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(SCMI)

MANUAL

Manual for Managing Geospatial Datasets In Service Centers

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Manual for Managing Geospatial Datasets in Service Centers

Introduction

The Service Center Agencies, along with our partners, are establishing an enterprise geospatial system. This system consists of hardware (including personal computers, network servers, Global Positioning Systems (GPS), field data collection devices, plotters, printers, and digital cameras), and software (including GIS, GPS and camera software) supplied under the Common Computing Environment. The geospatial data (including GIS, GPS and digital imagery) is also a part of the overall system architecture.

In order to support better Service Center Agency program management, geospatial data management in the Service Centers will become a standard process under the guidelines presented in this manual. A wide range of geospatial data can be utilized to support agency programs. It will take a high level of organization, training, and support in each state to bring all users of GIS technology to a point where data is used correctly, decisions made on the basis of geospatial maps and data are sound, and the management of data is not overly burdensome.

- Under the standard guidelines, management roles and the accompanying responsibilities are defined at the national, state, and local levels. People at each level in the agency organizations will be asked to take on new functions and responsibilities. This requires a high level of interagency coordination.

- Data that is currently stored in the Service Centers will be consolidated into a standard set of Windows folders. Names of individual folders and files will be standardized. Permissions will be established on each of these folders to ensure that data can be shared and protected as appropriate.

- Methods for downloading data from the FSA and NRCS National Data Centers in Salt Lake City and Fort Worth will become more automated.

- Greater emphasis will be placed on preparing data for movement between computers and between offices. Standard naming conventions will help ensure that file names are unique and consistent.

- There will be an increased emphasis on metadata (i.e., descriptive information about a file or “data about data”). Metadata enables employees; customers and GIS applications themselves to have access to descriptive data details in order to better understand the data’s characteristics (e.g., origins, geographic projection, scale, units, quality, etc.).

- The rollout of the CCE computers and servers to Service Centers will bring new data access security features.

- Consolidation of geospatial files and the populating of the shared ***geodata*** directory on the server will prepare Service Centers for the upcoming migration to the XP operating system on desktop/laptop computers. The XP migration will require the reformatting of the hard disk. All geospatial data migrated to the shared server directory will be unaffected.

This manual provides the procedures and standards that will be used to maintain the geospatial data. This manual documents both manual and tool assisted procedures to migrate geospatial data to the network servers; this documentation is provided in Appendix D and Appendix E. Additional procedures and standards will be added to this manual as the enterprise geospatial system is implemented.

➲ *All references to ArcView software in this document refer to ArcView 3.x.*

Revision History

RECORD OF CHANGE

Revision/Change Number	Update Number	Date of Change	Description/Reason for Change	Pages/Sections Affected
Version 4.0 – Final	**1**	**2/25/2003**	**Edited entire document**	**All**

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1. Overview

1.1 Purpose

The USDA Service Center concept is a cornerstone of the agency reorganization effort undertaken subsequent to the Department of Agriculture Reorganization Act of 1994. By consolidating its individual agency field offices into service centers, the USDA intends to reduce its total number of offices, and at the same time provide taxpayers with more efficient service at reduced cost.

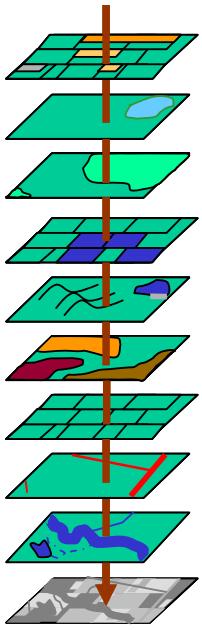
One of the key components of the Service Center Modernization Initiative (SCMI) implementation effort is the *Common Computing Environment* (CCE) project, which seeks to establish a consistent, common, and compatible information technology solution that will allow sharing of data and equipment among the agencies that make up each service center.

2. Why New Procedures are Needed for Geospatial Data

The scope of *geospatial data* includes orthophotography, Global Positioning System (GPS) data, the data collected and produced by Geographic Information Systems (GIS), digital photographs of land features, remote sensing data for the earth's surface and features, and the accompanying attributes and metadata that describe the geospatial data.

Geospatial data has several characteristics that make it difficult to manage:

- The content of a file is often seemingly random strings of numbers and symbols that are difficult for users to read and decipher directly. Therefore, it is difficult to determine what the content of a particular file represents without additional identifying information.
- Data files are often very large, making their movement from machine to machine challenging. You don't want to download a large file from a data warehouse if you already have the most current version on your machine.
- A large number of files are often accumulated. These files have to be stored and preserved, and found quickly when working with a customer.
- The user must make a determination as to whether new data will be managed as a separate dataset, or be merged into an existing larger dataset (such as a county-wide theme).
- It takes a concerted effort to ensure that metadata, the information that describes each of the geospatial datasets, is kept current and accurate. Without accurate metadata, the value of spatial data quickly declines. This has to be a coordinated effort.
- Geospatial data is often difficult and expensive to collect, producing a constant challenge for the user to acquire, and maintain the currency of, the data.
- There are a variety of sources for geospatial data. The user must know the sources, and maintain the linkages to utilize those sources.
- Geospatial data is sometimes shared with neighboring county offices, and with state offices. It is important that the data files are well documented and uniquely named.
- The increased data and access security being provided under the Common Computing Environment requires a certain level of standardization in how and where data is stored.



3. Creating a Folder for your Geospatial Data

A standard folder structure on all field-level computers, and consistent file naming procedures, are essential. Note that this standardization is also critical for upcoming automated processes to update datasets from national data warehouses.

3.1 Geospatial Folder Structure

The standard *geodata* folder structure will be created on all Service Center servers holding geospatial data. The Geospatial data will be installed on the shared (F) drive on the network servers in the Service Center. The top-level geospatial data folder is named "**geodata**". There will be only one shared *geodata* occurrence in any given Service Center, usually on the server's F: drive.

Under *geodata* a number of subfolders are included for ***geospatial dataset categories.*** Additionally, *geospatial dataset categories* are allowed to have subordinate subfolders (as in the case of climate, which has subfolders for precipitation and temperature.) Each category can hold multiple ***geospatial datasets*** (files). The document "Standard for Geospatial Data" gives further details on spatial categories. See section 4.6 for details on locating this document.

The standard folder structure under *geodata* will look like the following sample:

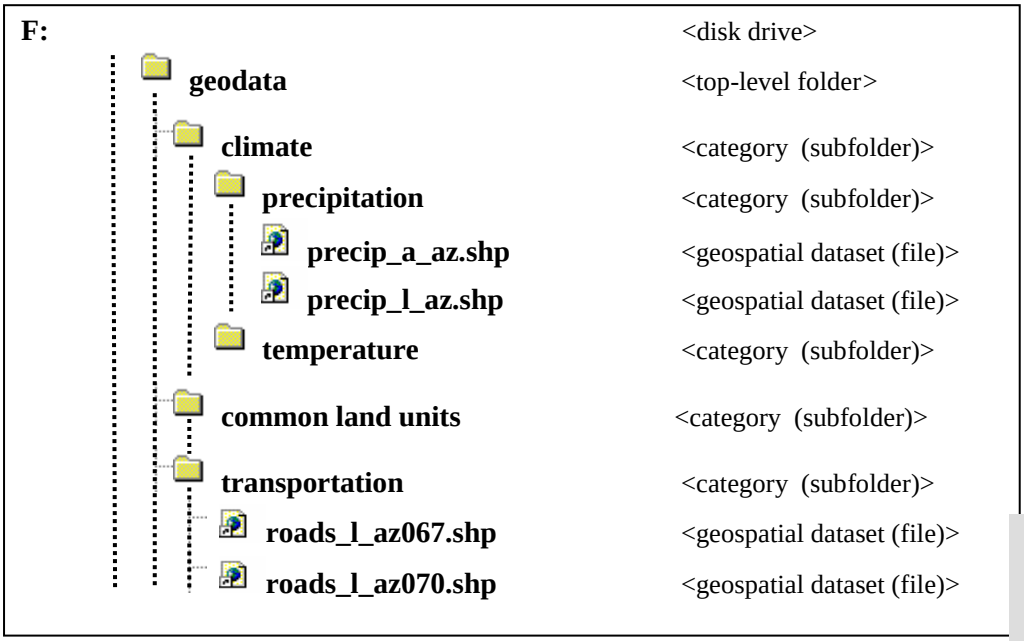


Figure 1— Sample Geospatial Folder

See Appendix A

for the complete standard folder structure.

➲ *All shared geospatial data (whether it is "locally-defined" data or nationally-distributed data) will be placed in this standard folder structure; so that local data appears adjacent to any nationally provided data when the user is selecting from a pick list.*

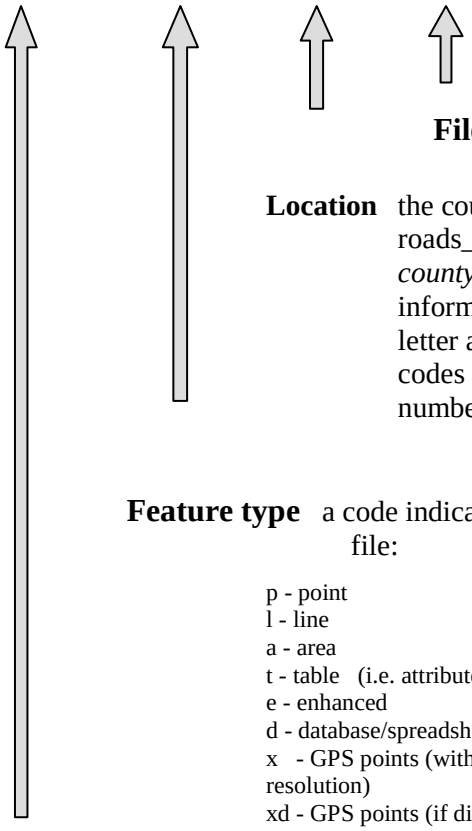
3.2 Naming the Geospatial Files

- Dataset/file names will be **unique** within the entire *geodata* folder. The names should maintain their uniqueness even if folder names are eliminated from the structure. Moving files between computers, and between offices, makes unique file names a necessity. Non-unique file names often result in the loss of data when a file is unintentionally overwritten during the moving of data.

- Naming standards apply to all nationally distributed datasets. It is recommended that the same standards be used for state-defined and locally defined datasets.

- File names contain only the information needed to accurately identify them, and make them unique. The general format is shown below. More detail regarding file name standards is found in *Appendix A.*

hydro_l_ms035.shp



File extension, as applicable

Location the county FIPS code (e.g. roads_l_mn010.shp) *of the predominate county* in the dataset, plus other identifying information. State codes are expressed as two-letter abbreviations (md, az, tx, etc.). County codes are expressed as the three-digit FIPS number (001, 015, etc.).

Feature type a code indicating the type of data contained in the file:

p - point
l - line
a - area
t - table (i.e. attributes in a .dbf file, or other linked files)
e - enhanced
d - database/spreadsheet
x - GPS points (without differential resolution, or of unknown resolution)
xd - GPS points (if differential resolution was used)
y - photograph (from digital camera or scanned photo)

Theme name can be the full name, a short version, or an acronym used to represent the business name of the dataset, e.g. precip, damsites, huc, etc.

When constructing the names for folders and files, the following conventions will be followed:

Allowable Characters for the Geodata File and Folder Names:

- File and folder names will consist of **only** the following:

  Lower case letters a-z

  The numerals 0-9

  The underscore "_" character

  The dash "-" character, but only when designating mosaic tiling (x-x). Otherwise the dash is not allowed.

- The **first character** in the name shall be **a letter** (a-z).
- The total length of the name shall not exceed **30 characters.**

3.3 Purpose of Standard Folders and Names

GIS usage in Service Centers is expected to create a large number of individual files, many of which will be relatively large. In addition, it is expected that more than 20 common geospatial datasets will be managed and distributed from national geospatial data warehouses.

A standard structure for this data is essential, especially for:

- Movement of data between computers within an office.
- Increased movement of data between offices. This factor makes it essential that file names are unique across the organization.
- Consistency as people move between offices.
- The introduction of automated refreshing of common datasets from national or state sources.
- The fielding of national applications that rely on the consistent placement of data within the windows folder structure.
- The sharing of data among agencies.
- The distribution of utilities and tools to make the maintenance of files and folders easier.
- Facilitating the backup of data.
- Facilitating the versioning of data.

The standard geodata folder, and its subfolders, will be installed on the shared (F:) drive of the network server. Files placed in these folders will follow the standard naming conventions.

These standards pertain to all offices.

4. Metadata

4.1 Metadata - The Rest of the Story

The name of the file may give you a clue as to what it contains but *metadata* provides the additional descriptive information about a file that would otherwise be lost to elapsed time, and an aging memory.

Metadata is simply descriptive information about a data file, i.e. data about data.

When GPS points are collected and stored, or a new file is created using a GIS tool, a few facts need to be documented to remind you, or to tell others, information about that stored file. Metadata includes such facts as what the file contains, what coordinate system was used, what is the accuracy, who to contact for more information, and identifiers, such as bounding coordinates and keywords.

