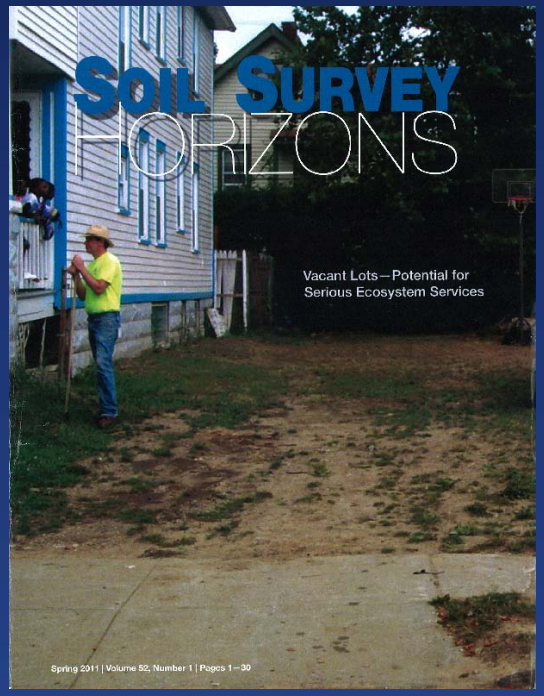
Opportunities

- Outreach to Low Impact Development community
- Set methodology/standards used in urban areas with partners
- Soil property layer maps as a new product
- ESD equivalent – how to get to suitable soil conditions for various soil uses