NASIS 6.0
Web Soil Survey 2.1

West Region
Cooperative Soil Survey Conference
June 19, 2008

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Background

- NASIS originally released in 1994
- UNIX® based with INFORMIX® database management system
- Has had several updates
- Currently at version 5.4

NASIS 6.0

- Converts current functionality of NASIS to Microsoft .NET® and SQL Server® platform
  - Current industry and agency standard
  - Will facilitate later integration of spatial data

Features

- New interface
- Similar to other Microsoft® applications
  - Rearrange, hide/unhide, and resize columns
  - Sort on any column
  - Filter data
  - View all rows in any table

Features

- Will be a client based application
  - SQL Server Express® on local computer
    - Connected via network to central server
  - Will download subset database (replica) to your computer
  - Uses replication processes to keep data synchronized with central server
  - Conflict resolution
  - Can disconnect your computer from network to edit data

Features

- Report, query, and interpretation editors are different
  - Will work like Soil Data Mart Report Manager
  - Interpretation editor will automatically load sub-rules, evaluations, and property scripts

Features

- Existing reports, queries, rules, evaluations, and properties will be converted
  - Many reports and queries will need revision due to data model changes
  - Interpretations should mostly be OK

Data Model Changes

- Revised Soil Survey Schedule schema
  - Includes Technical Soil Services
  - New Project data object
- Mapunit tables become separate data object – ownership by map unit

Data Model Changes

- Subaqueous soil proposals
- Mica proposal
- More anthropogenic choices
- Gypsum choices
- Data certification proposal
- National mapunit symbol
- Several minor additions/changes

Data Model Changes

- SSURGO changing edits will be made after 6.0 is released
  - These impact other applications such as Soil Data Mart, Web Soil Survey, Access templates, and Soil Data Viewer rules.

Pedon data import

- The process will change
  - In 6.0, the pedon.mdb file will be converted into SQL Server Express® format on your local computer, then saved to NASIS

Training

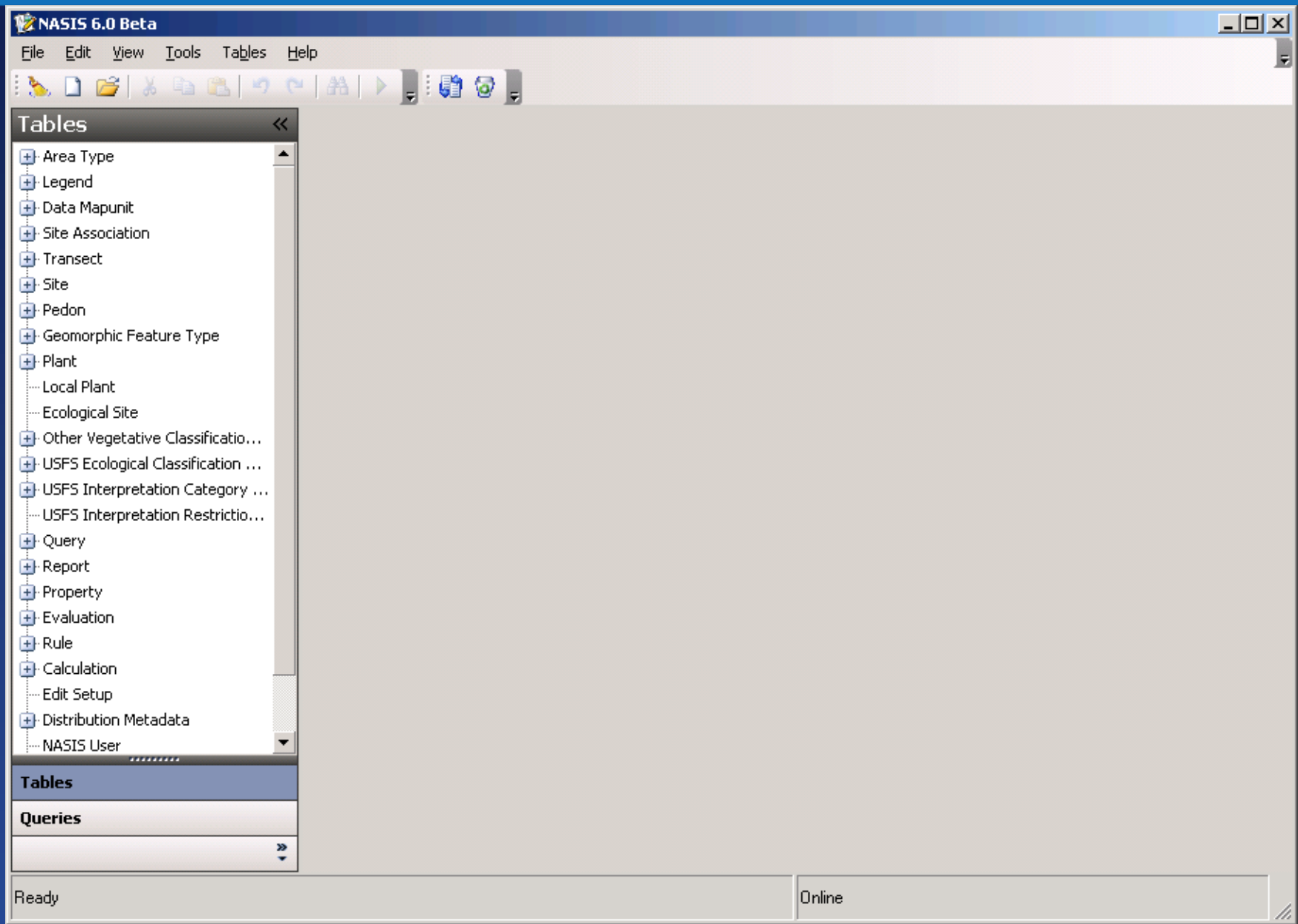
- Some training will be needed
  - New user interface and processes
  - Paul Finnell plans to update existing training modules
  - Plan to use Live Meeting or Net Meeting sessions as much as possible
  - Record sessions for later playback