METADATA

You can do it now…or you can do it later.

Later is harder.

4.2 What Metadata is Required

All geospatial metadata in the federal government is currently guided by the standards of the Federal Geographic Data Committee (FGDC). The FGDC committee has published a metadata standard (available at www.fgdc.gov) describing hundreds of metadata facts that can be recorded for each geospatial dataset. The full standard FGDC metadata is quite lengthy and time-consuming to enter and maintain. The Service Center agencies have decided that a smaller subset of the FGDC metadata elements is adequate, and affordable, for locally developed datasets, that will not be shared outside of the service center. These core metadata elements are listed and described in the document "Standard for Geospatial Dataset Metadata" (available at www.fsa.usda.gov/scdm) under the category "Data Standards".

To get started, only a handful (21) of the core metadata elements will be mandatory. The remainder are optional, but should be entered if there is a demonstrated need and the information is available. The following chart lists the mandatory metadata that will be captured for all locally developed geospatial files:

Minimum Core Metadata for Geospatial Datasets

Originator	**Contact_Organization** **(or Contact_Person)**
Title	**Address**
Purpose	**City**
Progress	**State**
	Postal_Code
Time_Period_of_Content	
Source_Scale_Denominator	**West_Bounding_Coordinate**
Map_Projection	**East_Bounding_Coordinate**
Horizontal_Datum_Name	**North_Bounding_Coordinate**
Planar_Distance_Units	**South_Bounding_Coordinate**
	Source_Information
	Process_Description
	Entity_Attribute_Overview

Chart 1 – Minimum Metadata for Geospatial Datasets

Each element in Chart 1 is defined in Appendix B of this document. Use the standard name listed for each metadata element when adding new metadata.

4.3 Where to Store the Metadata

Metadata is stored in a separate file from the actual geospatial data.

The metadata file is given a name similar to the geospatial file that it describes, and the pair of files (i.e. the geospatial file and the metadata file) will be stored together in the same folder.

4.4 Who Creates the Metadata, and When is it Created

The person who first creates the geospatial file is charged with also establishing the related metadata file. The person who updates the geospatial file is responsible for updating the metadata after each round of changes, as needed.

It is important to prepare the metadata as soon as a geospatial file has been saved, especially for shared files. Also, it is much easier to capture the metadata while the information is fresh, rather than try to reconstruct it later.

4.5 How to Store Metadata

The core metadata can be collected and stored as a text file, in a database/spreadsheet, or in a file generated by ESRI ArcCatalog. Metadata files generated by ArcCatalog will have the same name as the data file, but with an "xml" extension. ArcCatalog metadata can be exported into more readable txt or html formats. Wherever possible, a metadata file will be given a name similar to the geospatial file that it describes, and the pair of files (i.e. the geospatial file and the metadata file) will be stored together in the same folder.

A useful tool for metadata management is ESRI ArcCatalog. This tool is especially useful in that it automatically extracts bounding coordinates for the data set. Bounding coordinates can be difficult to obtain unless the process is automated. Current plans are to deploy ESRI's ArcCatalog, as well as other ArcGIS tools, to Service Centers in the Summer of 2003.

A Geospatial Metadata Team has been formed and is currently working on the process and procedures to collect metadata for all geospatial files in the service center. In the meantime, service centers can use one of the following methods for recording metadata.

STORING METADATA

As a text document:

If the metadata is stored in a text document, it will appear as pairs of data element names followed by values. Example:

Originator: James Smith

Title: Common Land Units of Boone County, Iowa

Purpose: This dataset was prepared by digitizing tracts and fields from 1:660 scale rectified aerial photos. Tracts and fields were digitized on-screen with a digital orthoimage background using ArcView. Quality assurance was provided by the Aerial Photo Field Office (APFO) in Salt Lake City. This dataset consists of geo-referenced digital map data and computerized attribute data…

Progress: Complete

An example of text metadata including all of the minimum metadata elements is presented in Appendix B for a SSURGO data file.

This document of metadata is given the same name as the geospatial dataset it describes but with a different file extension (.txt, .doc, .xml, .etc). Example: clu_a_ia015.txt (the related geospatial dataset is clu_a_ia015.shp)

In a spreadsheet:

If the metadata is stored in a spreadsheet, the metadata element names will be the column names, and a row of metadata will be created for each geospatial dataset. Example:

Dataset Name	Originator	Title	Purpose	
clu_a_ia015.shp	James Smith	Common Land Units of Boone Cnty, Iowa	A dataset of digitized Land Unit	
clu_a_ia021.shp			This dataset consists of georeferenced digital map…	

The spreadsheet describes multiple geospatial datasets. It should be given a name that describes its content. Examples:

clu_a_ia015.xls

4.6 Related Standards

This document is based on three Service Center Modernization Initiative (SCMI) Standards:

Standard for Geospatial Dataset File Naming

Standard for Geospatial Dataset Metadata

Standard for Geospatial Data

These documents can be found at the SCMI Data Team web site hosted on www.fsa.usda.gov/scdm under the category "Data Standards".

Additional information regarding the Federal Geographic Data Committee metadata standards can be found on the committee's website (www.fgdc.gov).

4.7 Definitions

Geospatial data are defined as either local or national depending on where the standards are established.

Local Data	Data for which the standards governing its collection, naming, and documentation are set locally, i.e. below the national level. (Note that nationally-defined data can be collected locally; but it is not called "local" data because the standards for its collection were set above the state level.) County tax assessor data is an example of a local data type.
National Data	Data for which the standards for its collection, naming, and documentation have been set at a national level by an agency or jointly by several agencies, or according to the standards of an external agency or organization. National data (1) has international, national, USDA, or agency-wide application, (2) contains information that is used/shared directly in making national program decisions, or (3) is used/shared in multiple agencies, offices, states, or other internal/external organizations. USDA SSURGO soils data is an example of a national data type.

In the Service Center data are either Common, Shared or Unique depending on the type of data.

Common data	Data jointly owned, used, and managed by the Service Center partners. Examples of common data include the base geospatial themes, such as Orthoimagery data.
Shared data	Data owned and managed by a specific Service Center partner, and shared by other partners (i.e., one agency maintains the data, while the other partner agencies access and use the data.) Common Land Unit data is an example shared data type as it is owned and managed by FSA but shared with NRCS.

Unique data	Data owned and managed by a specific Service Center partner but not shared. The data is usually specific to a particular program administered by only one agency. Disaster events\fsa_facilities is an example of a subfolder that contains unique data that is only accessed by a small number of FSA employees

5. Roles and Responsibilities for Geospatial Data Management

The shared *f:\geodata* folder on the Service Center server will be used by a number of people to perform a number of services and functions in the Service Center, including:

- Sharing information with co-workers and partner agencies.
- Providing a staging area for downloading nationally-developed and state-developed geospatial data, and making the data accessible to all GIS users.
- Providing a place to store spatial data that is to be backed-up on a regular basis. Backup processes will focus on data that is locally updated.
- Sharing data with outside agencies, including Conservation Districts, state and local governments, other USDA agencies, etc.

In order to manage the shared *geodata* folder to meet the business requirements of all three agencies, user groups will be established. Employees assigned to these user groups will have read, or read and write, permissions to the subfolders in the f:/geodata folder depending on their duties and responsibilities and the type of data. The administrative tasks to maintain the user groups and permissions will fall on the IT staff and Geodata Administrators in each state.

5.1 Local Geodata Administrators

Each Service Center will have Local Geodata Administrators who have the authority and permissions to maintain the content and data integrity of files and folders under the shared geodata directory. This function may be performed in the Service Center or remotely. The Local Geodata Administrator:

- Has the ability to add, update, and delete folders and files under the F:\geodata folder, except for sensitive data as outlined in Appendix C.
- Monitors the currency of local data files, and in coordination with the State Geodata Administrator can refresh national or state-developed datasets as appropriate.

5.2 State Geodata Administrator(s)

The State Geodata Administrator is a person from one of the partner agencies with responsibility that is jointly assigned by the NRCS State Conservationist, FSA State Executive Director and RD State Director in each state, to manage shared geospatial datasets for all agencies and partner organizations within the state. The State Geodata Administrator serves as a single point of contact for CCE management policies and recommendations regarding geospatial data. One or more backup administrators may be assigned from the same, or a different, agency. The backup administrators will help the identified State Geodata Administrator to manage geospatial data in a manner that is consistent with CCE geospatial data policies and recommendations. The State Geodata Administrator works with the IT staff and the State GIS Team to:

- Insures the geodata standard is implemented in all service centers within their state.
- Administer the transfer of geospatial datasets and metadata from national and state sources to the appropriate Service Centers.
- Monitor and maintain quality control for data and metadata used in state and local offices. Includes monitoring adherence to technical standards and policies.

- Provide training on the management and usage of geospatial datasets to local data administrators and stewards.
- Coordinate with National Geospatial Data Centers, and other national, state and local agencies and organizations, and National Application Development Centers to facilitate the acquisition and transfer of data.
- Maintains data tracking that will contain a listing of all of the GIS data themes present at each Service Center that are National, Common and Shared, including the currency of the data.
- Maintain the state-level geospatial datasets.
- Leads the State GIS Team that includes representative from NRCS, FSA and RD and from partner organizations if appropriate.

5.3 National Data Stewards

The National Data Steward is a business-area expert who is assigned responsibility by the National Executive Sponsor for the content of the data and database. The Data Steward establishes definitions and domains for data elements; sets the procedures for collecting and certifying data and metadata; and manages the overall storage, maintenance, and distribution of the data and metadata. Certain data steward responsibilities may be re-delegated to state and local data stewards who are responsible for portions or copies of a data set.

The National Data Steward(s) will:

- Act as the designated authority and point of contact for all business-area decisions concerning the data.
- Establish and maintain business rules and consistent definitions for data elements, including data quality and certification standards.
- Establish standards to ensure the validity, accuracy, and completeness of the physical data and supporting metadata, to include:
    - A process for the creation, storage and dissemination of data sets and associated metadata.
    - A process and monitoring system to certify that the data meets quality standards.
- Provide for the security of the data assets, to include:
    - Coordinate with agency security officers.
    - Recommend availability, security and access authority for the data.
    - Identify security requirements under the Freedom of Information Act, and for data that must be protected under the Privacy Act.

A complete listing of national geospatial data stewards is provided in Appendix G of this document.

5.4 National Geospatial Data Centers

The National Cartographic Center in Ft. Worth and the Aerial Photography Field Office in Salt Lake City are national repositories for geospatial data and metadata used by the partner agencies. The Data Centers:

- Coordinate the distribution of geodata products with the State GIS Team and Geodata Administrators.
- Acquire, integrate, maintain, and archive agency geospatial data.
- Provide quality assurance for geospatial data and metadata.
- Disseminate data to States, Service Centers, and other customers.
- Provide for the sustainability of national data resources.

Appendix A. – STANDARD GEOSPATIAL FOLDER STRUCTURE & NAMING CONVENTIONS

The *geodata* folder will have the following categories (subdirectories) under it. File naming formats are given under each subfolder. The single-letter "feature type" (a, l, x, etc.) can vary to accurately describe the contents of the dataset, i.e. whether the file contain points, lines, etc. State codes will be expressed as two-letter US Postal Office abbreviations (md, az, tx, etc.). County codes will be expressed as the three-digit FIPS number (001, 015, etc.).

The document "Standard for Geospatial Dataset File Naming" gives further details on spatial categories. See section 4.6 for details on locating this document. In the future refer to this document on the website for the most current naming standard.

The column marked **'B'** in the chart below contains the default determination as to whether or not (Y or N) the directory will be backed up on a regular basis. For directories having a 'Y' (yes) under "B", changed files will be updated on a daily basis with a complete backup of all files weekly. An 'N' (no) indicates that files in that folder will not be backed up either daily or weekly. GIS data obtained from the National Data Centers, and from the State Office, can be restored easily by either downloading new copies of the data or reloading from the original tape or CD. It is not necessary to continually back up these large datasets stored on the Service Center server. The backup of individual folders can be modified to meet local needs.

Agencies will continually obtain or create geospatial datasets that are not specifically identified in the *Manual for Managing Geospatial Datasets in Service Centers*. For example, more detailed color DOQs might be available from a local source. Also, unique local problems may require use of geospatial data that are not typically used by Service Centers. For example, Service Centers in Tennessee use BLM strip mine data. In both of these cases, the additional geospatial data could be placed within an existing geodata subfolder. The detailed, color DOQs should be placed in the ortho_imagery subfolder and a file naming convention should be developed and approved by the State Geodata Administrator. With the BLM strip mine geodata files, there are a number of possible subfolders that could be used (e.g., geology, land_use_land_cover, land_sites, etc.). The State Geodata Administrator should help make the subfolder selection as well as help develop the file naming convention for files of local or state interest. If the data are placed within an existing subfolder, a filename other than the standard filenames must be used or there is a danger that existing files might be overwritten.

