

NASIS 6.0 – Where are we? What's next?

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ABSTRACT

The Natural Resources Conservation Service (NRCS) is about to complete the redesign of the NASIS computer application. NASIS, originally released in 1994, is used to collect, manage, store, and deliver for publication tabular soil data and information of the National Cooperative Soil Survey. The main emphasis on this redesign is to bring the application up to present day standards. The current version of NASIS uses the UNIX[®] computer operating system, and the INFORMIX[®] database management software. The new version to be released, NASIS 6.0, will be a Microsoft[®] based system using .NET[®] operating system and SQL Server[®] database management software.

A benefit of converting to a Microsoft based system will better enable the future integration of geographic information system (GIS) software into NASIS. Another benefit will allow NASIS users to use NASIS in a disconnected mode in the field. The application will run on the user's personal computer, but will still be connected to the central database. This should facilitate quicker capture of field data. NASIS 6.0 will present a different user interface to users. A major change is being made in regards to how soil survey goals and progress are reports, along with the ability to record progress related to Technical Soil Service activities. Some training will be required for users to fully understand and be aware of new functionality in the application.

NASIS 6.0 is scheduled for beta testing in September, with release in October-November 2008 timeframe. Training will follow. Several report, query, and interpretation scripts will need to be updated to match the revised data structure.

BACKGROUND

NASIS was first released in 1994 and has had several enhancements and updates since then. We are currently using version 5.4. NASIS is a UNIX[®] based application and uses INFORMIX[®] software for its database. Support for these is waning, and NRCS applications are migrating to Microsoft based software.

Redesign of NASIS began in late 2003 to move it to a Microsoft .NET[®] and SQL Server[®] platform.

WHERE ARE WE?

The redesign of NASIS is almost complete. Existing functionalities of NASIS have been migrated and initial testing of NASIS 6.0 by a small group of individuals is underway. Feedback from these individuals is being used to tweak the application.

Features

NASIS 6.0 will have a new interface that will have several similarities to other Microsoft applications. Users will be able to

- Rearrange, hide/unhide, and resize columns by clicking and dragging
- Use right mouse click options
- Sort data on based on any column
- Filter data based on column content
- View all rows of data in any table

NASIS 6.0 will be a client based application meaning that the software will be loaded on the user's local computer – table, laptop or desktop. The data will be synchronized with the central database over the network using data replication processes. Conflict resolution processes will be used to resolve conflicts of content if multiple users have edited the same data. Users will be able to disconnect their computer from the network and take NASIS to the field if they desire. When they reconnect to the network, data will be synchronized with the central database.

Report, query and interpretation editors will be different in NASIS 6.0. For those who have used the Soil Data Mart/Web Soil Survey Report Manager, these changes will quite familiar. A big improvement is that the interpretation editor will automatically load subrule, evaluation, and property scripts by clicking an item in the interface. Existing scripts will be converted into NASIS 6.0, but many report and query scripts will need updating due to some significant data model changes to the database.

A revised method on importing Pedon PC data into NASIS will be implemented. In this process the pedon.mdb file will be converted to SQL Server Express on the local client computer. The data will then be uploaded by the individual user to the NASIS central database using the synchronization processes.

Data Model Changes

A number of data model changes are being made with the release of NASIS 6.0. These include:

- A revised data structure for recording soil survey goals and progress
 - A new Project data object has been created
 - Many tables that have been child tables of Legend are being moved to this new data object
 - Many data elements that were in the Legend table are being convert to Milestones under a Project.
 - New tables for recording Technical Soil Service activity are included
- A new Mapunit data object has been created by moving the Mapunit table and its child table out of the Legend data object. Doing so allows for
 - Ownership and editing privileges of individual map units to be assigned to the new MLRA Soil Survey Offices
 - Merging of map unit records that currently exist in multiple SSA legends into a single data record.
 - This single data record can then be referenced back to the individual legends as needed.
 - This should result in reduced data maintenance workload.
- A new data element for a national map unit symbol has been added as discussed at the recent state soil scientist meeting in Kentucky.
 - This resides in the Mapunit table
 - It will be computer generated by converting the muiid attribute to Base 36.
 - Base 36 is a combination of letters and numbers
 - Will be no longer than 6 characters
 - We will include this in the SDM database and WSS will be modified to begin using it as the national symbol.
 - It will **not** be added to the SSURGO Access template until we make other SSURGO changes – hopefully in FY 2009.
- Several other data model additions have been made to address
 - Subaqueous soils
 - Soils with high mica content
 - Additional anthropogenic items

- Soils with high gypsum content
- Enhanced data certification
- Several minor additions and changes to choice lists

WHAT'S NEXT?

Timeline

- Beta testing – Sept/Oct 2008
- Final testing – Oct/Nov 2008
- Release 6.0 and convert data – Oct/Nov 2008

Getting Ready

To prepare for the release of NASIS 6.0 some software will need to be loaded on each user's computer. This includes .NET 2.0[®] and SQL Server Express[®] packages. Those involved with initial and/or beta testing will need to do so earlier than others. Guidance will be provided on the specifics.

Some data cleanup will be needed.

- We will be implementing a choice list for PLSS Meridians. Much of the existing data can be converted, but some cleanup would help.
- Names in current Legend Staff table will be changed to links to NASIS User table. Names will need to match for conversion to be successful.
- Guidance will be provided.

Training

Several new processes and concepts will be introduced in 6.0, as well as it having a new interface. Some training will be needed to familiarize users with these. A training plan to address these needs is in the early formulation stage. We will be updating existing materials to agree with 6.0. We hope to use Net Meeting and Live Meeting sessions as much as possible. Job aids are an option. We do plan on putting together a user guide of sorts to replace the old NASIS Getting Started manual. It is anticipated that these materials will be available so that training can begin in early FY 2009.

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