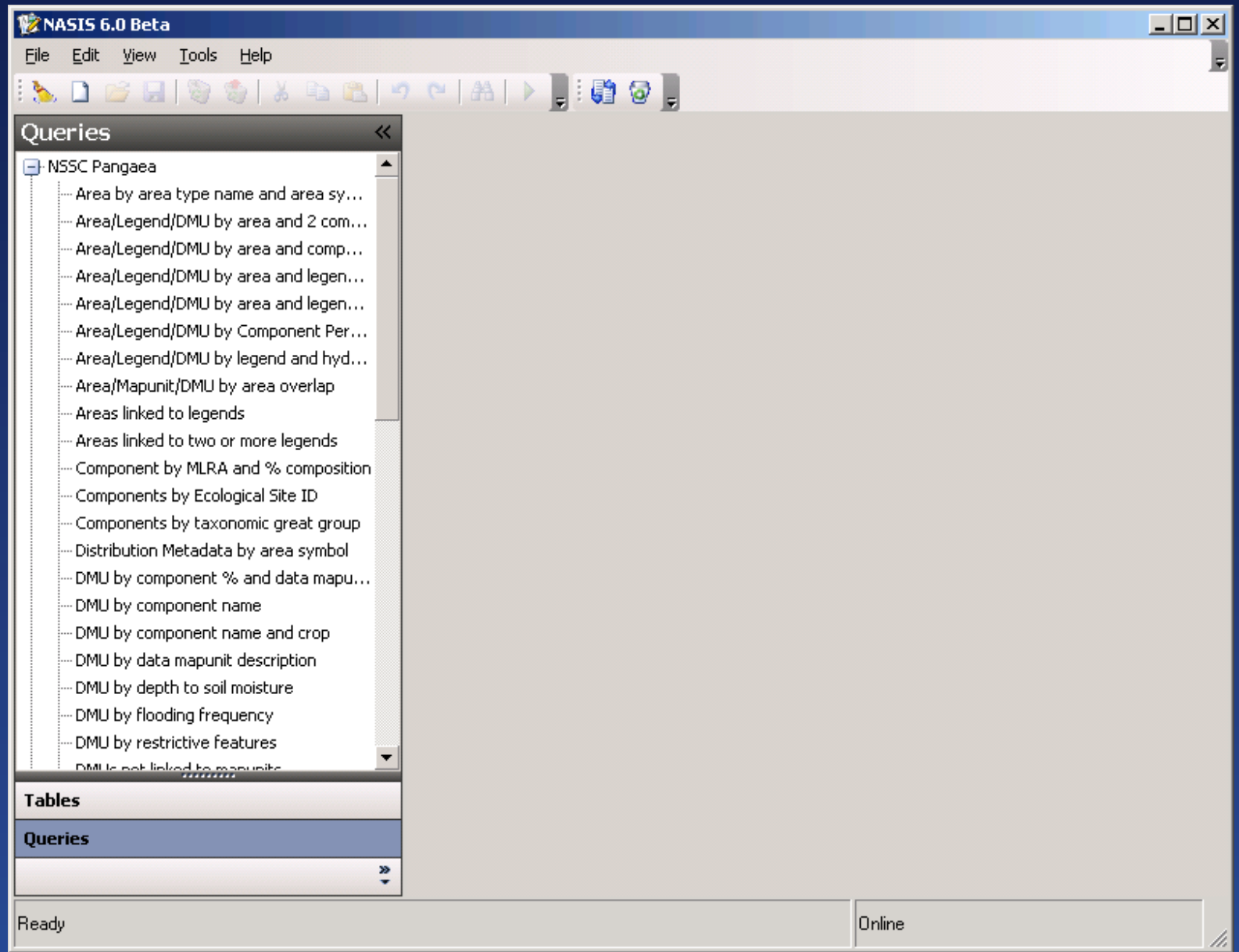
Getting Ready

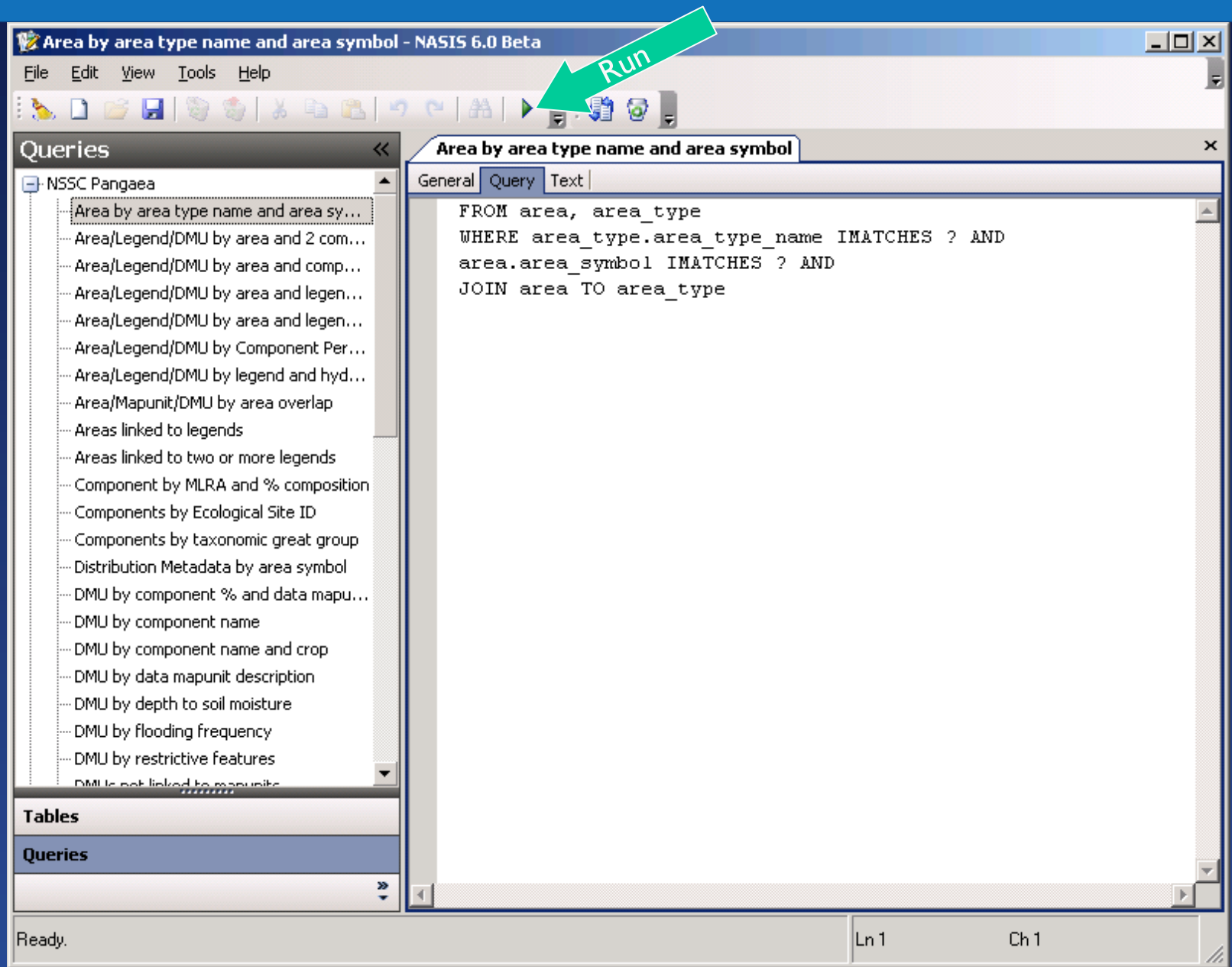
- SQL Server Express® will need to be loaded on all computers.
- Some data clean-up
  - Choice list implemented for Principal Meridians
  - Names listed in Legend Staff table will be converted to NASIS User names – need to match.
- Guidance will be distributed