Filenames may express a unique scale, projection, date or other source to clearly differentiate the file from the standard, existing files. An alternative, acceptable convention for state and local data is to create an additional subfolder to the high level geodata directory. For example, strip mine data may be added in the following way without impacting the standard directory tree: F:\geodata\strip_mines. **Subfolders should not be added between the high level geodata folder and a standard geodata subfolder**, for example: F:\geodata\<county>\ortho_imagery, as this would cause the existing standard geodata directory structure to be disrupted. As mentioned previously, the State Geodata Administrator should be involved in the supplemental subfolder and file naming process to better ensure that procedures are correctly followed.

An alternative solution for the unique state and local datasets, would be to store them in the f:/geodata/project_data/<agency name> folder. The project_data folders are to be thought of as working directories for each agency and should be managed by each individual agency. Both temporary and permanent data can be placed in these folders. (Examples of temporary data would

be default clip, merge, or dissolve shapefiles created while using the ArcView Geoprocessing Wizard.)

While, the State GIS Teams may develop their own naming conventions for the unique state and local datasets, they should follow the examples on page 3, and throughout Appendix A, of the *Manual for Managing Geospatial Datasets in Service Centers* as much as possible.

The following is a summary of the standard geodata subfolders, and the geospatial datasets that are to be stored in each of them:

B	Subfolder Name	File Name Prefix	Description
	F:\geodata		Top folder in the directory structure. The following are subfolders for major theme categories under the primary geodata folder:
Y	**air_quality**	File naming to be determined.	No files delivered to date.
N	**cadastral**	plss_a_<stnnn>	Public Land Survey System polygon data
		plss_l_<stnnn>	Public Land Survey System boundaries (township/range/section) for cartographic display.
N	**census**	block_groups<yy>_<stnnn>	Demographic block data tabulated by census geography from Bureau of Census. Other base map TIGER features such as road, hydro etc are in appropriate theme folders.
		tracts<yy>_<stnnn>	Demographic tract data tabulated by census geography from Bureau of Census.
N	**climate\precipitation**	precip_a_<st>	'precipitation' is a subfolder of 'climate'. Annual precipitation (sum of 12 monthly maps) for the entire state. <st> is equal to the state two character postal abbreviation
		precip_l_<st>	Annual precipitation boundaries for cartographic display for the entire state
		precip<mmm>_a_<st>	Mean (1961-1990) Monthly precipitation data for the entire state. <mmm> is equal to the three-letter abbreviation for the applicable month
		precip<mmm>_l_<st>	Monthly precipitation boundaries for the entire state. <mmm> is equal to the three-letter abbreviation for the applicable month
N	**climate\temperature**	File naming to be determined.	‘temperature ‘ is a subfolder of ‘climate’. No files delivered to date.
Y	**common_land_unit**	dlu_a_<stnnn>	District Land Unit (DLU) – Farm field boundary layer.
Y	**common_land_unit\fsa_clu**	crp_t_<stnnn>	CRP data linked to CLU. (May be in the form of converted .dbf files. Would include compliance and crop reporting.)

B	Subfolder Name	File Name Prefix	Description
		clu_a_<stnnn>	Common Land Unit (CLU) Farm Field Boundary
		wet_p_<stnnn>	FSA wetland point data
Y	**conservation_practices**	File naming to be determined.	Planned and applied conservation practice data aggregated for the Service Center.
Y	**cultural_resources**	File naming to be determined.	Archeology, state historic sites, Native American settlements and burial grounds, National Park Service National Register of Historic Places, National Historic Landmarks and National Natural Landmarks. A general category and no files delivered to date.
Y	**disaster_events**	<disaster type>_a_<stnnn> _ <identifier>	Describes the area (or points if feature type is a 'p') affected by a natural disaster, with a unique name or identifier for the event. Disaster type describes whether the event was a flood, storm, etc. The unique event identifier is a date, unless some other identifying code is assigned, such as a version number. State and county can be included depending on the scope of the disaster area.
Y	**disaster_events\ fsa_facilities**	ffl_p_<stnnn>	Point locations within the county of Fertilizer Facilities
		ffsfl_p_<stnnn>	Point locations within the county of Food, Feed, and Seed Facilities
Y	**ecological**	File naming to be determined.	No files delivered to date.
N	**elevation**	contour_l_<stnnn>	1:24,000 USGS hypsography line data
		ngs_p_<stnnn>	Point location and description of National Geodetic Survey Monuments
		ned_<nnnnn>	1:24,000 USGS National Elevation Dataset (NED) merged into a one-degree seamless raster format with elevations portrayed in decimeters.
		nez_<nnnnn>	Reprojected 1:24,000 USGS National Elevation Dataset (NED) from adjacent UTM zone merged into one-degree block
		nedshd_<nnnnn>	1:24,000 USGS National Elevation Dataset (NED) merged into a one-degree seamless shaded relief TIFF and bil formats.
		nezshd_<nnnnn>	Reprojected 1:24,000 USGS National Elevation Dataset (NED) from adjacent UTM zone merged into a one-degree seamless shaded relief TIFF and bil formats.
		<usgs standard>	USGS Digital Elevation Model (DEM) ASCII file. USGS standard lat/long name with a "d" leading character. File extension

B	Subfolder Name	File Name Prefix	Description
			is .dem
Y	**endangered_habitat**	File naming to be determined.	No files delivered to date.
Y	**environmental_easements**	wrp_a_<st>	Aggregation of Wetland Reserve Program (WRP) easements for State Service Centers. Data developed locally.
		wrp_a_<stnnn>	Aggregation of WRP easements for a specific Service Center area. No files delivered to date. Data developed locally
Y	**environmental_easements \fsa**	flpce_a_<stnnn>	Farm Loan Program Inventory Property (Conservation) Easements. Data developed locally.
		flpct_a_<stnnn>	Farm Loan Program Conservation Transfers. Data developed locally.
		dfn_a_<stnnn>	Debt for Nature easements. Data developed locally.
N	**geographic_names**	gnis_p_<stnnn>	Geographic Names Information Systems point data from GNIS cultural and topographic non-populated places file
Y	**geology**	File naming to be determined.	No files delivered to date.
N	**government_units**	blm_a_<stnnn>	Bureau of Land Managemt Polygon Data
		boundary_l_<stnnn>	1:24,000 USGS boundary line data
		boundary_a_<stnnn>	1:24,000 USGS boundary polygon data (state park, wildlife refuge, etc.)
		congdist_<nnn>_a_<st>	Full US Congressional districts 104 – 107 from Census TIGER data. <nnn> is the congress number e.g. 106
		cities_p_<stnnn>	Geographic Names Information Systems point data from GNIS populated places file
		cnty24k_a_<stnnn>	1:24,000 county boundary polygon data
		cnty24k _l_<stnnn>	1:24,000 county boundaries for cartographic display
		cnty100k_a_<stnnn>	1:100,000 county boundary polygon from Census TIGER data
		cnty100k_l_<stnnn>	1:100,000 county boundaries for cartographic display from Census TIGER data.
		manfetr_a_<stnnn>	1:24,000 USGS manmade feature polygon
		manfetr_l_<stnnn>	1:24,000 USGS manmade feature line data
		ntlforests_a_<stnnn>	National Forests Polygon data

B	Subfolder Name	File Name Prefix	Description
		ntlforests_l_<stnnn>	National Forests Line boundaries for cartographic display
		ntlparks_a_<stnnn>	National Park Polygon data
		ntlparks_l_<stnnn>	National Park Line boundaries for cartographic display
		tribal_a_<stnnn>	Native American Indian Lands
		rcd_a_us	Full US Resource Conservation & Development Areas polygon data
		state_a_us	Full US state polygons
		state_l_us	Full US state boundaries for cartographic display
		swcd _a_us	Full US Soil and Water Conservation District polygon data
		urban_a_<st>	1:100,000 urban area polygons from Census TIGER data
		zip_p_us	Full US zip code centroids (points). GIS Implementation Team to identify data source
Y	**hazard_site**	File naming to be determined.	No files delivered to date
N	**hydrography**	damsites_p_<stnnn>	National Inventory of Dams point data
		femaq3_a_<stnnn>	Federal Emergency Management Agency (FEMA) polygon data
		hydro24k_l_<stnnn>	1:24,000 USGS line data
		hydro100k_l_<stnnn>	1:100,000 Census TIGER line data for hydrology
		nhd100k_l_<xxxxxxxx>	1:100,000 USGS/EPA National Hydrography Dataset line data by 8 digit sub basin
		nhd24k_l_<xxxxxxxx>	1:24,000 USGS/EPA National Hydrography Dataset line data by 8 digit sub basin
		ssara_p_<stnnn>	Sole source aquifer recharge areas
		watbod_a_<stnnn>	1:100,000 Census TIGER area features for water bodies hydrology
Y	**hydrologic_units**	huc250k_a_us	1:250,000 8-digit hydrologic unit data for U.S.
		wbd_a_<xxxxxxxx>	1:24,000 polygon data of the Hydrologic Units by sub basin at the 4th, 5th and 6th level
		wbd_a_<xx>	1:24,000 polygon data of the Hydrologic Units by region at the 1st, 2nd, 3rd, and 4th level

B	Subfolder Name	File Name Prefix	Description
N	**imagery**	landsat_<stnnn>_<ppprrr> _ <yyyymmdd>	Other imagery files such as satellite or non-standard imagery. <ppprrr> is path and row.
Y	**imagery\compliance_fsa**	comp_<nnnnnnn>_ <yyyymm>	Annual Compliance imagery – *other* than 35 mm slides. <nnnnnnn> equates to two numbers for latitude, three numbers for longitude and two numbers for the 01 to 64 quadrangle numbers in the one degree block
		slides_<stnnn>_<fffeee> _<yyyymm>	Scanned 35mm or digital slides. <fffeee> is the flight and exposure number. Example: slides_va013_048009_200207.tif
		slides_<stnnn>_t<nn>_ r<nn>_ s<nn>_<yyyymm>	Scanned 35mm or digital slides. t<nn> is township, r<nn> is range, s<nn> is section. Example: slides_mn013_t34_r26_s15_200207.tif
Y	**land_site**	aboveground_storage_p _<stnnn>	County coverage of the location points of aboveground storage facilities. Any kind of storage or particular types of storage
		housing_p_<stnnn>	Location points for instances of housing developments and/or foreclosures, within a county
		lagoon_p_<stnnn>	Location points for lagoons and similar areas in a county
		livestock_facility_p_ <stnnn>	Location points of feedlots, poultry facilities, etc. within a county
		stackyd_a_<stnnn>	Polygons of stackyards for hay/silage storage in a county
		storage_p_<stnnn>	Location points for grain bins and similar facilities in a county
		underground_storage_p _<stnnn>	County coverage of the location points of underground storage facilities
		well_p_<stnnn>	Point data for locating well heads within a county
Y	**land_use_land_cover**	lulc_a_<stnnn>	Polygon data of the USGS Land Use Land Cover
		nonveg_a_<stnnn>	1:24,000 USGS non-vegetative polygon data (sand area, beach, gravel beach, etc.)
		nlcd_<st>_utm<nn>	30 meter USGS/EPA National Land Cover Dataset raster data. The dataset is available in multiple UTM zones for states in more than one zone
		surfcvr_a_<stnnn>	1:24,000 USGS surface cover polygon data (woods, brush, orchard, etc.)

B	Subfolder Name	File Name Prefix	Description
		File naming to be determined.	Vegetation distribution, etc.
Y	**land_use_land_cover\ fsa_compliance**	crl_a_<stnnn>_<yyyy>	Acreage reporting data created by FSA's Crop Reporting Tool (an R&D tool). Data is created locally for each farm, then merged into one county file. Is used in SC with CLU
		land_use_a_<stnnn>	Commodity (acreage) reporting data created by the FSA Land Use pilot application. Will be run in only three counties in 2002 using SQL Server. Up to ten years of data is kept in one file – not an annual file.
		land_use_d_<stnnn>	Commodity (acreage) reporting data created by the FSA Land Use pilot application. Will be run in only three counties in 2002 using SQL Server. All polygon data is kept in one file – not an annual file
Y	**map_indexes**	napp_p_<stnnn>	National Aerial Photography Program (NAPP) point data
		quads12k_a_<stnnn>	1:12,000 quarter quad polygon data
		quads20k_a_<stnnn>	1:20,000 7.5x7.5 quad polygons
		quads24k_a_<stnnn>	1:24,000 7.5x7.5 quad polygons
		quads25k_a_<stnnn>	1:25,000 7.5x7.5 and 7.5x15 quad polygons
		quads63k_a_<stnnn>	1:63,360 15x15 quad polygons
Y	**measurement_services**	meas_service_a_ <stnnn>_<yyyy>	Yearly file for all area measurement services
N	**ortho_imagery**	ortho_e<x-x>_<stnnn>	APFO MrSID **county** ortho mosaic of enhanced MDOQ. <x-x> is number-total tiles in county mosaic. File extension of MrSID image is .sid.
		ortho<x-x> _<stnnn>	NCGC or NRCS county ortho mosaic of DOQQ. <x-x> is the number of total tiles in county mosaic. File extension of .sid depicts a MrSID image, while file extension of .ecw depicts an ERMapper image.
		ortho_<st><nnnnnn>	NRCS field office multi-county service area (defined in Office Information Profile database as the NRCS Office ID) ortho mosaic. File extension of MrSID image is .sid.
		<a><nnnnnnn>_<qq>_<yyyymmdd>	USGS DOQQ –Raster format (.bil, .bsq, .bip). <a> is leading character either 'o' for black and white or 'c' for color. <nnnnnnn>, two numbers for latitude, three numbers for longitude and two numbers for

