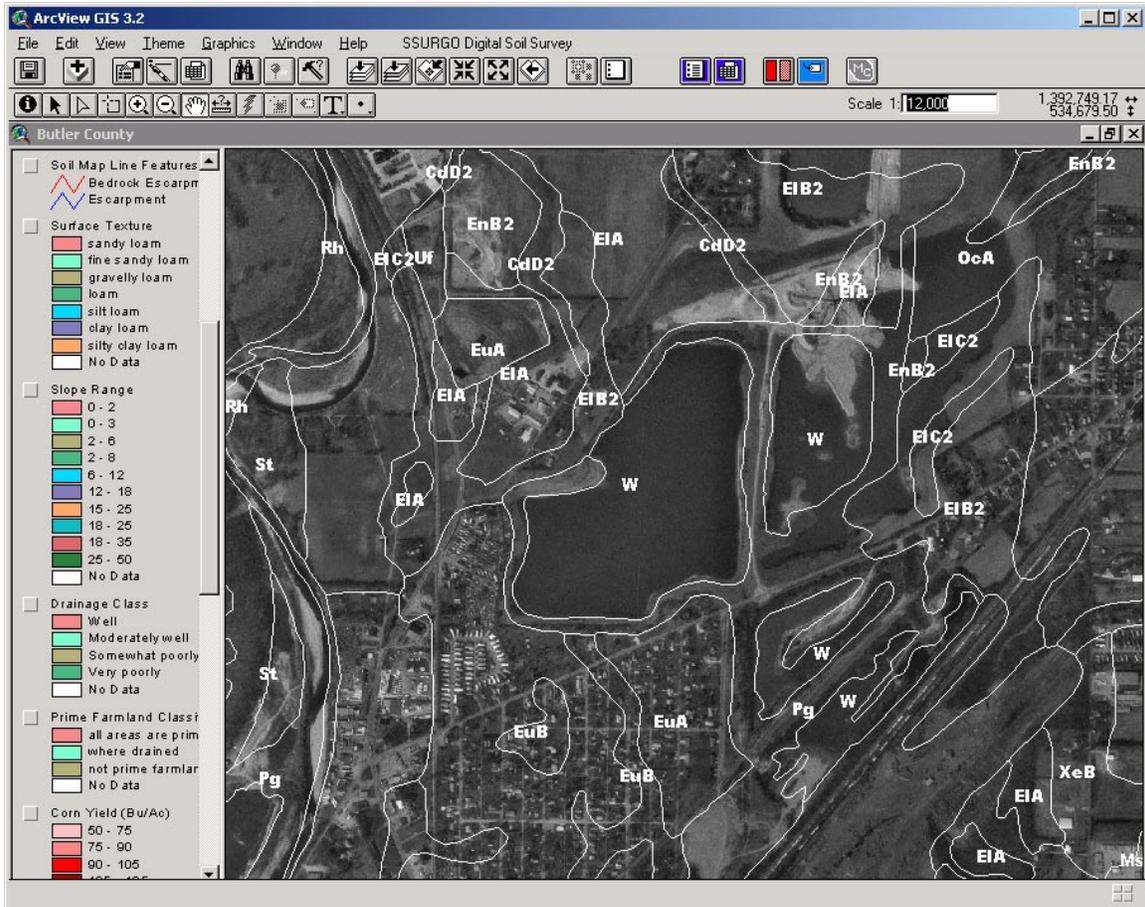


SSURGO Digital Soil Survey Application Reference Guide

Division of Soil and Water Conservation
Ohio Department of Natural Resources
Columbus, Ohio



SSURGO Digital Soil Survey Application

Introduction

Fuller, Mossbarger, Scott and May Engineers, Inc. (FMSM) was contracted by the Ohio Department of Natural Resources to develop an ArcView Data Publisher-based SSURGO Digital Soil Survey application. The ArcView Data Publisher is a read-only version of ArcView 3.1 locked by Environmental Systems Research Institute, (ESRI) to a single ArcView project. The application has been designed to link and display existing SSURGO spatial data, database components, NRCS County Soil Survey documents and support a variety of soil information display options.