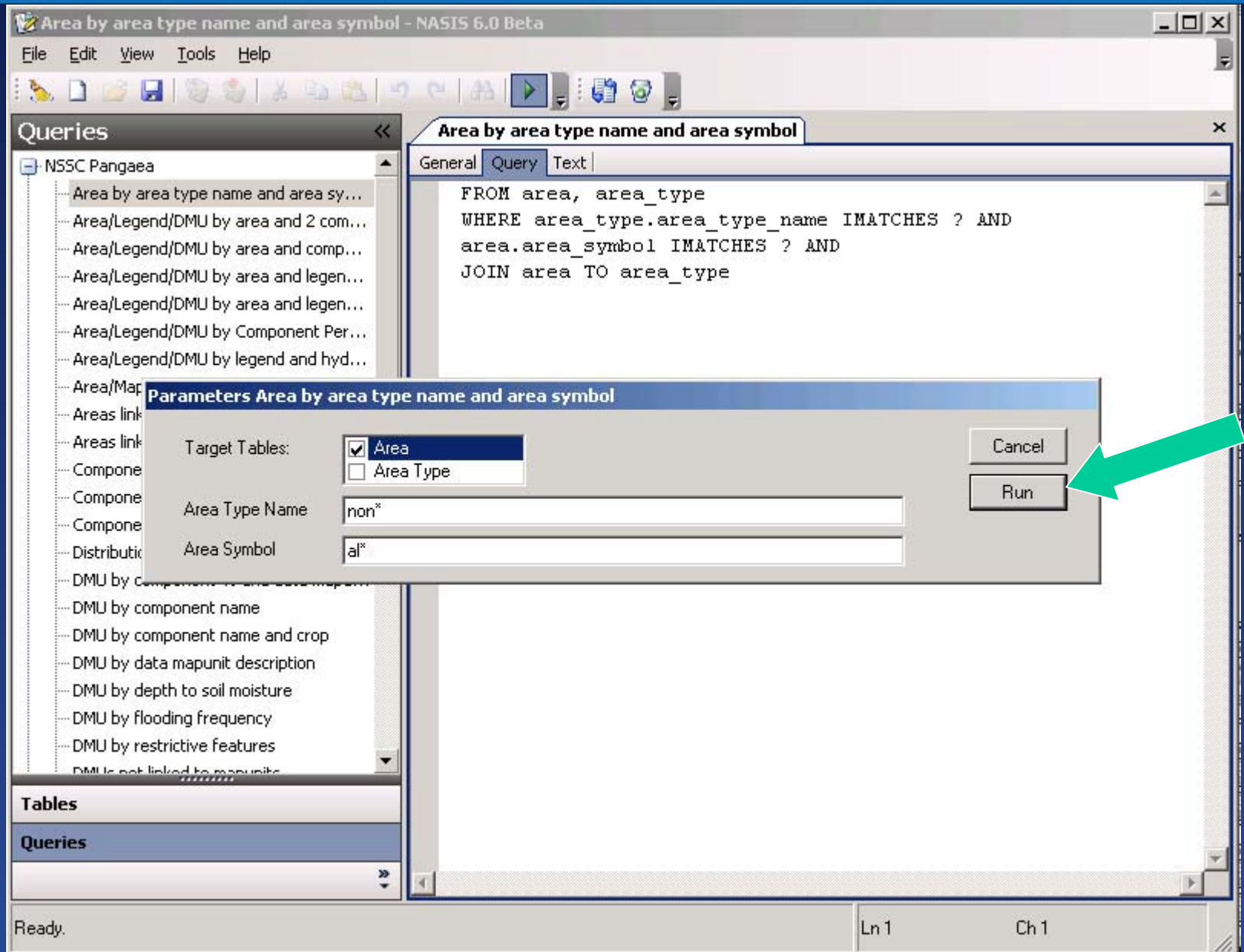
Timeline

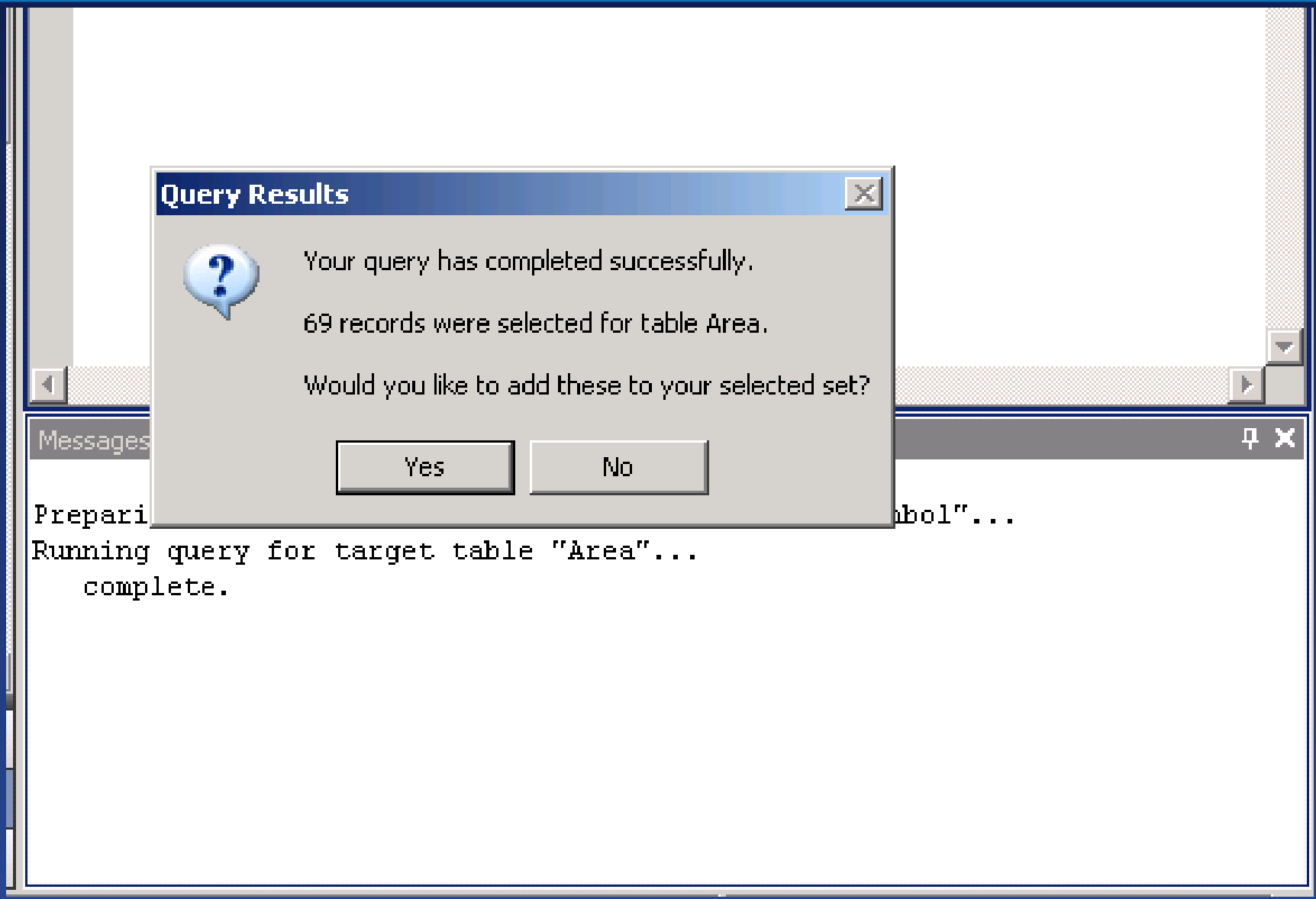
- Early testing has begun
- Beta testing – Sept/Oct 2008
- Final testing – Oct/Nov 2008
- Release 6.0 and convert data – Dec 2008