B	Subfolder Name	File Name Prefix	Description
			the 01 to 64 quadrangle number in the one degree block. <qq> is quarter area.. <yyyymmdd> is image date.
		<a><nnnnnnn>_<yyyymmdd>	APFO DOQ .tif image. <a><nnnnnnn> is leading character, two numbers for latitude, three numbers for longitude and two numbers for the 01 to 64 quadrangle number in the one degree block. <yyyymmdd> date is optional. Leading character <a> can be: m – all DOQQs present and reside in native UTM zone x – there is a missing DOQQ in the DOQ z – re-projected DOQ into dominant county UTM zone
Y	**project_data**		Subfolders for agency-specific data that does not fit under the major geodata theme subfolders. **Subfolders for each agency or organization may be created as needed.**
	project_data\fsa	File naming to be determined	
	project_data\nrcs	File naming to be determined	
	project_data\rd	chattel_p_ <stnnn>	Known location points for customer-owned, moveable property, in a county. Multiple assets may be linked to a point
		chattel_y_<stnnn> <sequence_number>	Photographs associated with the customer chattel points file. If multiple photos, they can be distinguished with a sequence number, or other identifying information.
	project_data\rcd	File naming to be determined	Resource Conservation District
	project_data\swcd	File naming to be determined	Soil and Water Conservation District
Y	**public_utilities**	File naming to be determined.	
N	**soils**	crpdata_d_<stssaid>	NOT A MAP-Excel spreadsheet with 1990 frozen soils data used for Conservation Reserve Program (CRP) eligibility determinations. <stssaid> State Soil Survey Area ID number (e.g., crpdata_d_ca048.xls)
		mlra_a_us	Full US Polygon data of Major Land Resource Areas (MLRA) Reselected to SC Area
		soil_d_ <stssaid>	NOT A MAP-Access database of soil survey attribute data in the current SSURGO structure format.
		soil_a_<stssaid>	SSURGO Soils Polygon data
		soil_l_<stssaid>	Line data of the soils special features

B	Subfolder Name	File Name Prefix	Description
		soil_p_<stssaid>	Point data of the soils special features
		soilmosaic_d_<nnnnnn>	Merged SSURGO attribute data for more than one soil survey area to support service center area of service. <nnnnnn > is the OIP office ID not OIP site ID
		soilmosaic_a_<nnnnnn>	Merged SSURGO soil polygon data for more than one soil survey area to support service center area of service. <nnnnnn > is the OIP office ID not OIP site ID
		soilmosaic_l_<nnnnnn>	Merged SSURGO soil special line features for more than one soil survey area to support service center area of service. <nnnnnn > is the OIP office ID not OIP site ID
		soilmosaic_p_<nnnnnn>	Merged SSURGO soil special point features for more than one soil survey area to support service center area of service. <nnnnnn > is the OIP office ID not OIP site ID
		ssa_a_<stssaid>	Polygon data limit of Soil Survey Area (SSA)
N	**topographic_images**	drg_<stnnn>	County mosaic MrSID of 1:20K, 1:24K, 1:25K Digital Raster Graphs without map collar. File extension of MrSID image is .sid.
		drg_<st><nnnnnn>	NRCS field office multi-county service area (defined in Office Information Profile database as the NRCS Office ID) DRG mosaic. File extension of MrSID image is .sid.
		<usgs standard>_<yyyy>	Enhanced DRG image with map collar removed. Map content date <yyyy> is optional for more than one set. The following characters are used in the usgs standard: r – 1:20,000, 7.5’ x 7.5’ topographic map image o – 1:24,000, 7.5’ x 7.5’ topographic map image p – 1:24,000, 7.5’ x 7.5’ provisional/orthophoto map image l – 1:25,000 7.5’ x 7.5’ topographic map image j – 1:30,000, 7.5’ x 7.5’ topographic map image k – 1:25,000, 7.5’ x 15’ topographic map image

B	Subfolder Name	File Name Prefix	Description
			i – 1:63,360, Alaska topographic map image g – 1:100,000, 30’ x 60’ planimetric map image f – 1:100,000, 30’ x 60’ topographic map image c – 1:250,000, 1 x 2 degree topographic map image
N	**transportation**	misctrans24k_l_<stnnn>	1:24,000 USGS line data (power transmission lines, substation, pipelines, etc.)
		misctrans100k_l_<stnnn>	1:100,000 Census TIGER line data for pipelines, power transmission lines, etc.
		railroads24k_l_<stnnn>	1:24,000 USGS line data-railroad layer
		railroads100k_l_<stnnn>	1:100,000 Census TIGER line data for railroad layer
		roads24k_l_<stnnn>	1:24,000 USGS line data-Roads layer
		roads100k_l_<stnnn>	1:100,000 Census TIGER roads line data
Y	**wetlands**	nwi_a_<stnnn>	Polygon data of the National Wetland Inventory (NWI) Fish and Wildlife Service (FWS)
		nwilfetr_l_<stnnn>	Linear Features line data of the NWI
		nwi_l_<stnnn>	Outlines of the NWI polygon data for cartographic display
		nwi_p_<stnnn>	Point data of the NW I
		wetland_l_<stnnn>	Boundaries of natural or constructed wetlands, by county.
Y	**wildlife**	File naming to be determined.	No files delivered to date.
Y	**zoning**	File naming to be determined.	No files delivered to date.

As needed, the following subfolders can be added as an additional layer of subfolders under each of the major *geodata* theme folders:

Y	**gps_data**	<subject>_xd_<stnnn>_<yyyymmdd>	A file of GPS points downloaded from a GPS instrument. The data in this file is kept in its original GPS-specific format. The subject describes what the data represents, i.e. “Grain Bins”. If this GPS data is imported into a GIS system, the resulting file would have a different feature type, i.e. ‘p’ if it is saved as a point data GIS file.
Y	**photographs**	<identifier>_y_<yyyymmdd>_<sequence number>	<Identifier> = the basic content of the photo, i.e. “Grain Bins on Smith Farm”. Date indicates when the photo was taken. If multiple pictures were taken, a sequence number (i.e. 1, 2, 3) can be added to give each photo a unique name.

Table Notations: The following notations apply to the file naming conventions used in Appendix A:

- < > indicates a substitution notation
- **<mmm>** is the three-letter abbreviation for the applicable month (e.g., precip<mmm>_a_<st>, precipjun_a_co is the file name for Colorado June precipitation)
- <**nn**> is the UTM Zone number 01-60
- **<nnnnn>** is a 2-digit latitude and 3 digit longitude for a one degree block
- <**nnnnnn**> is the NRCS office number in the Office Information Profile.
- <**ppprrr**> is landsat path and row.
- <**qq**> identifies the Digital Ortho Quarter Quad (nw, ne, sw, se, xx) within the full quad.
- **<st>** is the two character state postal abbreviation (e.g., precip_a_<st>; precip_a_co is the filename for Colorado annual precipitation).
- **<stnnn>** is the 2-character state postal abbreviation and 3-digit County FIPS codes (e.g., drg_<stnnn>, drg_md047 is the filename for Worcester County, Maryland DRG)
- **<stssaid>** is the state soil survey area ID (e.g., soils_l_<stssaid>; soils_l_md047 is the filename for Worcester County, Maryland Soil Survey Geographic Database (SSURGO) Lines)
- **us** indicates a dataset covering the entire United States, its protectorates and territories.
- **us48** indicates the conterminous or contiguous United States
- **<usgs standard>** is the standard naming convention used by the United States Geological Survey (USGS) The USGS naming standard for topographic images (DRGs) is available at http://mcmcweb.er.usgs.gov/drg/drg_name.html. The USGS naming standard for digital orthoimagery is available at http://www.ftw.nrcs.usda.gov/gdr/doq_name.html
- **<x-x>** is number - total tiles in an APFO or ERMapper county ortho mosaic. Tiles are numbered west to east and north to south. These are county subsets due to maximum file sizes (2GB for Solaris 2.5), maximum space on CD media (650MB), and Maximum compression ratio: Lizardtech recommends a maximum of 12:1 for B/W and 20:1 for color.
- **<xx>** is the 2-digit Hydrologic Unit Region
- <**xxxxxxxx**> is the 8-digit Hydrologic Unit Code
- **<yyyy>** is the calendar year.
- <**yyyymmdd**> is the date expressed as year,month, day. When entire date is not available, use at least year <**yyyy**>.

For the Digital Ortho Quadrangles Mosaic imagery

- **<a>** is a substitution for the leading character that describes the Digital Ortho Quadrangles Mosaic imagery as follows:
  - **m** indicates DOQQs (Digitial Ortho Quarter Quadrangles) are present and reside in native Universal Transverse Mercator (UTM) zone
  - **x** indicates there is a missing DOQQ in the DOQ

- **z** represents re-projected Digital Ortho Quadrangle (DOQ) into dominant county UTM zone

The feature-type portion of a file name is one of the following:

a - area
d - database/spreadsheet
e - enhanced
l - line
p - point
t - table
x - GPS points (without differential resolution, or of unknown resolution)
xd - GPS points (if differential resolution was used)
y - photograph (from digital camera or scanned photo)

A.1 Merging Datasets into Multi-County Data Layers

Merged datasets created to provide a multi-county data layer are named using the data theme file standard name preceded with 'mosaic_' and ending with the OIP office id.

Example: If the NRCS Fort Collins, CO office (OIP Office No. 60548) merged two soil surveys (Larimer County Area Soil Survey (CO644) and Weld County Area Soil Survey (CO617)), the resulting file would be named – soil_mosaic_a_60548, and soil_mosaic_d_60548

The OIP office id can be found at http://offices.usda.gov, navigating to the state and county and selecting the menu item "*complete office listing*". Do not use the site ID. The site ID will change with a change in physical location of the office. Use the Office ID, which remains the same as long as the agency office has a presence in the county.

Appendix B. – DEFINITIONS OF METADATA ELEMENTS

Listed below are the minimum metadata elements that must be recorded for each locally developed geospatial data file in a service center. A more detailed explanation of metadata can be found in the ***Standard for Geospatial Dataset Metadata*.** See section 4.6 for details on locating this document. In the future refer to this document for the most current metadata standard.

Example: Metadata Minimum Elements for SSURGO in Polk County, Iowa

Originator: U.S. Department of Agriculture, Natural Resources Conservation Service

Title: Soil Survey Geographic (SSURGO) database for Polk County, Iowa

Purpose: SSURGO depicts information about the kinds and distribution of soils on the landscape. The soil map and data used in the SSURGO product were prepared by soil scientists as part of the National Cooperative Soil Survey.

Progress: Complete

Time Period of Content: 1998

Source_Scale_Denominator: 12000

Map_Projection: UTM_Zone_Number: 15

Horizontal_Datum_Name: North American Datum of 1983

Planar_Distance_Units: Meters

Contact_Organization: U.S. Department of Agriculture,
Natural Resources Conservation Service

Address: 210 Walnut Street, Suite 693
City: Des Moines
State_or_Province: Iowa
Postal_Code: 50309-2180

West_Bounding_Coordinate: -93.8750
East_Bounding_Coordinate: -93.3125
North_Bounding_Coordinate: 41.8750
South_Bounding_Coordinate: 41.4375

Source_Information:

1. U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Polk County, Iowa (1960)

2. U.S. Geological Survey, multiple paper photographs (1988-1993)

3. U.S. Geological Survey, stable-base orthophotographs (1990)

4. U.S. Department of Agriculture, Natural Resources Conservation Service, unpublished material, annotated overlays

Process_Description:

Field procedures for the second order soil survey included plotting of soil boundaries determined by field observation and by interpretation of remotely sensed data. Boundaries were verified at closely spaced intervals, and the soils in each delineation were identified by traversing and transecting the landscape. Soil scientists described and sampled the soils, analyzed samples in the laboratory, and statistically analyzed the data. The classification and map unit names were finalized at the final correlation in September 1993.

Entity_Attribute_Overview:

Map Unit Delineations are closed polygons that may be dominated by a single soil or nonsoil component plus allowable similar or dissimilar soils, or they can be geographic mixtures of groups of soils or soils and nonsoil areas.

The map unit symbol uniquely identifies each closed delineation map unit. Each symbol is linked to a map unit name. The map unit symbol is also the key for linking information in the Map Unit Interpretations Record tables. The map unit symbols are not carried within the modified Digital Line Graph file; however, they are made available in a companion attribute file. The attribute file links the minor codes in the Digital Line Graph files to the map unit symbols.

Map Unit Delineations are described by the Map Unit Interpretations Record database. This attribute database gives the proportionate extent of the component soils and the properties for each soil. The database contains both estimated and measured data on the physical and chemical soil properties and soil interpretations for engineering, water management, recreation, agronomic, woodland, range, and wildlife uses of the soil.

