



## Geospatial Nutrient Tool - GNT

### Background

The Geospatial Nutrient Tool (GNT) was developed by the USDA NRCS in collaboration with the University of Missouri. Its primary purpose is to enable NRCS planners to work with previously accomplished work contained in the Customer Service Toolkit software for nutrient management planning purposes.

### What is the Geospatial Nutrient Tool (GNT)?

The Geospatial Nutrient Tool (GNT) is the nutrient management geospatial front end for NRCS conservation planners and is used prior to streaming data to Manure Management Planner (MMP) for nutrient management planning purposes. GNT operates as a toolbar within the Customer Service Toolkit (CST) application and runs in the ArcGIS9.X environment.

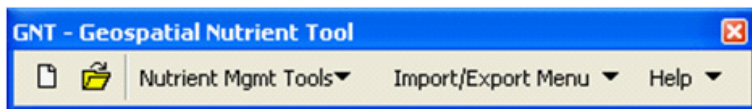


Figure 1. GNT Toolbar in Customer Service Toolkit (CST)

### How Does GNT Work?

NRCS planners can access a customer's folder in Customer Service Toolkit (CST), open conservation planning data and maps, conduct nutrient management related activities (Figure 1.) and produce or modify maps and setbacks (Figure 2.) for nutrient management planning purposes. The electronic data can be streamed / exported (Figure 3.) to Manure Management Planner (MMP) in order to expedite nutrient management planning and development of several NRCS CNMP template output documents. GNT includes the use of the **National Setbacks Database** to provide access to manure setback requirements for the 34 states currently supported by MMP. More states will be added as MMP rollout to states continues. The GNT is used primarily by NRCS nutrient management planners.

Conservation planners can also digitize operations that have not been digitized yet, and also refine field features for farming operations that have already been digitized. Larger fields that are adequate for conservation planning purposes generally need to be divided into sub-fields for nutrient management planning purposes. In addition, there is a field setbacks tab that steps the user through the various available voluntary and regulatory setbacks regarding nutrient (generally manure) applications. These setbacks are important when determining "spreadable acres" for manure applications, and developing a farm nutrient balance.

TSPs and other private industry individuals currently do not have direct access to the GNT. However, with landowner permission and NRCS authorization, TSPs can be granted access to NRCS client information using the “Conservation Transaction Plug In Tool” and utilize the client data in their own software to make nutrient management and CNMP changes. Changes made can also be uploaded back to the NRCS CST for NRCS usage.

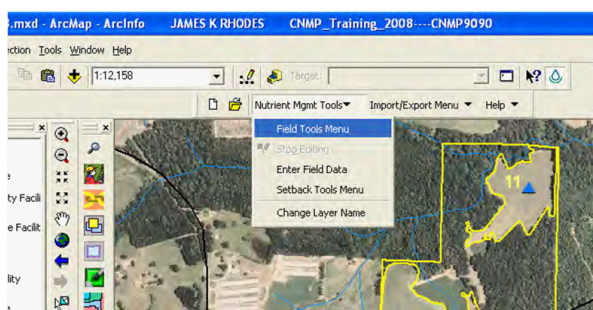


Figure 2: GNT Nutrient Mgmt Tools menu bar

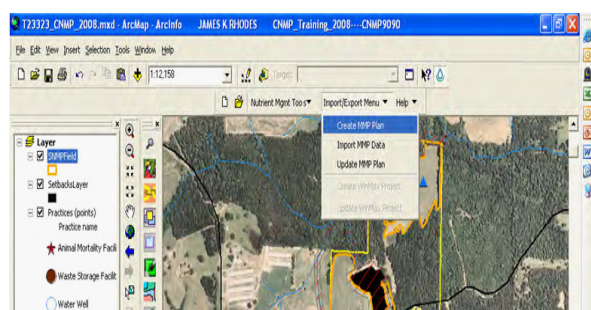


Figure 3: GNT Import/Export menu bar

## What Happens Next?

Efforts in collaboration with NRCS-ITC are underway to develop an integrated next generation nutrient management planning tool (ng-NMPT) that combines the capabilities of several national software tools. The ng-NMPT will be implemented in the Service-Oriented Architecture using web-services with access to national database (soils, climate, land management, etc.) services, and will integrate a comprehensive front-end GIS tool able to handle conservation planning and nutrient management planning tasks.

## For More Information

GNT has been developed by the USDA Natural Resources Conservation Service (NRCS), National Water Quality and Quantity Technology Development Team, the National Cartographic and Geospatial Center (NCGC), and the Animal Husbandry and Clean Water Division (AHC-WD). Development occurred in cooperation with the Environmental Protection Agency, the USDA Agricultural Research Service, and others. For more information on GNT and future plans for NTT, contact Chris Gross, Water Quality and Quantity National Technology Development Team, Nutrient Management Specialist, [chris.gross@wdc.usda.gov](mailto:chris.gross@wdc.usda.gov) or (301) 504-3954. Further information on GNT can be found at <http://www.wsi.nrcs.usda.gov/products/W2Q/nutr/nutrGNT.html>.