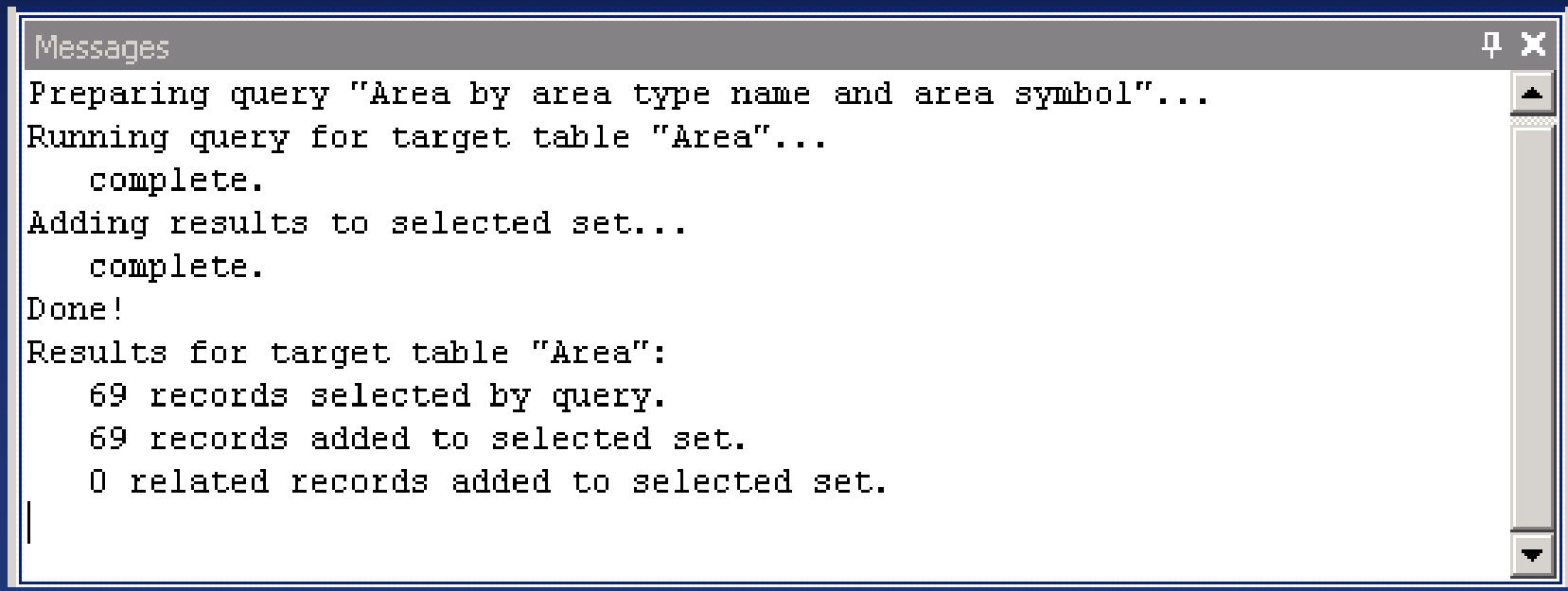

NASIS 6.0 Beta
File Edit View Tools Tables Help
Tables
Area Type
Legend
Data Mapunit
Site Association
Transect
Site
Pedon
Geomorphic Feature Type
Plant
Local Plant
Ecological Site
Other Vegetative Classificatio...
USFS Ecological Classification ...
USFS Interpretation Category ...
USFS Interpretation Restrictio...
Query
Report
Property
Evaluation
Rule
Calculation
Edit Setup
Distribution Metadata
NASIS User
Tables
Queries
Ready
Online


NASIS 6.0 Beta
File
Edit
View
Tools
Help
Queries
NSSC Pangaea
Area by area type name and area sy...
Area/Legend/DMU by area and 2 com...
Area/Legend/DMU by area and comp...
Area/Legend/DMU by area and legen...
Area/Legend/DMU by area and legen...
Area/Legend/DMU by Component Per...
Area/Legend/DMU by legend and hyd...
Area/Mapunit/DMU by area overlap
Areas linked to legends
Areas linked to two or more legends
Component by MLRA and % composition
Components by Ecological Site ID
Components by taxonomic great group
Distribution Metadata by area symbol
DMU by component % and data mapu...
DMU by component name
DMU by component name and crop
DMU by data mapunit description
DMU by depth to soil moisture
DMU by flooding frequency
DMU by restrictive features
Tables
Queries
Ready
Online


Area by area type name and area symbol - NASIS 6.0 Beta
File Edit View Tools Help
Run
Queries
NSSC Pangaea
Area by area type name and area sy...
Area/Legend/DMU by area and 2 com...
Area/Legend/DMU by area and comp...
Area/Legend/DMU by area and legen...
Area/Legend/DMU by area and legen...
Area/Legend/DMU by Component Per...
Area/Legend/DMU by legend and hyd...
Area/Mapunit/DMU by area overlap
Areas linked to legends
Areas linked to two or more legends
Component by MLRA and % composition
Components by Ecological Site ID
Components by taxonomic great group
Distribution Metadata by area symbol
DMU by component % and data mapu...
DMU by component name
DMU by component name and crop
DMU by data mapunit description
DMU by depth to soil moisture
DMU by flooding frequency
DMU by restrictive features
Tables
Queries
Area by area type name and area symbol
General Query Text
FROM area, area_type
WHERE area_type.area_type_name IMATCHES ? AND
area.area_symbol IMATCHES ? AND
JOIN area TO area_type
Ready.
Ln 1
Ch 1