Description of the Core Metadata Elements for Geospatial Datasets

Metadata Element Name	Definition	Domain value/example
Originator	The name of an organization or individual that developed the data set.	Textual entry, should include the names of editors or compliers if information is available. Examples include: "USDA NRCS", "USDA APFO", USDA FS" or "John Smith NCRS"
Title	The name by which the data set is known.	For example, "Common Land Unit of Taylor, Texas".
Purpose	A summary of the intentions under which the data set was developed.	Example: "This data set depicts information about features on or near the surface of the Earth depicting information about the distribution of the theme across the landscape. It can be used for general planning purposes in GIS analysis."
Progress	The current status of the data set.	"Complete", "In Work", "Planned"
Time_Period_of_Content	The year (and optionally month, or month and day).	The date should conform to the following format: YYYY for year only, YYYYMMDD if month and day information is available. An example for June 10, 1999 is 19990610 or simply 1999 if only year information is available.
Source_Scale_Denominator	The denominator of the representative fraction on a map.	For example, on a 1:24,000-scale map, the source scale denominator is 24000.
Map_Projection	A value representing a UTM zone number or a State Plane zone. This metadata element is used in the simplified core metadata described in section 5 of this document. A full set of metadata would, instead, record the values in the separate data elements listed below.	UTM or State Plane zone number value. Usage is according to the predominate usage in the particular state. UTM Zones: Values for the northern hemisphere fall within 1 <= UTM zone <= 60. Values for the southern hemisphere fall within -60 <= UTM zone <= -1. SPCS Zones: Use the four-digit numeric codes for the SPCS zone based on the North American Datum (NAD) of 1927 or NAD 1983 depending on applicability.
Horizontal_Datum_Name	The identification given to the reference system used for	Select either "North American Datum of 1927" or "North American Datum

Metadata Element Name	Definition	Domain value/example
	defining the coordinates of points.	of 1983".
Planar_Distance_Units	Units of measure used for distances.	Examples include: "meters", "international feet", "survey feet"
Contact_Person	The name of the individual to whom the contact type applies. In many cases this may be the data steward.	For example: "John Smith"
Contact_Organization	The name of the organization to which the contact applies.	Examples include: "USDA NRCS", "USDA APFO", "USDA FS"
Address	An address line for the address.	For example: 100 S. Main St.
City	The city of the address	For example: Kansas City
State	The state or province of the address.	For example: MO
Postal_Code	The ZIP or other postal code of the address.	For example: 20002
West_Bounding_Coordinate	Western-most coordinate of the limit of coverage expressed in longitude (decimal degrees).	-180.0 <= West Bounding Coordinate <= 180.0
East_Bounding_Coordinate	Eastern-most coordinate of the limit of coverage expressed in longitude (decimal degrees).	-180.0 <= East Bounding Coordinate <= 180.0
North_Bounding_Coordinate	Northern-most coordinate of the limit of coverage expressed latitude (decimal degrees).	–90.0 <= North Bounding Coordinate <= 90.0; North Bounding Coordinate >= South Bounding Coordinate.
South_Bounding_Coordinate	Southern-most coordinate of the limit of coverage expressed in latitude (decimal degrees).	-90.0 <= South Bounding Coordinate <= 90.0; South Bounding Coordinate <= North Bounding Coordinate
Source_Information	List of sources and a short discussion of the information contributed by each.	Sources used to develop the geospatial dataset.
Process_Description	An explanation of the event and related parameters or tolerances.	Processing steps used to develop the geospatial dataset.
Entity_Attribute_Overview	Detailed summary of the information contained in a data set.	Textual description of attributes. For example: taxclass (taxonomic classification) - stores the taxonomic classification for soils in the database.

Appendix C. – ADMINISTRATION OF THE GEODATA FOLDER

There will be specific Geodata Groups interacting with the geodata folders on the Service Center network servers. Each group will have a specific set of permissions for reading and/or writing files, and creating/deleting specific subfolders. The level of access assigned to some groups may vary from subfolder to subfolder (e.g., the FSA Staff Group may have read access to one subfolder and read/write access to a different subfolder). Groups will, in many cases, have members from multiple agencies. State IT staffs working with the State and Local Geodata Administrators assign group membership.

In addition to the original global groups set up for the service centers, the following series of geodata groups will be created and assigned appropriate permissions on geodata subfolders

1. State Geodata Administrator

   Will have access to all geospatial data for the state, excluding any "sensitive" data identified by FSA ,on the network servers at the Service Center and State Office and permissions to read, write, change, delete folders and subfolders, or individual files within them either by making global changes or changes to individual elements within them. SGDA can create folders & subfolders as necessary.

2. Local Geodata Administrator

   Will have access to all the geospatial data at the Service Center, excluding any "sensitive" data identified by FSA, and permissions to read, write, change, delete folders and subfolders, or individual files within them either by making global changes or changes to individual elements within them. LGDA can create folders & subfolders as necessary within that Service Center. This domain group has been established; however, local geodata administrators may not be assigned to this group until training has been provided by the state office staffs on geodata data management and administration. In some cases the State Office staff may assign members to this group if they determine that the individuals have the proper experience. Each office will have at least one administrator and a back-up person or persons in this group.

3. FSA – Local Geodata Editors

   Will have access to all FSA specific geospatial data at the Service Center and permissions to read, write, change, delete and replicate all FSA administered folders except restricted folders. The group may, but is not required to, include the same employees as those in groups 4 and 5. Specifically the group should include employees responsible for entering Measurement Services into the GIS system; working with Farm Loan easements (FSA Farm Loan Manager & backup), compliance imagery or CRP; collecting or maintaining data for files listed under the land_site subfolder; and anyone who will be entering data on disaster events into GIS system.

4. FSA – Local CLU Data Editors

   Will have access to geospatial and customer/business CLU data at the Service Center with permissions to read, write, change, delete and replicate CLU specific data files. The persons assigned to this group should be the employees responsible for maintaining the CLU data.

At a minimum, at least the CLU Data Manager and one backup should be assigned to the group. See 8-CM, paragraph 33 for more information on CLU Service Center Manager.

5. FSA- Disaster Events/FSA Facilities Access and Edit

This highly restricted FSA group will have access to view and edit point locations data relating to Fertilizer Facilities and to Food, Feed and Seed Facilities. The persons assigned to this group should be the employees responsible for maintaining the existing paper listings in Section 2 and Section 3 of 1-DP. Once position data is collected for Fertilizer Facilities and Food, Feed and Seed Facilities, the group would be expected to maintain the data.

6. Service Center Users

Will have read - access to all non-restricted folders.

The existing service center staff global group (gg-sitename-users) will be used to establish this service center users group.

7. FSA Staff Users Group

Will have FSA agency only read access to specific folders (e.g., measurement services) and sub-folders that are restricted to access by other agencies. Will have read and write access to project_data\fsa subfolders.

The existing FSA staff global group (gg-sitename-fsa) will be used to set up FSA only access to specific folders.

8. NRCS Staff Users Group

Will have NRCS agency only read access to specific folders and sub-folders that are restricted to access by other agencies. Will have read and write access to project_data\nrcs and project data\rcd subfolders.

The existing NRCS staff global group (gg-sitename-nrcs) will be used to set up NRCS only access to specific folders.

9. RD Staff Users Group

Will have RD agency only read access to specific folders and sub-folders that are restricted to access by other agencies. Will have read and write access to project_data\rd subfolders.

The existing RD staff global group (gg-sitename-rd) will be used to set up RD only access to specific folders.

10. SWCD Staff Users Group

Will have SWCD agency only read access to specific folders and sub-folders that are restricted to access by other agencies. Will have read and write access to project_data\swcd subfolders.

The existing CD staff global group (gg-sitename-cd) will be used to set up SWCD only access to specific folders.

Permissions Matrix:

All geodata subfolders will have Read Only access for all Service Center Users, and Read/Write access for the State and Local Geodata Administrators, except for the subfolders identified in the following matrix. Permissions on those folders will be set as described in the matrix.

In the following chart, the groups having access to each subfolder are listed. The level of access (i.e., R for Read, R/W for Read/Write, etc.) is included in the matrix.

Subfolder Name	Examples of Files in the Subfolder	Groups with access to the folder
F:\geodata		
common_land_unit\fsa_clu	clu, crp, wet	1, 2, 6 - R 4 - R/W
disaster_events	disaster_type	1, 2, 6 - R 3 - R/W
disaster_events\fsa_facilities	ffl, ffsfl	5 - R/W
environmental_easements\fsa	flpce, flpct, dfn	1, 2, 6 - R 3 - R/W
imagery	landsat	1, 2, 6 - R ,3 R/W
imagery\compliance_fsa	comp, slides	1, 2, 6 - R 3- R/W
land_site	aboveground_storage, housing, lagoon, livestock_facility, stackyd, storage, underground_storage, well	1, 2, 6 – R 3 – R/W
land_use_land_cover\fsa_compliance	crl, land_use	1, 2, 6 – R 3 - R/W
measurement_services	meas_service	3 - R/W
project_data		
project_data\fsa		1, 2, 7 - R/W
project_data\nrcs		1, 2, 8 - R/W 10 - R
project_data\rd	chattel	1, 2, 9 - R/W

Subfolder Name	Examples of Files in the Subfolder	Groups with access to the folder
project_data\rcd		1, 2, 8 - R/W 10 - R
project_data\swcd		1, 2, 10 - R/W 8 - R

Appendix D. – PROCEDURES FOR MIGRATING GEOSPATIAL DATA TO NETWORK SERVERS

D.1 Objectives

The objective is to:

1) Establish the standard geodata folder structure on each personal computer that houses geospatial data.
2) Rename existing files according to the standards, and move them into the standard folders.
3) Establish the standard geodata folder structure on the network server as a shared resource.
4) Copy common and sharable geospatial and metadata files from personal machines to the shared server.
5) Acquire for service centers all available layers and themes pertinent to their program functions.
6) Update existing ArcView project files with the new geodata folder/filenames.

The following procedures apply to service centers that:

1) already have a network server,
2) already have geospatial data, and
3) are ready to migrate their geospatial data to the network server after promotions of network servers are completed (i.e., after July 1, 2002).

There are two alternative methods for migrating geospatial data to the network servers. These alternative methods are:

1) Tool-assisted Procedures
2) Manual Procedures

The tool-assisted procedures enable a simpler and faster migration of geospatial data to the network servers. The tool searches workstations for all geospatial data files, establishes new subfolders and supports migration of the existing data files to the new standardized subfolder and data file configuration and reestablishes ArcView project links. These steps can also be accomplished using manual procedures, but with greater difficulty and more time.

The State Geodata Administrator (see Section 4.2) has overall responsibility for initiating, scheduling, coordinating and conducting migrations of geospatial data from workstations to the network server. These migrations must comply with standards for folder and file names and permissions. The State Geodata Administrator will communicate with the service centers to schedule the geodata migrations and to make sure that service centers understand the advance preparation steps that are identified below in Section D.2.3.

D.2 Advance Preparation Procedures

The advance preparation procedures that are discussed in this section apply regardless of which geospatial data migration method is used (i.e., tool assisted or manual).

D.2.1 Advance Preparation at the State Office

The State Geodata Administrator will have responsibility for this task, but may complete it in cooperation with state IT staff. The key steps involved in this advance preparation task are to assess the geospatial data that are available at the service center and to supplement these data with other data that may be available from state archives and other sources (e.g., ftp download from NCGC). If additional geospatial data are readily available, then it is useful to load these data on the network server in the various Service Centers while performing the geospatial data migration.

It is important to note that there is not a need at this point to perform an exhaustive search for additional geospatial data; however as a minimum the priority datasets identified in Section D.2.2 should be acquired and delivered to all service centers.