Application Assumptions

It is assumed that the targeted user possesses a basic understanding and familiarity with the GIS application ArcView and SSURGO soils data. In addition to this understanding, the user is expected to possess or obtain the necessary computer hardware to run this application.

This Reference Guide is separated into three distinct sections.

1. Application Installation
2. Data Themes, Classifications and Support Documents
3. Application Functions and Features

1. Installation Directories

The application CD possesses a file directory format that resembles Figure 1. The top level provides a Setup.exe that should be run at the time of installation. It is required that a user loads both **Data** and **Program** files to their hard drive during installation. Consult the **readme.doc** file for additional setup and application removal instructions.

The **Data** files folder contains the SSURGO soils information that is referenced within the application. Additional documentation and table data may also be accessed through the Data source directories.

The **Program** files folder contains the necessary application components that enable the GIS DataPublisher software to run and function as intended. Users should not modify the files in the Program folder or subfolders.

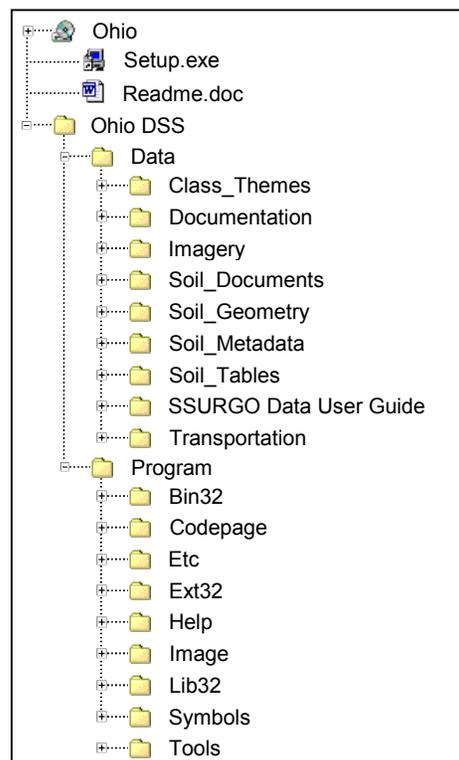


Figure 1: Application directory structure.

2. Data Themes, Classifications and Support Documents

The SSURGO Digital Soil Survey application provides access to and visualization of several data sets. Each application displays the following data layers;

- County-based 1:24,000 scale digital orthophotography
- County-based road and street centerline data
- County-based municipality locations and names
- SSURGO county soil map point features
- SSURGO county soil map line features
- SSURGO county quadrangle boundaries
- SSURGO county boundary
- SSURGO county soil polygons with the following classifications
 - Soil Map Units
 - Surface Texture
 - Slope Range
 - Drainage Class
 - Prime Farmland Classification
 - Corn Yield
 - Soybean Yield
 - Woodland Erosion Hazard
 - Hydric Soil Rating
 - Limitations for Dwellings with Basements
 - Limitations for Septic Tank Absorption Fields
 - Soil Map Polygon Features

In addition to the thematic classifications, this application provides access to NRCS Soil Report tables and text documents. The report tables and text are derived from multiple data sources, including the paper-based county soil survey document that was scanned and organized as a Portable Document Format (PDF) files. Report tables provided in the SSURGO Digital Soil Survey 2.x versions were derived directly from the custom MS Access SSURGO application as distributed by NASIS. These PDF files may be accessed through custom links provided within the Data Publisher application.

3. Application Function and Features

This customized SSURGO Digital Soil Survey application may be run via CD or from a user's hard drive. Launching the program will result in opening a map window to display a given county's spatial data and information. See Figure 2.