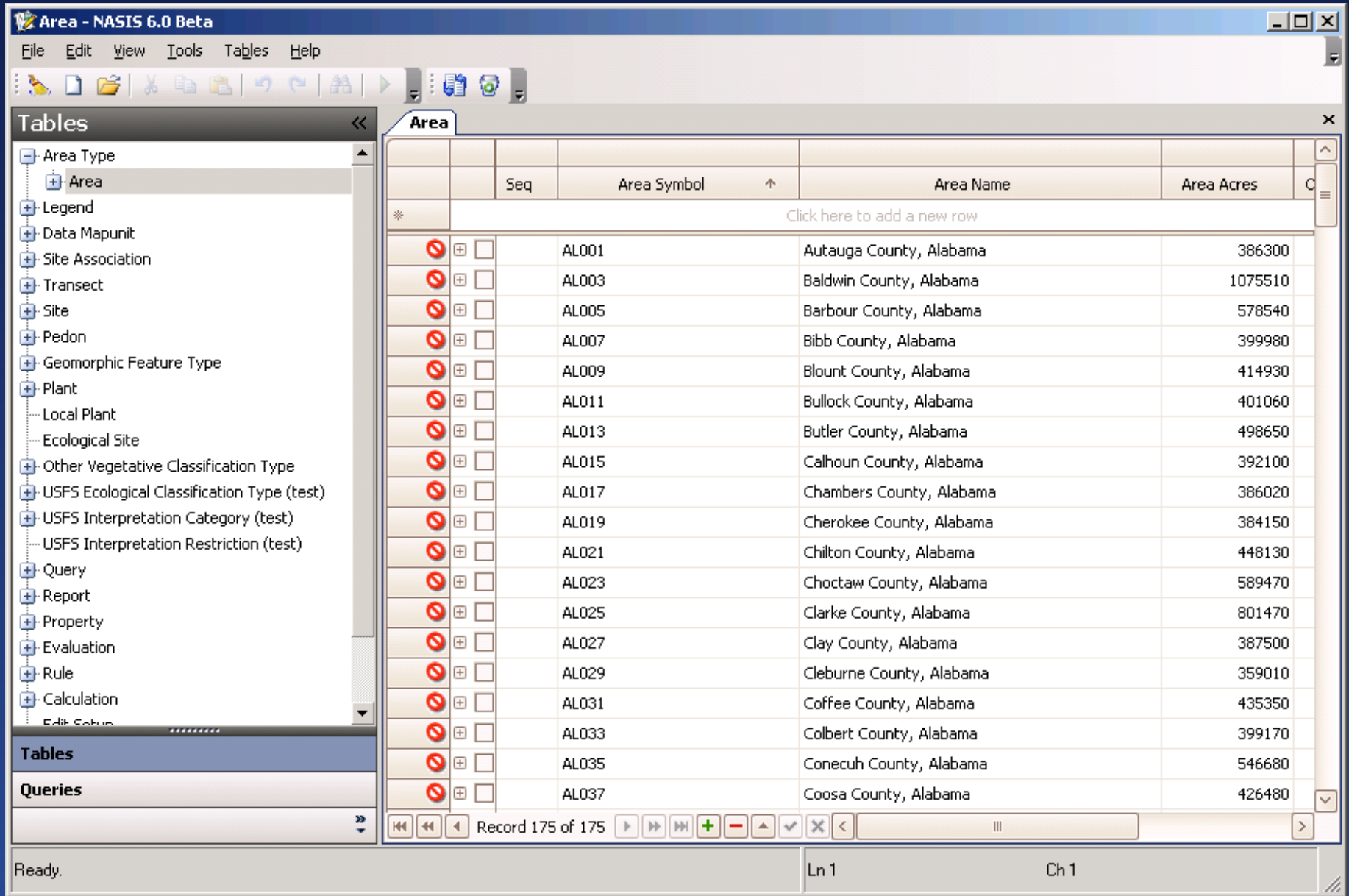

Area by area type name and area symbol - NASIS 6.0 Beta
File Edit View Tools Help
Queries
NSSC Pangaea
Area by area type name and area sy...
Area/Legend/DMU by area and 2 com...
Area/Legend/DMU by area and comp...
Area/Legend/DMU by area and legen...
Area/Legend/DMU by area and legen...
Area/Legend/DMU by Component Per...
Area/Legend/DMU by legend and hyd...
DMU by component name
DMU by component name and crop
DMU by data mapunit description
DMU by depth to soil moisture
DMU by flooding frequency
DMU by restrictive features
Tables
Queries
Area by area type name and area symbol
General Query Text
FROM area, area_type
WHERE area_type.area_type_name IMATCHES ? AND
area.area_symbol IMATCHES ? AND
JOIN area TO area_type
Parameters Area by area type name and area symbol
Target Tables:
Area
Area Type
Area Type Name
non*
Area Symbol
al*
Cancel
Run
Ready.
Ln 1
Ch 1


Query Results
Your query has completed successfully.
69 records were selected for table Area.
Would you like to add these to your selected set?
Yes
No
Messages
Prepari
bol"...
Running query for target table "Area"...
complete.


Messages
Preparing query "Area by area type name and area symbol"...
Running query for target table "Area"...
complete.
Adding results to selected set...
complete.
Done!
Results for target table "Area":
69 records selected by query.
69 records added to selected set.
0 related records added to selected set.

Messages

```
Preparing query "components by component name"...
Running query for target table "Component"...
   complete.
Adding results to selected set...
   complete.
Done!
Results for target table "Component":
   22 records selected by query.
   22 records added to selected set.
   1236 related records added to selected set.
```


Area - NASIS 6.0 Beta
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Area Type
Area
Legend
Data Mapunit
Site Association
Transect
Site
Pedon
Geomorphic Feature Type
Plant
Local Plant
Ecological Site
Other Vegetative Classification Type
USFS Ecological Classification Type (test)
USFS Interpretation Category (test)
USFS Interpretation Restriction (test)
Query
Report
Property
Evaluation
Rule
Calculation
Tables
Queries
Area
Seq
Area Symbol
Area Name
Area Acres
Click here to add a new row
AL001 Autauga County, Alabama 386300
AL003 Baldwin County, Alabama 1075510
AL005 Barbour County, Alabama 578540
AL007 Bibb County, Alabama 399980
AL009 Blount County, Alabama 414930
AL011 Bullock County, Alabama 401060
AL013 Butler County, Alabama 498650
AL015 Calhoun County, Alabama 392100
AL017 Chambers County, Alabama 386020
AL019 Cherokee County, Alabama 384150
AL021 Chilton County, Alabama 448130
AL023 Choctaw County, Alabama 589470
AL025 Clarke County, Alabama 801470
AL027 Clay County, Alabama 387500
AL029 Cleburne County, Alabama 359010
AL031 Coffee County, Alabama 435350
AL033 Colbert County, Alabama 399170
AL035 Conecuh County, Alabama 546680
AL037 Coosa County, Alabama 426480
Record 175 of 175
Ready.
Ln 1
Ch 1

Beyond 6.0

- Content management system
- Import USFS data from Terra
- Form-based data entry
- SSURGO - data model changes
- Spatial data integration
- Dynamic soil properties (soil change)
- Integrated resource inventory system
- Integration of lab data

Web Soil Survey 2.1

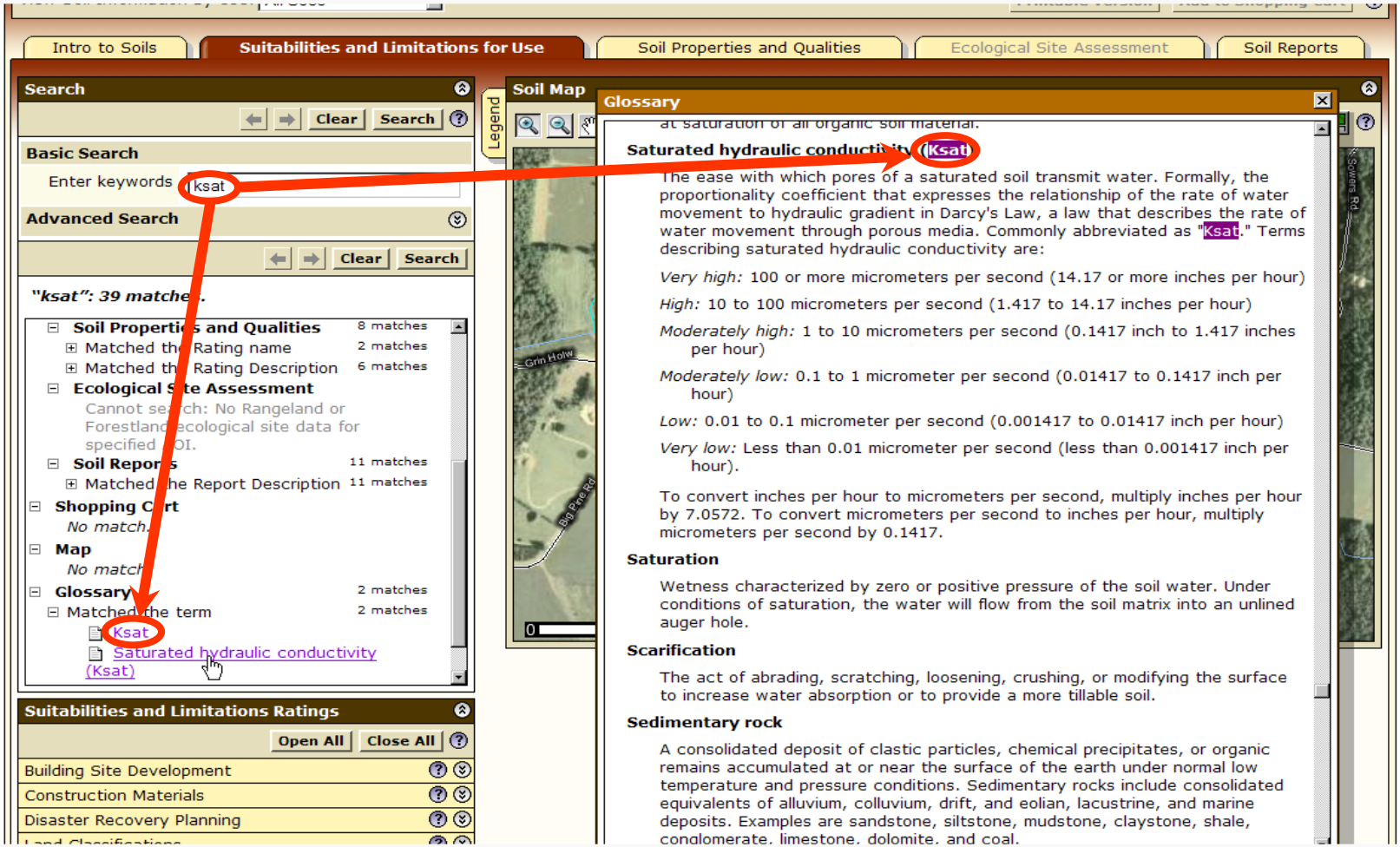
Time line:

- Beta testing SOON (volunteers?)
- Programming should be completed July 2008
- Available for general use once ITS in Kansas City deploys new servers and loads the applications

New Features

- Search function
  - Should help new users find desired information
  - Searches on keywords or phrases