D.2.2 Priority Geospatial Datasets

The table below list the priority geospatial data sets, the corresponding filenames (defined in Appendix A) and the websites where the data can be acquired:

1st Priority Datasets			
Subfolder Name F:\geodata\	**Filename**	**Available Formats**	**On-line Data Sources And URL for Status Maps**
ortho_imagery	ortho_e<x-x>_<stnnn> ortho<x-x>_<stnnn> ortho_<st>_<nnnnnn>	MrSID UTMNAD83 MrSID ERMapper UTMNAD83	http://lighthouse.nrcs.usda.gov/gateway/ Status Map: http://lighthouse.nrcs.usda.gov/gateway/statusmaps.asp
soils	soil_a_<stssaid>	Shapefile Coverage DLG UTMNAD27/83	http://www.ftw.nrcs.usda.gov/ssur_data.html Status Map: http://data4.ftw.nrcs.usda.gov/website/archived_ssurgo/viewer.htm
common_land_unit\ fsa_clu	clu_a_<stnnn>	Shapefile UTMNAD83	No online files to date. Data delivered locally. Status Map: http://www.apfo.usda.gov/statusmaps/clustat.gif
topographic_images	<usgs standard>_<yyyy> drg_<stnnn>	TIF UTMNAD27/83 MrSID UTMNAD83	http://lighthouse.nrcs.usda.gov/gateway/ Status Map: http://lighthouse.nrcs.usda.gov/gateway/statusmaps.asp

1st Priority Datasets			
Subfolder Name F:\geodata\	**Filename**	**Available Formats**	**On-line Data Sources And URL for Status Maps**
cadastral	plss_a_<stnnn>	shapefile UTMNAD27	http://edc.usgs.gov/geodata/dlg_large/states.html Status Map: http://mcmcweb.er.usgs.gov/status/dlg_stat.html Alternative Source: http://www.lsi.blm.gov/website/lsi/
hydrography	femaq3_a_<stnnn> hydro100k_l_<stnnn> watbod_a_<stnnn> (optional dataset, but readily available on same website) nhd100k_l_<xxxxxxxx> nhd24k_l_<xxxxxxxx>	Shapefile Geo/UTM/SP NAD27/83 Coverage GeoNAD83	http://lighthouse.nrcs.usda.gov/gateway/ Status Map: http://lighthouse.nrcs.usda.gov/gateway/statusmaps.asp http://nhd.usgs.gov/data.html
census	block_groups<yy>_<stnnn> tracts<yy>_<stnnn>	shapefile GeoNAD27	http://arcdata.esri.com/data/tiger2000/tiger_download.cfm Alternative Source: http://www.census.gov/geo/www/tiger/tiger2002/tgr2002.html
government_units	cnty100k_a_<stnnn> congdist_<nnn>_a_<st> (optional dataset, but readily available on same website)	Shapefile GeoNAD27	http://arcdata.esri.com/data/tiger2000/tiger_download.cfm Alternative Source: http://www.census.gov/geo/www/tiger/tiger2002/tgr2002.html

2nd Priority Datasets			
Subfolder Name	**Filename**	**Available Formats**	**On-line Data Sources And URL for Status Maps**
transportation	roads100k_l_<stnnn> railroads100k_l_<stnnn> (optional dataset, but readily available on same website)	shapefile Geo/UTM/SP NAD27/83	http://lighthouse.nrcs.usda.gov/gateway/ Status Map: http://lighthouse.nrcs.usda.gov/gateway/statusmaps.asp Alternative Source: http://www.census.gov/geo/www/tiger/tiger2002/tgr2002.html
hydrologic_units	wbd_a_<xx> wbd_a_<xxxxxxxx>	shapefile GeoNAD83 coverage GeoNAD83	http://www.ftw.nrcs.usda.gov/huc_data.html Status Map: http://www.ftw.nrcs.usda.gov/HUC/hucstatusstate.jpg

2nd Priority Datasets			
Subfolder Name	**Filename**	**Available Formats**	**On-line Data Sources And URL for Status Maps**
	huc250k_a_us	shapefile GeoNAD83	http://water.usgs.gov/GIS/huc.html
elevation	ned_<nnnnn> nedshd_<nnnnn> (optional dataset, but readily available on same website)	ArcInfo grid UTMNAD83	http://lighthouse.nrcs.usda.gov/gateway/ Status Map: http://lighthouse.nrcs.usda.gov/gateway/statusmaps.asp
climate\ precipitation	precip_a_<st> precip_<mmm>_a_<st> (optional dataset, but readily available on same website)	shapefile Geo/UTM/SP NAD27/83	http://lighthouse.nrcs.usda.gov/gateway/ Status Map: http://lighthouse.nrcs.usda.gov/gateway/statusmaps.asp Alternative Source: http://www.ocs.orst.edu/prism/prism_new.html
wetlands	nwi_a_<stnnn>	Coverage UTMNAD27/83	http://www.nwi.fws.gov/downloads.htm Status Map: http://www.nwi.fws.gov/Maps/maps.htm

- If additional geospatial data are available from state, data center or other sources, obtain these data sets, re-project them into UTM zone NAD83 (if necessary), and name them according to the standard name conventions. Note: UTM zone NAD83 refers to the Universal Transverse Mercator Projection with the 1983 North American Datum. The specific zone will vary across the country.

    - For ease of installation, these new datasets can be placed on a CD under the standard folder structure and carried to the Service Center when the migration process is to take place. Take uncompressed ortho CD's and CD with other geospatial data.

D.2.3 Advance Preparation at Service Centers with GeoSpatial Data by GIS Users/Computer Operators

In the Service Center, the advance preparation task involves backup of geospatial data as well as identification of geospatial data to be migrated and deletion of duplicate data. The State Geodata Administrator will coordinate with the local GIS users in the service center, as needed. Note that the Toolkit Customer Files, and their customer specific shapefiles, are not part of the geodata migration. Customer specific shapefiles will continue to be stored in the Customer Folders.

- Locate where the geodata or Service Center Themes data resides in the Field Service Center.

- Notify all service center personnel that the geospatial data is going to be migrated to the server.
- Backup all geospatial data and ArcView project files on your desktop/laptop computer to tape, CD-Rom, personal directory on a server, or diskette. (Staffs who use geospatial data will perform this step; in some states supplemental instructions may be provided by the State IT staff and/or State Geodata Administrators.)
- If there are duplicate datasets on the computer, or if the same dataset is duplicated on multiple desktop/laptop machines, determine which dataset is the complete and correct source of data to be moved to the server. Delete any extra copies of the data that will no longer be needed. (Staffs who use geospatial data will perform this step.) There may be duplicate datasets across agencies.

D.3 Manual Processes for Consolidating and Migrating GeoSpatial Data to the Network Servers

If you plan to use the *automated tools* for consolidation and migration, *proceed to Appendix E.*

D.3.1 Overview of Manual Processes for Geospatial Data Consolidation and Migration

The purpose of this section is to provide an overview of processes for manually consolidating and migrating geospatial data from workstations to network servers in Service Centers. The manual procedures are more labor intensive and less user-friendly than the tool assisted procedures. Based on pilot testing of these procedures, the geospatial data for a typical size service center can be consolidated and migrated in approximately one day. The manual processes section provides standard, tested methods for performing geospatial data consolidation and migration to minimize the need for various staff to "re-engineer the wheel" while performing these tasks.

As mentioned previously, the geospatial data consolidation and migration process should be initiated by and coordinated by the state geodata administrators. The state geodata administrators will likely use state IT staff and other resources to help complete this process.

D.3.2 Work on Site at Service Centers with Existing GeoSpatial Data to Migrate Manually to Network Servers

The specific manual procedures to follow will vary depending on where the geospatial data originates (e.g., workstation on the domain, workstation off of the domain, toolkit folders, CDs, etc.). These steps will be conducted by the State Geodata Administrator and/or State IT staff working in conjunction with the service center staff.

- These tasks will be conducted on the workstation or server, which contain the geospatial data to be migrated.

- Rename the existing geospatial files that reside on the workstation according to the file naming standards described in Appendix A. If some of the geospatial files exist on a CD, then copy them to a hard drive, having enough space, and modify the file name per the documentation.
- Once the files have been renamed, establish the geodata directory structure on your desktop computer including the following subfolders.

List of Subfolders under the *geodata* Folder

air_quality	hydrologic_units
cadastral	imagery
census	**imagery\compliance_fsa**
climate\precipitation	**land_site**
climate\temperature	land_use_land_cover
common_land_unit	**land_use_land_cover\fsa_compliance**
common_land_unit\fsa_clu	map_indexes
conservation_practices	**measurement_services**
cultural_resources	ortho_imagery
disaster_events	**project_data\fsa**
disaster_events\fsa_facilities	**project_data\nrcs**
ecological	**project_data\rd**
elevation	**project_data\rcd**
endangered_habitat	**project_data\swcd**
environmental_easements	**public_utilities**
environmental_easements\fsa	soils
geographic_names	topographic_images
geology	transportation
government_units	wetlands
hazard_site	**wildlife**
hydrography	**zoning**

NOTE: The subfolders shown in bold type were added to the geodata standard after the initial deployment of the network servers, and must be added to the original geodata directory. Obsolete subfolders originally included on the servers, that should be removed include: govenment_units (misspelled), plants, miscellaneous, and zip_codes. (Note: A script has been developed to make these modifications automatically. The script will be made available after it is certified by the IO Lab.)

- Move each of the geodata files into the appropriate subfolder as described in Appendix A.

- ****As the filenames are changed, and the files are moved to their new location in the geodata directory, a record should be kept of the original path and filenames and the new path and filenames, in order to update the ArcView project files after the renaming has been completed.**

- After all geospatial files are renamed, and placed in the correct geodata subdirectory, copy all geodata files from the workstation to the F:\geodata directory on the network server.

- **** Be aware of the possibility of overwriting existing files on the server, where duplicate files exist on one or more workstations. The Local Geodata Administrator should validate which of the files is the "official" copy to be stored on the server.**

- All geodata files will be copied to the server, however the user may decide to keep a copy of any, or all, of the geodata files in the geodata directory on their local hard drive. After copying the geodata files to the server, delete any unwanted files from the local hard drive.

- Update (remap) ArcView project files (APR's) to reflect the correct path/filenames using the procedures described in Section D.4. State Geodata Administrators will perform this step in conjunction with service center staff.

- NRCS users may need to replace the existing Toolkit2_template.apr in each of the Customer Files with a revised version after migrating the geospatial data. The easiest way to accomplish the replacement of the template project file in all Customer Files would be to edit the Toolkit2_template.apr file stored in C:\Program Files\usda\Toolkit Express NT\ArcView Extensions\Projects, then "push" the file to the ArcView_Projects subdirectory in all Customer Files. To "push" the new template to all of the customer files, use the "CopyFile2CST" utility available at http://www.itc.nrcs.usda.gov/toolkit/MoreTools.htm, under the "Missouri Customer Service Toolkit File Utilities" section. Both the Copyfile2SCT utility and the instructions for using it are available on the website.

D.4 Manually Updating ArcView Project Files

There are two basic ways to edit ArcView project files. The option you choose will depend on how many changes need to be made to the project file.

D.4.1 Option 1 – Answer the "Where Is …?" Questions when Opening the ArcView Project

This option works well when a minimum number of changes need to be made in the project file.

To update projects using option 1: Start ArcView, and attempt to open the project you wish to edit. ArcView will display a dialog window prompting you to locate any of the files it can not find. (Note: the missing path/filename is displayed in the Title Bar of the dialog window following "Where is . . .?").

At each prompt, on the right side of the dialog window, navigate to the **new directory** for the identified file. Locate the **new filename** on the left side of the dialog window. When you have located the file double click on the new filename. The dialog window will update, asking you for the next file it can not find. Continue to navigate to the new file locations and double click on the new filenames.

➲ *As an alternative you may click on the Cancel All button when prompted for the first missing theme, then reload the missing themes using the standard Add Theme button.*

After all the files have been located, save the new paths/filenames. From the **File** menu, select **Save Project**. Close ArcView. At this point, the project file has been updated and can be opened successfully in future ArcView sessions.

D.4.2 Option 2 – Use a Text Editor, such as MS Word, or Notepad to Edit a Project File

This option works well if you have a minimum number of project files involved, and you don't want to answer the "Where Is . . . ?" questions as described in Option 1 for every file that has been renamed or moved. While this option is more convenient for making multiple changes, the process is more complicated, and there is more room for error when editing the project file. Before you begin editing a project file using a text editor it is highly recommended that you backup the project file before you begin.

To update a project file using option 2: Start **MS WORD**, or **NOTEPAD.** Open the project file (.apr file) you wish to edit.

From the **Edit** menu select **Replace**. In the **Find What** box type in the **original** path and filename that has been changed using the following as a guide:

[Drive][path][filename prefix]
For example: ***[C:/Service_Center_Themes/soils/soilsco025]***

Notice the file extension has been left off. This allows you to edit the primary file (.shp) and any associated files (.dbf, .avl, etc) by doing the Find/Replace one time. If the file extension is included you will need to do the find/replace for the primary file as well as all associated files.

Also notice the forward slash (/) that is used in ArcView project files is not the same as the backslash (****) that is normally used in describing directory paths. Be sure you use the forward slash when using the Find/Replace tools.

After typing in the new ***[drive/path/filename prefix]*** in the **Replace With** box type in the new [drive/path/filename], following the above example.

Click **[Replace All].**

Repeat this process for all files in the original project file that have been renamed/moved during the migration. This includes all geodata "themes" as well as any extra files that may have been included in the project. (Extra .dbf files that were used for joining or linking tables, SSURGO databases used with Soils Data Viewer, Image Catalogs that were rebuilt after the migration (see Section D.5) etc.

After you have completed the find/replace on all paths/filenames for the themes included in the project, you will need to do a find/replace on the **primary** files again, this time including the file extension. It is not necessary to do this second Find/Replace on associated files. This will not effect whether or not the project will open correctly in ArcView, but it will make some "cosmetic" changes in the ArcView project. Without

updating the primary files with their associated extension the original filenames will be displayed in both the View's table of contents and in the **LEGEND EDITOR** dialogs.

To make these cosmetic changes use the same Find/Replace process as described above, but this time in the **Find What** box type in the original primary filename in quotes. Do not include the drive or the path this time. For example: **"soilsco025.shp"**.

In the **REPLACE WITH** dialog type the ***[new filename]*** in quotes.
For example: ***[soils_a_co025.shp].***

Repeat this process to update all themes that were included in the project.

When you are finished updating the project file, close the Find/Replace dialog window. From the **File** menu, choose **[Save].** This will overwrite the original project file.