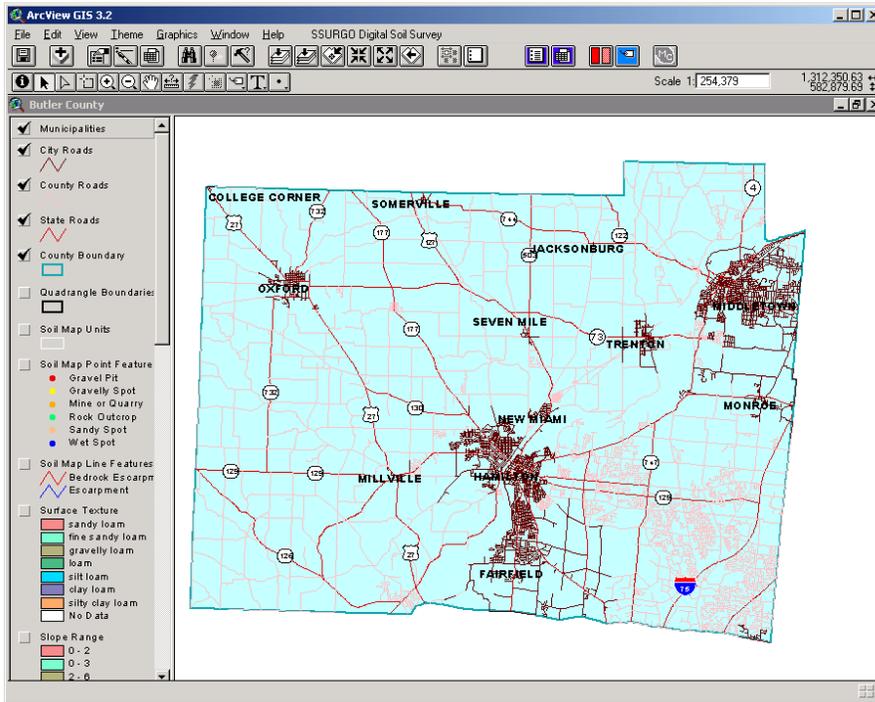


Figure 2: Initial map display as seen on application startup.

Although many of ArcView-based tools and standard menu options are included in the application, it is not the intent of this document to explain each function or option. Instead, please consult the application's help documentation for additional assistance. Selecting the *Help* dropdown menu option and choosing *Help Topics* may access this supplemental set of application information. The features that will be addressed within this Reference Guide are limited to the customizations that were specifically developed for and relate to the SSURGO Digital Soil Survey application.

Upon loading the application, the user will notice a customized dropdown menu located upon the application's menu bar. In addition, 5 new buttons have also been placed within the application's interface and reside on the button toolbar. The dropdown menu is named *SSURGO Digital Soil Survey* and is where the user will find access to the customizations developed for this application. See Figure 3. The 5 buttons provide an alternative means for accessing similar functionality as provided within the *SSURGO Digital Soil Survey* menu. See Figure 4.



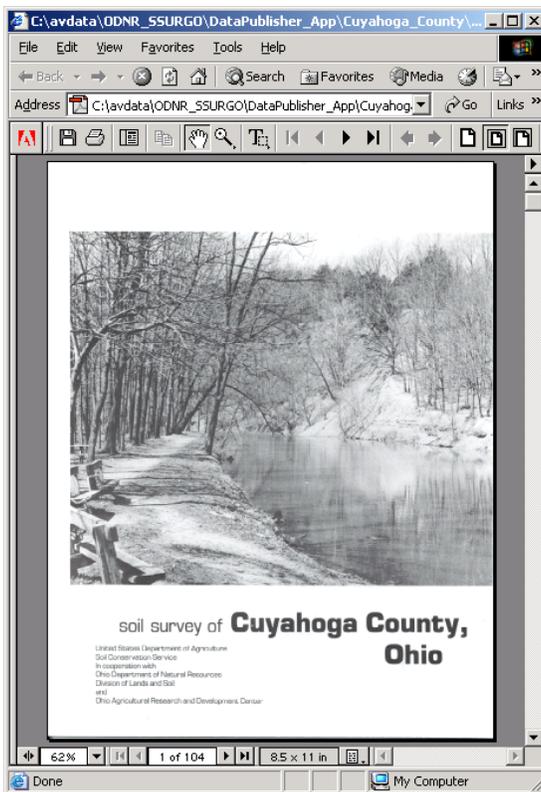
Figure 3: SSURGO Digital Soil Survey application dropdown menu.



Figure 4: SSURGO Digital Soil Survey application button options.