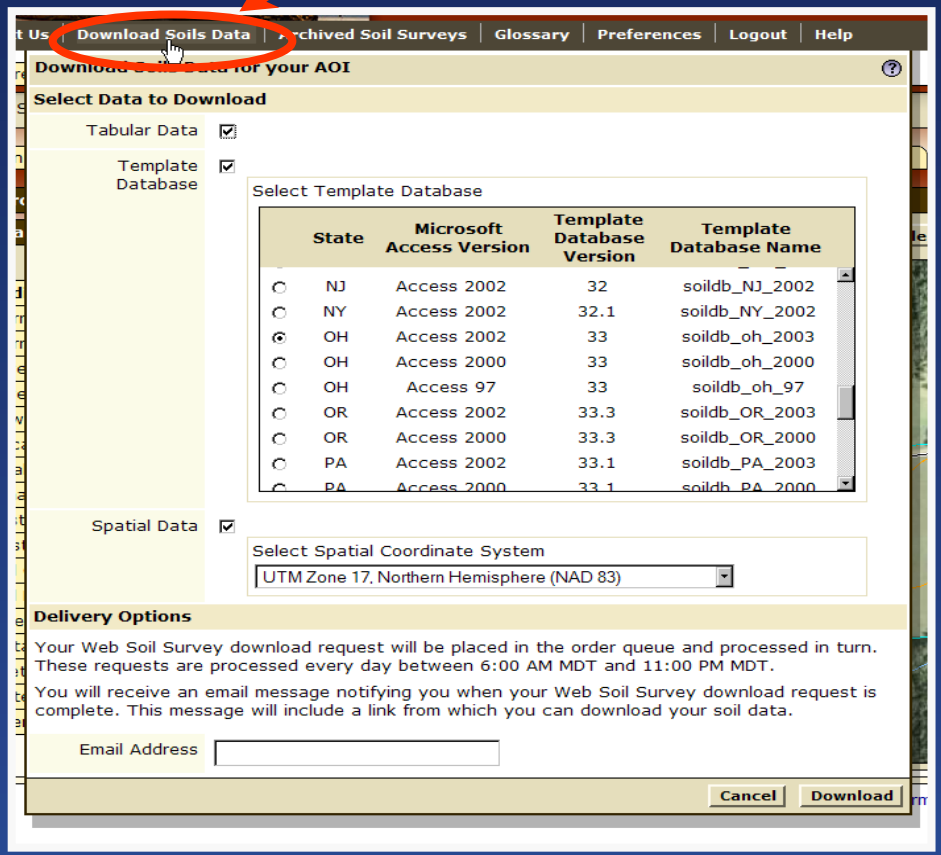
Search


Intro to Soils
Suitabilities and Limitations for Use
Soil Properties and Qualities
Ecological Site Assessment
Soil Reports
Search
Clear
Search
Basic Search
Enter keywords
ksat
Advanced Search
Clear
Search
"ksat": 39 matche
Soil Properti s and Qualities 8 matches
Matched th Rating name 2 matches
Matched th Rating Description 6 matches
Ecological S te Assessment
Cannot se ch: No Rangeland or Forestland ecological site data for specified OI.
Soil Repor s 11 matches
Matched he Report Description 11 matches
Shopping C rt
No match
Map
No match
Glossary 2 matches
Matched the term 2 matches
Ksat
Saturated hydraulic conductivity (Ksat)
Suitabilities and Limitations Ratings
Open All
Close All
Building Site Development
Construction Materials
Disaster Recovery Planning
Soil Map
Legend
Glossary
at saturation of all organic soil material.
Saturated hydraulic conductivity (Ksat)
The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are:
Very high: 100 or more micrometers per second (14.17 or more inches per hour)
High: 10 to 100 micrometers per second (1.417 to 14.17 inches per hour)
Moderately high: 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour)
Moderately low: 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour)
Low: 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour)
Very low: Less than 0.01 micrometer per second (less than 0.001417 inch per hour).
To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.
Saturation
Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.
Scarification
The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.
Sedimentary rock
A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

New Features

- Clip, zip, & ship
  - Clips and downloads SSURGO data for the AOI

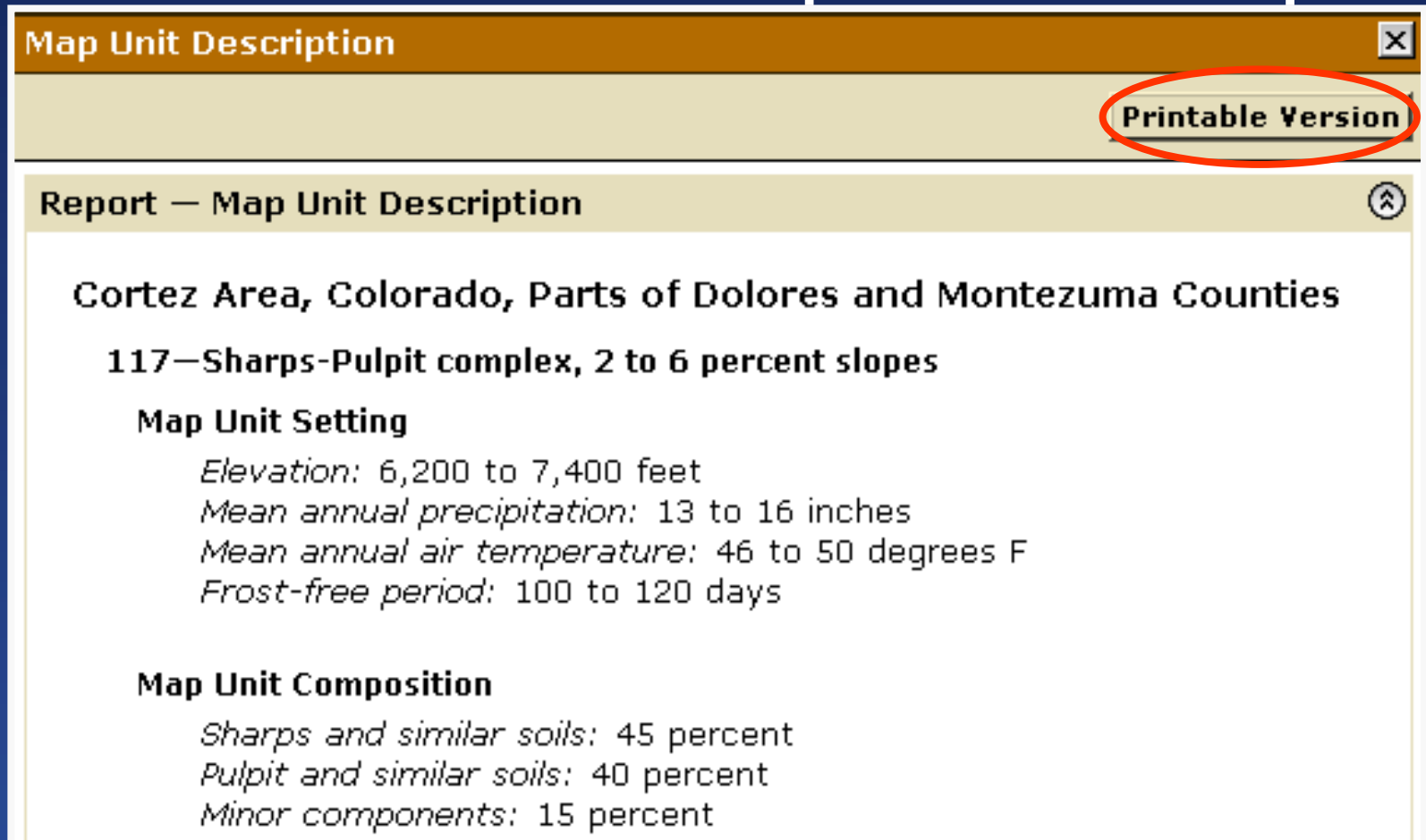
Clip, Zip, and Ship (AOI Data Download)