You may also use the File, Save As option to save the new project file. However if this option is used, you will need to save the file with a .txt extension, then after saving open **WINDOWS EXPLORER**, change file extension from .txt to .apr.

After saving the new project file, close the text editor.

D.5 Rebuild ArcView Image Catalogs

After migrating the geospatial data it may be necessary to rebuild any image catalogs that were being used prior to the migration. Because image catalogs are .dbf files that contain the path and filenames of the image files they access, the image catalog files will no longer be valid after renaming the geodata files and moving them into the new geodata directories.

The following instructions will guide you through the process of rebuilding the image catalogs.

D.5.1 Loading the Image Catalog Script

To load the Image Catalog script in an ArcView Project:

Start **ARCVIEW**, and open a **New Project**, with a N**ew View.**

From the **Project menu**, click the **[Scripts Icon],** then click **[New].** This will bring up a dialog box named **SCRIPT1.**

From the button bar, click the **[Load Text File]** button. 

In the **LOAD SCRIPT** dialog window, navigate to:

C:\esri\av_gis30\arcview\samples\scripts

From the file list on the left choose **imgcat.ave**, then click **[OK].**

ARCVIEW inserts the contents of the file at the insertion point in the **SCRIPT1** Window.

Next, compile the Script by clicking the **[Compile Icon]** in the Script GUI**.** 

To rename Script1:

From the **Script Menu, c**hoose **Properties, and then** type in a descriptive name in the **name field**. (i.e. Image Catalog). Click **[OK].** Close the **IMAGE CATALOG** dialog box.

To attach the script to a new button on ArcView's graphical user interface (GUI):

Make the **VIEW** window active, and then double-click in a blank area of the View GUI (any space without a button on it). This will bring up a dialog box to customize the GUI.

In the **Type** field choose **View**, in the **Category** field choose **Buttons.**

A row of buttons will be displayed in the **CUSTOMIZE** dialog window. Click once in the row, at the point you want the new button to be located. Next, click the **[NEW]** button. A new button will appear in the row.

In the lower half of the window is a list of options that can be set for the new button. **Double-click** on the line labeled **[click].** Search for the **[Image Catalog]** script and click it. Click **[OK].**

Double-click on the line labeled **[icon].** Choose an icon to use for the **[Image Catalog]** button (i.e. "**I**") Click **[OK].**

Close the **Customize** Dialog Window.

Your new button is now part of the ArcView GUI. To save your work, save the project as **ImageCatalog.apr**. This will insure the button is available for building future image catalogs, by simply opening the ImageCatalog.apr in ArcView.

D.5.2 BUILDING IMAGE CATALOGS

To build an image catalog with ArcView:

Start ArcView. Open the ImageCatalog.apr created by following the instructions in the "Loading the Image Catalog Script" section above.

Using the Add Theme button, add the image files to be included in the image catalog to the View. ArcView will compile all images in the View into the image catalog, therefore **only** the images to be cataloged into a single file should be in the View when you execute the Image Catalog script.

Click the **[Image Catalog] Button**.

➲ *The images do not have to be displayed in the View when building the catalog.*

In the **SAVE IMAGE CATALOG** dialog box, navigate to the directory where you wish to store the new image catalog file, then type in a file name for the Image Catalog. Click **[OK]**.

The new image catalog table will be displayed. Close the table. The new image catalog will be added to the View as a theme. You may turn on the image catalog to verify the theme contains all the selected images.

Close the **View** window. The **Image Catalog** is now ready to use as a theme in other **ARCVIEW** projects.

To build additional image catalogs – open a New **VIEW** window and repeat the process as outlined above. When you are finished close ArcView.

For more detailed information on **Image Catalogs**, Start **ARCVIEW**. From the Help menu, select **Help Topics**, and then click the **[Index Tab].** In the dialog box type in ***Image Catalogs***, then click the **[Display]** button.

Appendix E. – AUTOMATED PROCEDURES FOR MIGRATING GEOSPATIAL DATA TO NETWORK

E.1 TOOL ASSISTED PROCESSES FOR CONSOLIDATING AND MIGRATING GEOSPATIAL DATA TO THE NETWORK SERVERS

E.2 OVERVIEW OF THE GEODATA CONVERSION UTILITY

Many Service Centers have already been storing geospatial files on desktops, laptops, and/or network servers. The standards for folder and file naming have not been widely distributed, so folders and file names vary from office to office. Many offices are storing geospatial data on CD or other media due to a shortage of hard disk space on their computers.

The Geodata Conversion Utility was developed to assist Service Centers in establishing the standard "geodata" folder (directory) structure on their computers; to rename their geospatial files according to the geodata naming standard; to move the files into the proper geodata directories; and to migrate the geodata to the network server. The utility also aids in updating ArcView project files with the newly assigned paths and filenames.

The Geodata Conversion Utility consists of three "tools". The "Consolidate GeoSpatial Data" tool will assist the user in establishing the geodata folder structure on their local hard drive, renaming the existing geospatial files according to the naming standard, and moving the files to the proper geodata subfolder on their local hard drive. The tool will also update the paths and filenames in the ArcView project files.

The "Migrate GeoData Files" tool will assist the user in moving or copying geodata folders and files between computers. Normally this will be done after the consolidation process has been completed, either manually or using the Consolidate GeoSpatial Data utility. The receiving computer will likely be the shared CCE server (the F: drive), but could also be another desktop computer or laptop. If the geodata folder structure does not already exist (or is not complete) on the receiving computer, this tool will create it, (or add any missing subfolders).

The "Assign Aliases" tool allows the user to assign an alias to each of the geodata files, and sort the geospatial datasets by Geographic Region (i.e. county, state, watershed, etc.). The alias list is designed to be used with the Service Center Data Loader Extension (SCDL).

The SCDL extension allows the user to add themes from **multiple** directories at one time in ArcView. The files are selected by their alias from a choice list and added to the View. The alias is displayed in the View's Table of Contents, and subsequently in the ArcView legends.

The Geodata Conversion Utility may be used initially to clean-up existing geospatial data on the workstations, and to consolidate data from other media. It may also be used in the future to move data between computers, or to move data that is received from one of the national data centers in Ft. Worth or Salt Lake City, or from the state office.

While all of these functions could be accomplished with Windows Explorer and a Text Editor (for updating ArcView project files) the objective is to lead the user through the necessary steps, and automate as much work as possible to minimize user workload. The GeoData Conversion Utility was developed for the CCE 4 Windows NT environment.

System Administrator privileges are required, in order to install the utility on a CCE 4 computer. The installation will place the program and its associated files in C:\Program Files\usda\Geodata Conversion Utility.

E.2.1 "CONSOLIDATE GEOSPATIAL DATA" TOOL

- This tool will search the destination drive for an instance of the "geodata" folder. If present, it will insure all standard subfolders are included in the directory. If the geodata directory structure is not already present it will create it.

- If geospatial files exist on more than one drive, the user may run the consolidation tool on each of the drives, consolidating all of the files into a single geodata directory on their local hard drive.

- The tool will scan the selected directories for the following primary file extensions: .shp, .tif, .sid, .bil, .rs, .dem, .bsq, .bip, .ecw, and .e00. When a primary file extension is found, any associated files (.dbf, .shx, .avl, .tfw, .sdw, etc.) will automatically be selected, renamed, and migrated simultaneously with the primary file. The associated files are automatically selected by having the same prefix in the filename as the primary file, and being located in the same directory as the primary file.

- The user will be given the opportunity to rename each file, and to select the directory in which to place it. The objective is to have all geospatial files renamed and stored in their proper geodata subfolder on a local disk drive before migrating the data to the server.

- After the files are renamed and moved to the proper subfolder the ArcView project files can be selected for updating.

- After the consolidation is complete a report will be generated showing the before and after filenames and directory locations, as well as all .apr files that were modified.

E.2.2 "MIGRATE GEODATA FILES" TOOL

- The Migrate Geodata Files tool allows the user to select a source drive where their geodata files are currently stored. They can then select the destination computer and the drive where they want the files to be moved to.

- If the receiving computer does not have a geodata directory, the folder will be created along with all of the standard subfolders. If a geodata directory already exists on the destination drive, the tool will insure all standard geodata subfolders are present, any missing subfolders will be added.

- A dialog box will display all of the subfolders and files within the **geodata** directory on the selected source drive. The user can select any, or all, of the files and subfolders they wish to migrate to the destination drive. The user will also choose whether they wish to move (files are deleted from the sending drive) or copy (files will exist on both the sending and receiving

drive) the data to the source drive. This selection of move or copy allows the user to move some files while copying others.

- The possibility of duplicate files, when converging several workstations onto one computer drive, need to be acknowledged. The user will be given the option to overwrite files, or ignore them during both the consolidation and migration phase. It is important that they identify which files need to be preserved before running the tools.

- After the geodata has been migrated, all ArcView project files (.apr files) will be edited to reflect the new filenames and directory locations. During migration the user may decide to keep copies of some files on their local hard drive, while removing other files. The removed files can then be accessed from the shared drive on the server. The ArcView projects will be edited accordingly.

- After the migration is complete a report will be generated showing the before and after filenames and directory locations, as well as all .apr files that were modified.

The consolidation tool in the Geodata Conversion Utility will allow the user to stop and restart the application at the point where they left off, in cases where they don't have time to consolidate everything at once.

E.2.3 THE ASSIGN ALIASES TOOL

- The Assign Aliases Tool can be used as a stand alone application. It can be used to assign aliases regardless of whether or not the Geodata Conversion Utility was used to consolidate and/or migrate data to the server.

- The Assign Aliases Tool is designed for use on data that is stored in a standard geodata directory structure.

- The Assign Aliases Tool allows the user to assign an Alias and a Geographic Region to selected geodata files. The tool can be used with data stored in the geodata directories, both on the server and on the workstation.

- The alias and geographic region information is stored in a text document entitled **scdldata.txt**. The scdldata.txt file is used by the Service Center Data Loader extension in ArcView. The document contains the geographic region, alias, path, and filename of each dataset and is stored on the local H: drive.

- Since the scdldata.txt file is stored on the H: drive, the Assign Aliases Tool can be executed on individual workstations, providing each user, with their own unique alias list. If users wish to share a common alias list, the tool can be run on one workstation, and each user can copy/paste the single scdldata.txt file onto their local H: drives.

E.3 PREPARATION PROCEDURES FOR USING THE GEODATA CONVERSION UTILITY

Before running the GeoData Conversion Utility, follow the procedures outlined below to prepare the existing geospatial data for consolidation/migration. These procedures will need to be conducted on each workstation involved in the consolidation/migration of geospatial files.

Preparation Steps:

1. Become familiar with the file/folder structure on the computer. Locate all geospatial data files that are to be consolidated under the new geodata directory and migrated to the server. You will need this information when running the consolidation tool.

2. Identify the location of all existing ArcView project files. You may want to search the drives for *.apr files in **WINDOWS NT EXPLORER** in order to locate all project files. **Once you run the conversion utility, any missed .apr files can not be updated automatically with the tool at a later time.** If you are not certain of the location of the project files, you may choose to search the entire drive(s) when running the utility so all directories will be searched during the "Update APR" phase of the process.

3. Delete any duplicate files from the workstations to simplify the migration phase. Where duplicate files exist, identify which file is the one you wish to preserve during the migration. This is especially important if you will be migrating several workstations to a single server.

4. Be sure there is adequate space on the local hard drive to write files to the new geodata directory before using the consolidation tool. The space needed will depend on how much data you wish to consolidate, and if you will be adding data that is not currently on the local hard drive (i.e. data from CDs, or other media).

5. Check permissions on all geospatial files on the source drive to be sure the user has permission to rename and delete the existing geospatial files.

Insure the geospatial files are not "Read-Only" files. If the files are Read-Only they will be **copied** to the new geodata directory, but will not be removed from their original location (i.e. Service_Center_Themes).

If ArcView project files are Read-Only they **can not** be edited to show the new path/filenames during the consolidation/migration.

The following DOS command can be used to remove the Read-Only attribute from all files in a single directory:

attrib –r [[drive][Path]*.*] /s

For example: C:> attrib –r C:\Service_Center_Themes*.* /s

6. Insure the person running the migration tool has write permissions on the F:\geodata directory on the server. They will need, write permissions in order to migrate the data from the workstation(s) to the server.

7. **Back up all existing geospatial data and ArcView project files before running the utility!**

After following these procedures, you may install and run the Geodata Conversion Utility as described in the following User's Guide.

E.4 GEODATA CONVERSION UTILITY USER'S GUIDE

E.4.1 PREREQUISITES FOR INSTALLING THE GEODATA CONVERSION UTILITY:

You must have system administrator privileges in order to install the application, and an H: drive must be configured prior to the installation.

The Geodata Conversion Utility has been developed and fully tested on the CCE 4 Windows NT configuration. CCE 3 computers will have to be upgraded to CCE 4 before installing the application. The CCE 4 upgrade may be obtained for download using the Toolkit 3.0 installation package available at:

http://www.itc.nrcs.usda.gov/toolkit/Toolkit_30

All FY 2001 Dell Optiplex GX240, Precision 330, and Latitude C600 computers must have the Microsoft Data Access Components 2.5 patch loaded. The MDAC 2.5 Service Pack 2 is available at:

http://www.itc.nrcs.usda.gov/toolkit/IT_Updates.htm

E.4.2 INSTALLING ON NON-CCE COMPUTERS:

The application may be installed on non-CCE computers running Windows XP, NT, or 2000. All Windows operating systems must have MDAC version 2.6 installed. A configuration file to upgrade to the MDAC 2.6 is posted for download with the Geodata Conversion Utility.