The choices included within Figure 2's dropdown menu are designed to provide users additional information as well as options to make viewing the digital data more convenient. Each menu item and button function is described below;

- **County Survey Text:* Invoking this option or the  button will launch an embedded version of Internet Explorer and direct the web browser application to a county's NRCS County Soil Survey text PDF document. See Figure 5.

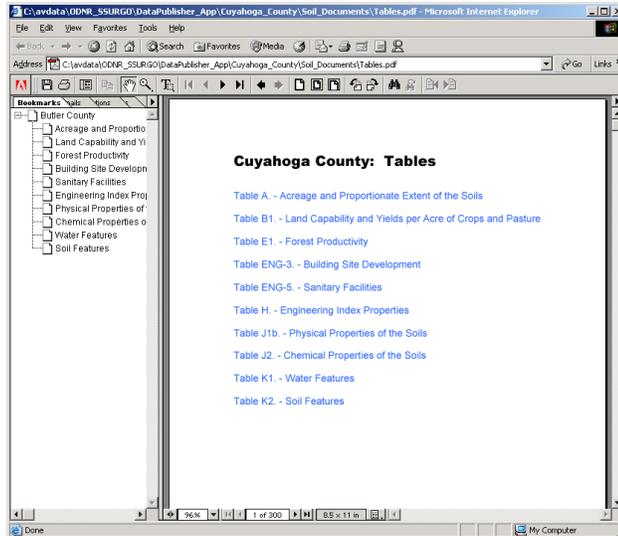


Text from each county's soil survey document has been scanned and included into the Digital Soil Survey application CD.

The text information is provided as PDF format and accessed through an imbedded version of the MS Internet Explorer application.

Figure 5: Scanned County Soil Survey Text.

- ***County Survey Tables:** Invoking this option or the  button will launch an embedded version of Internet Explorer and direct the browser application to open a county's soil survey tables in a PDF document. See Figure 6.



Tables from each County's Soil Survey document have been included into the Digital Soil Survey application CD. PDF hyperlinks provide access to scanned soil survey tables or tables directly derived from the NASIS Soil Reports template.

Table data will vary within the application based upon the format of the SSURGO data from which it was derived.

Figure 6: County Soil Survey Tables.

- **Toggle Transparency:** This option or the  button toggles each polygon theme's legend with a legend possessing approximately 50% transparency. This feature is best used in conjunction with the aerial photography.
- **Resize Labels:** This option or the  button re-labels road markers, soil map unit text symbols, and municipality locations with symbols and font sizes that are appropriate for the scale at which the user's map window is zoomed.
- **Set Survey View:** This option or the  button zooms the display window to a 1:12,000 scale while redefining the visibility of specific map layers. The result will provide the user a map display that illustrates aerial photography and soil map unit boundaries. The intent is to replicate the standard county soil survey map.
- ***View Readme File:** This selection will launch the application's Readme file. This document outlines the information specific to the project and the county data from which each SSURGO Digital Soil Survey application was derived.
- ***View Reference Guide:** Selecting this option will open this document.
- **Note:** The options prefixed with the * symbol indicate a feature or function that requires the existence of a PDF reader. Each application CD provides an installation executable of Adobe Acrobat Reader 5.05, *rp505enu.exe*. Should any of these options (*) fail to properly open the intended document, please install the *rp505enu.exe* and try again. The *rp505enu.exe* file is located within the ...*Soil_Documents\Readers* file directory.

4. Application Installation and Removal

SSURGO Digital Soil Survey Installation Instructions:

- 1) Print this page to have available during application installation/removal.
- 2) Using Windows Explorer, navigate to CD root directory and double-click the **setup** executable file.
- 3) Be certain to read each setup dialog carefully.
- 4) **Important.** Select the checkbox to **add** SSURGO Digital Soil Survey data files.