- Spatial data down-loaded in your choice of projection (UTM, State plane, geographic)
- Attribute data downloaded for import into a SSURGO template of your choice

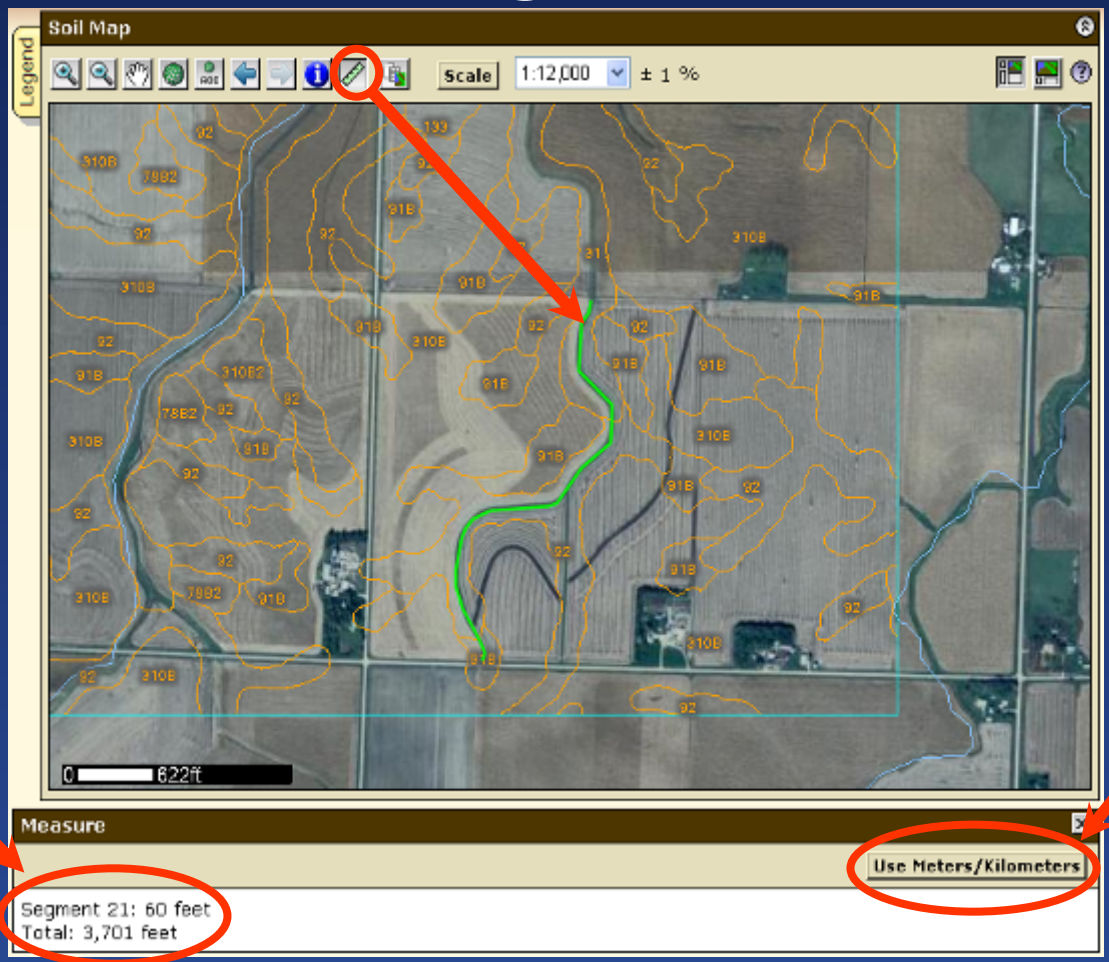
New Features

- Print individual map unit descriptions



New Features

- Linear measuring tool



Distance for Multiple Segments and Totals

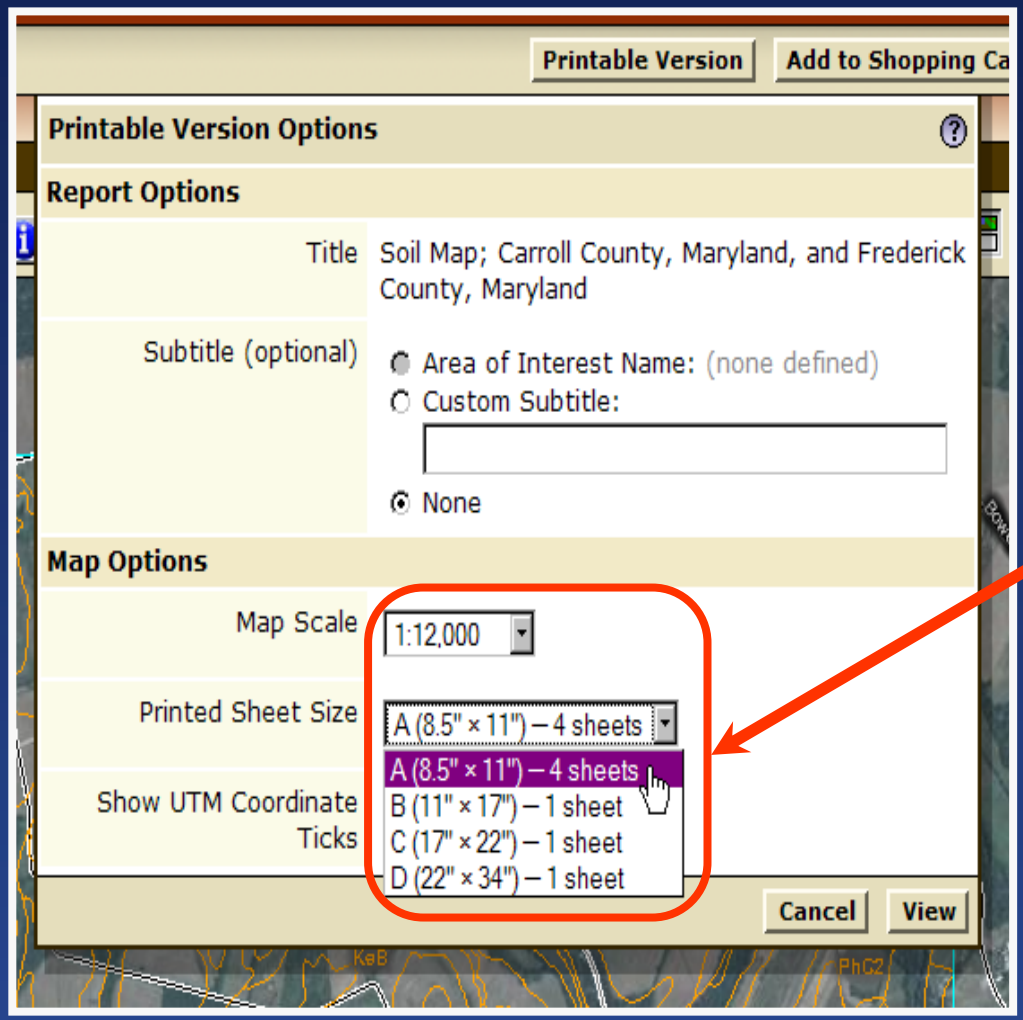
Metric or English Dimensions

New Features

- Improved map unit symbol placement
- Disclaimers added
  - On-site investigation
  - Estimated vs. measured data
  - Maximum scale of maps
- New navigation data layers

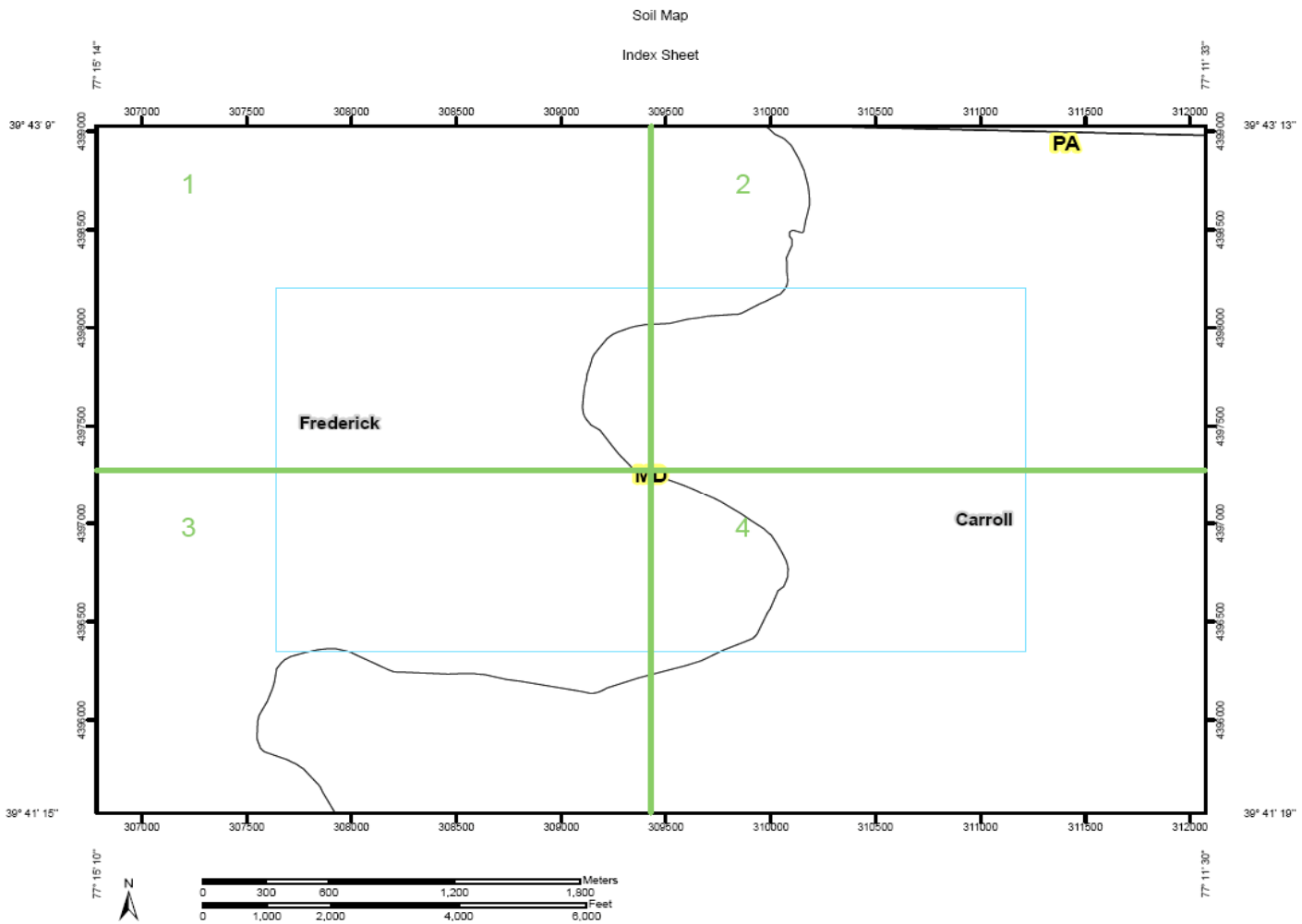
New Features

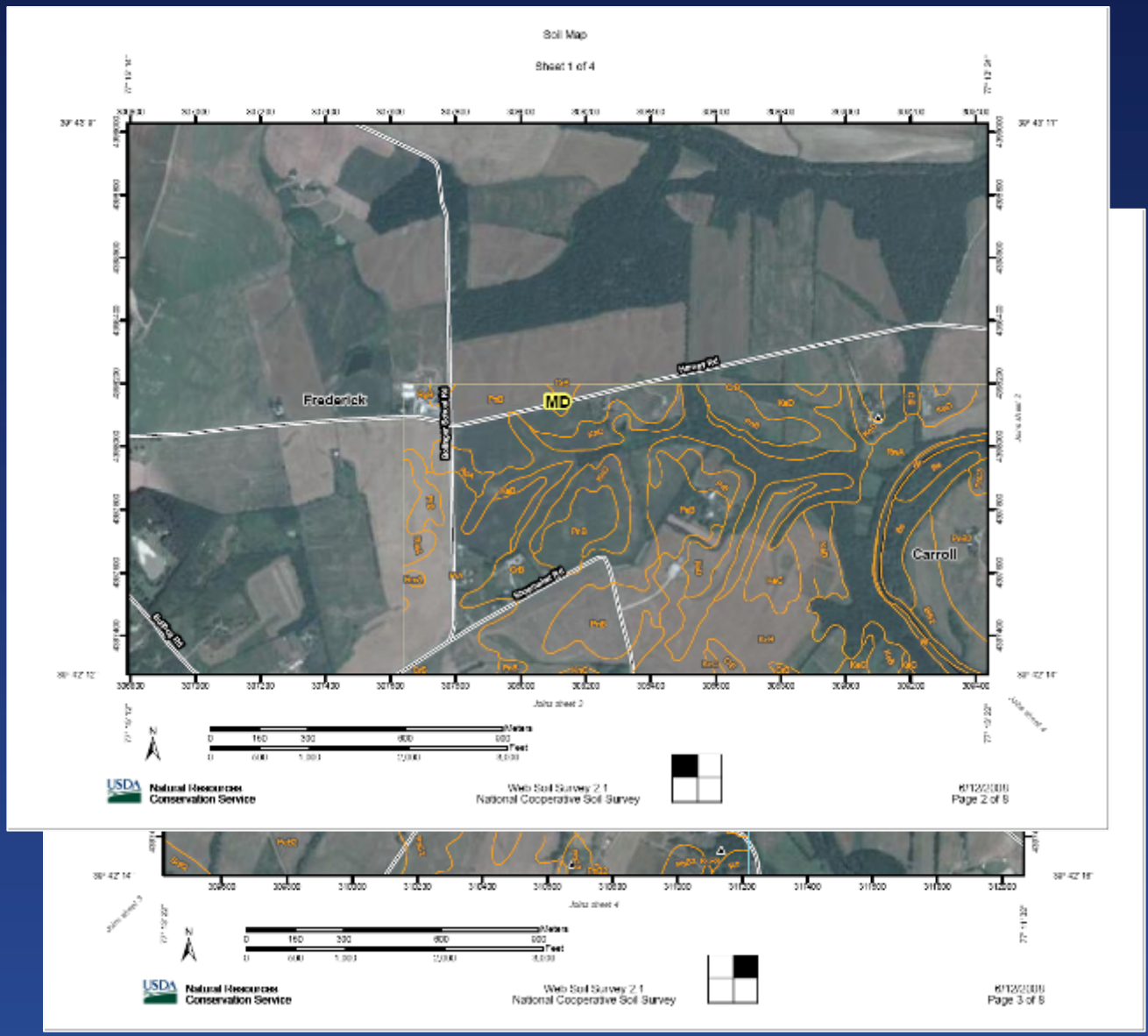
- Tiling of printed maps
  - Based on user selected scale and paper size
  - 2x2, 3x3, or 4x4
  - Includes map index sheet



- Scale
- Individual sheet size

Map Index Sheet





Individual Tiled Map Sheets