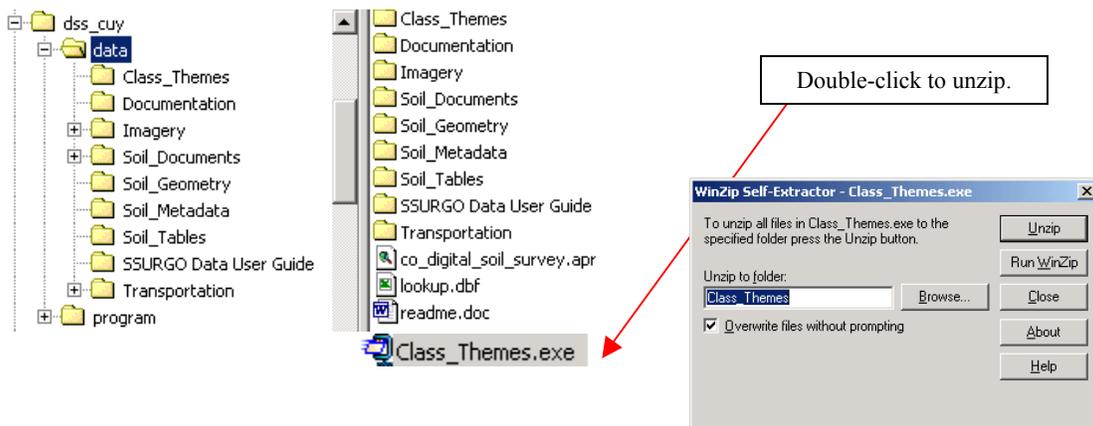


Including data files is required.

- 5) Next, choose the default installation directory by clicking on **Next** for “Select Program Folder” or navigate to an alternative directory location.
- 6) Write down installation directory (you will need this later). _____
- 7) Confirm directories in “Information” (“Setup Summary”) and click **Next** to begin transferring application files.

IMPORTANT. YOU ARE NOT YET DONE.

- 8) After the application has finished installing, use Windows Explorer to locate the installation directory (See Step 6). Note: If folders do not appear, press the **F5** key to refresh system files.
- 9) Navigate through the installation directory's **/data/** folder and double-click the **Class_Themes** executable file.



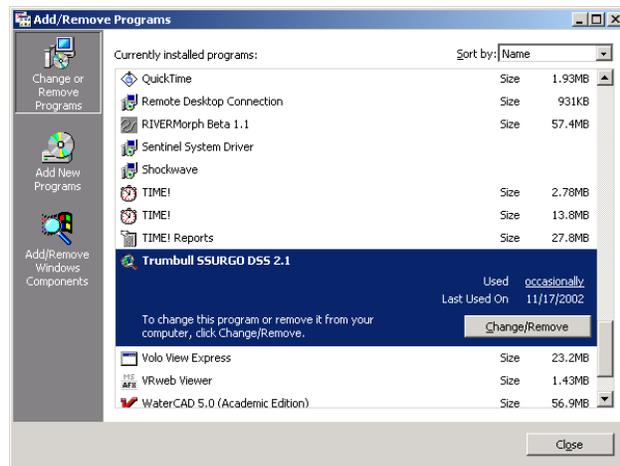
- 10) Choose the **Unzip** button and allow data to inflate in default location. This step may take several minutes to complete.

- 11) Once completed, you may access the application through your computer's **Start > Programs** menu. Additional application instructions are provided from the "SSURGO Digital Soil Survey" drop-down menu (**View >Readme File** and **Reference Guide**).

SSURGO Digital Soil Survey. Application Removal Instructions:

Due to limited availability of hard drive storage, users may wish to uninstall SSURGO Digital Soil Survey applications while not in use. See instructions below.

- 1) Access the **Add/Remove Programs** application through your computer's **Start > Settings > Control Panel** menu.
- 2) Scroll down until you reach the "County" SSURGO application you wish to remove. Select the application.
- 3) Choose the **Change/Remove** Button
- 4) Continue with defaults and do not remove any shared files. These are primarily ESRI fonts that may be in use by other SSURGO DSS applications running on your computer.



IMPORTANT. YOU ARE NOT YET DONE.

- 5) After the application has finished uninstalling, use Windows Explorer to locate the installation directory (See Step 6 from installation instructions).
- 6) Delete the **dss_xxx** county folder and all subfolders to properly remove the contents of the Class_Themes that you previously unzipped (See Step 10 from installation instructions).

5. SSURGO User Guide Information.

Additional information about the SSURGO data used for this application may be accessed by clicking the following link:

[Additional Information](#)