Windows 2000 also requires Service Pack 2. Service Pack 2 for Windows 2000 may be downloaded at:

http://www.microsoft.com/windows2000/downloads/servicepacks/sp2/

It is important to note that this application was developed for CCE 4 operating systems. While it may be installed on other Windows operating systems, the functionality has not been extensively tested. Use caution when running the application on non-CCE computers.

E.4.3 INSTALLATION PROCEDURES:

The Geodata Conversion Utility is available for download from the following websites:

http://www.itc.nrcs.usda.gov/toolkit/IT_Updates.htm

http://century.itc.nrcs.usda.gov/cce-states/

To install the application: Download the GeoDataSetup.exe file, saving it to your local hard drive. After the download is complete close all open applications. Click the **[Start]** button, then click **[Run].** Browse to the location where **[GeoDataSetup.exe]** was saved and double-click it. Click

[OK]. The install wizard will open and begin the installation process. Follow the prompts to complete the installation.

During installation, the program files will be installed in the C:\Program Files\usda\Geodata Conversion Utility directory and your computer will be upgraded with components necessary for the correct operation of the Geodata Conversion Utility. A shortcut icon will be added to the desktop for easy access to the application.

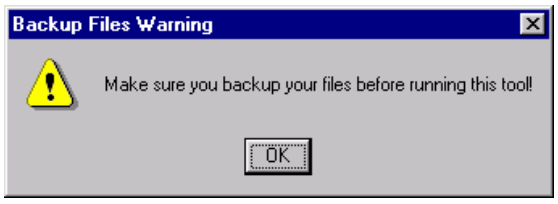
The Geodata Conversion Utility can be uninstalled using the Add/Remove Programs applet found in the Control Panel.

E.4.4 USING THE GEODATA CONVERSION UTILITY:

Before running the Geodata Conversion Utility read section E.2, Overview of the Geodata Conversion Utility, to familiarize yourself with the tool's functionality. Also, follow the Preparation Procedures for the Geodata Conversion Utility in Section E.3, to prepare your data for consolidation/migration.

To start the Geodata Conversion Utility, double-click on the shortcut icon on the desktop, or from the Start menu, choose Programs, Geodata Conversion Utility. (You can also start the application through **WINDOWS EXPLORER** by navigating to **C:\Program Files\usda\Geodata Conversion Utility** and double clicking **[Convert2GeoData.exe]**.)

The first prompt will remind you to backup your files before running the tool. Click **[OK].**

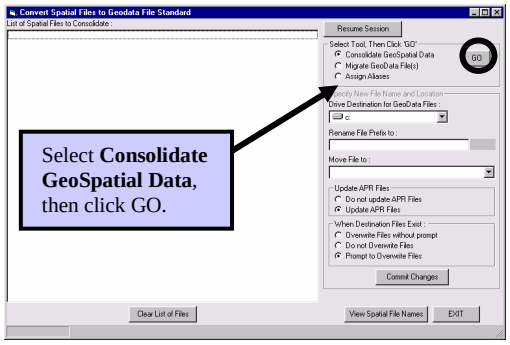


When the utility opens you will notice three functions (tools) are available:

1 - Consolidate GeoSpatial Data
2 - Migrate GeoData Files
3 - Assign Aliases

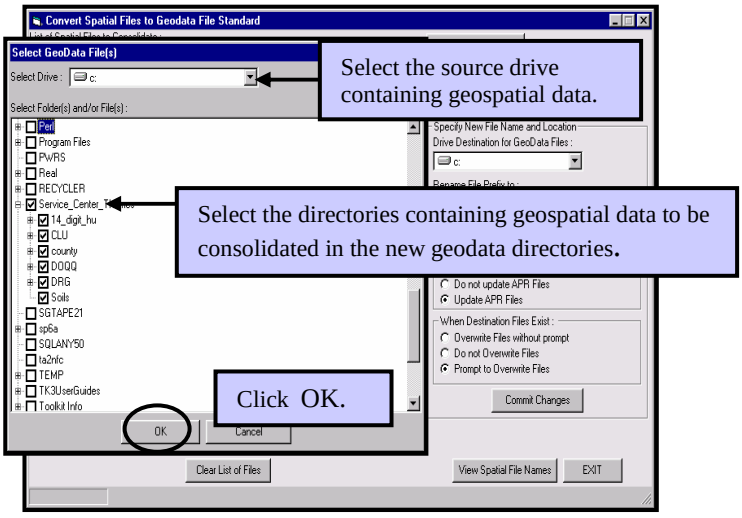
E.4.4.1 USING THE "CONSOLIDATE GEOSPATIAL DATA" TOOL:

To begin, select the **Consolidate GeoSpatial Data Function**, then click **[GO].**

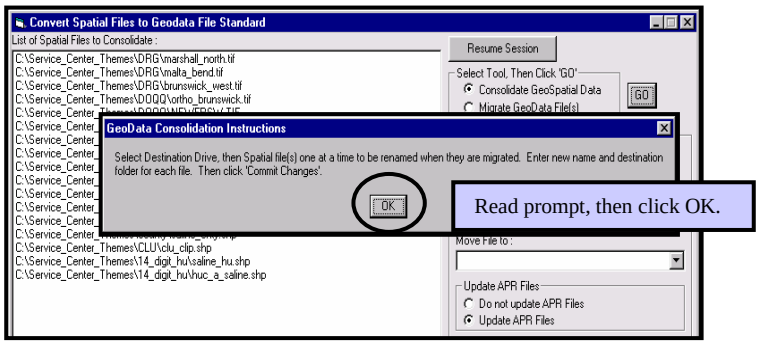


Next, select the source drive containing the geospatial files you wish to consolidate from the drop down list. The default is the C: drive.

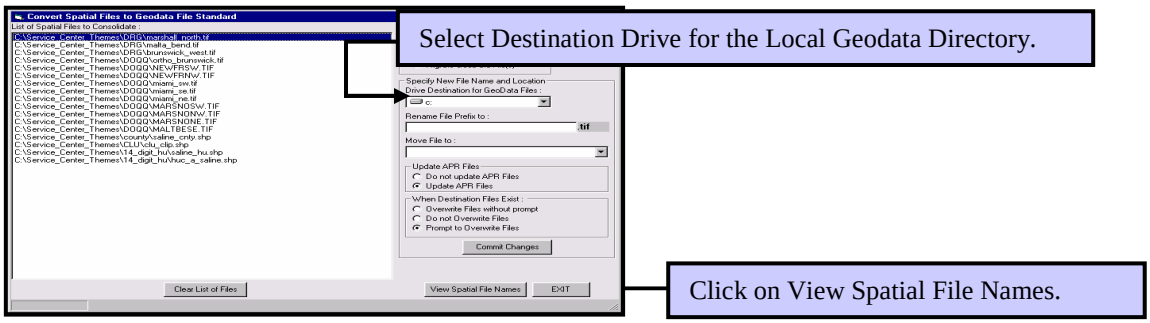
After the drive is selected a list of available directories is displayed in a new window. Place a check in the box to the left of each directory containing the geospatial files you wish to consolidate. Directories may be expanded to select specific subdirectories and/or files. You may select a few directories to consolidate at a time to better track the changes being made on your system. When you are finished selecting the directories you wish to access, click **[OK].**



A message will be displayed instructing you to select the destination drive where you wish to move the geospatial data to. This is the local drive that will contain the new geodata directory structure. The dialog also instructs you to choose the existing geospatial files, one at a time, to rename them and to move them to the proper geodata directory.

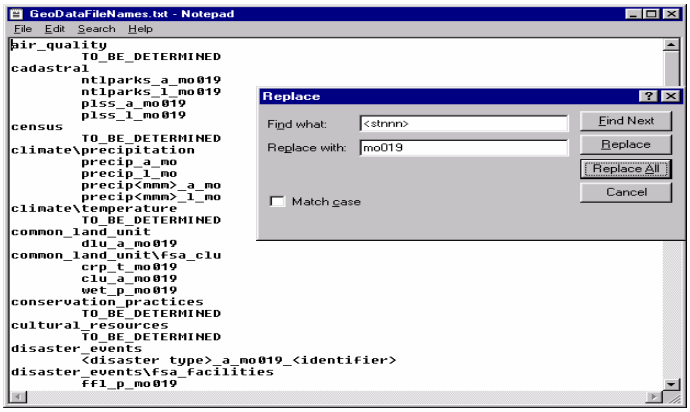


Select the destination drive for the local geodata directory. The default is the C: drive.
Next click the **[View Spatial Files Names]** button.



A text document will open in Notepad, displaying the standard geodata directory structure, with the standard file naming conventions under each subdirectory. This document can be used to copy standard filenames, and paste them into the **RENAME FILE PREFIX TO:** box.

In order to customize the text for your specific location, you may use the Find/Replace functions in Notepad, under the Search menu, to change many of the variables (i.e. <stnnn>) in the document to specific values (i.e. mo019). This will help limit the amount of typing necessary while renaming files.



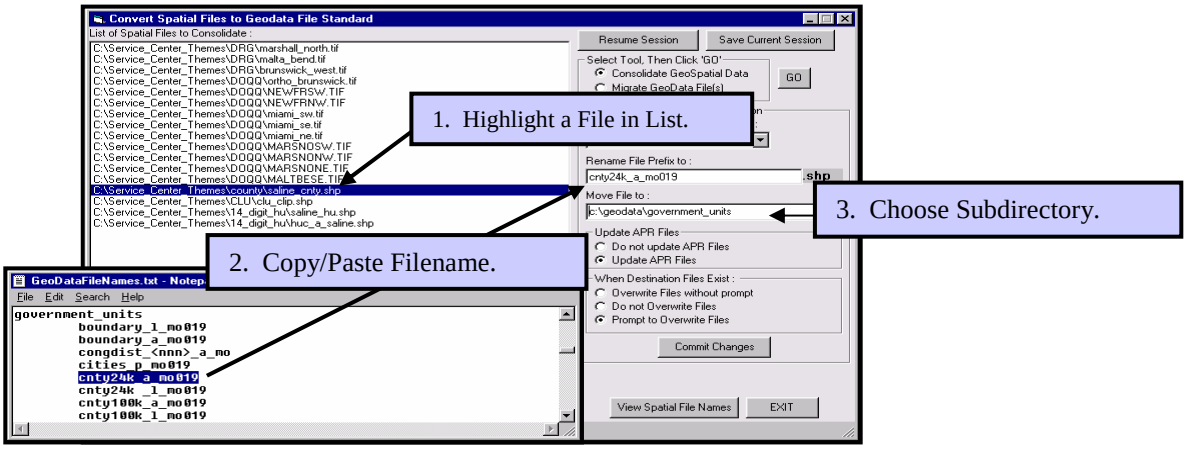
After you have customized the text document with specific values for your service center, position it so that you can see both the document, and the **GEODATA CONVERSION UTILITY** window.

Highlight the first file you wish to rename from the list of geospatial files to consolidate. From the text document, copy the new filename prefix (if available) you wish to use. Paste the new filename in the **RENAME FILE PREFIX TO:** box.

➲ *Do not type in the file's extension, as it is already provided.*

Edit the filename as necessary.

The application only allows the following characters to be used in the **RENAME FILE PREFIX TO**: dialog box: lower-case alpha characters a-z, digits 0-9, an underscore (_), and a hyphen (-). Click in the **MOVE FILE TO**: box. If available, the default subdirectory will automatically be entered into the dialog box, but you may change the selection by choosing a different subdirectory from the drop down list. If a subdirectory is not automatically selected, choose the appropriate subdirectory for the geodata file.

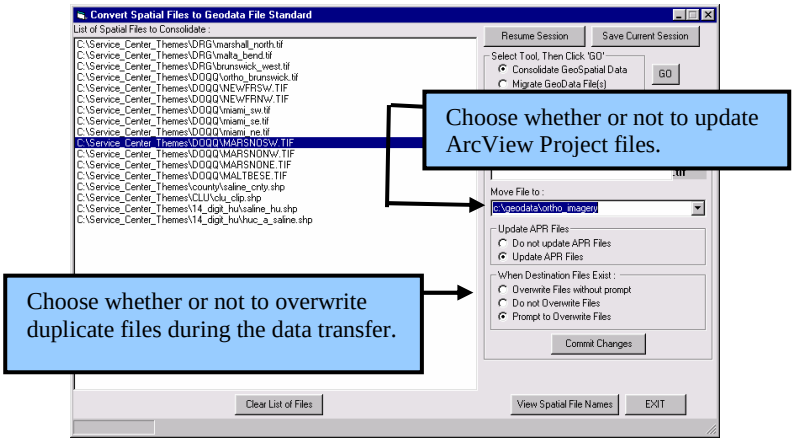


If you do not want to rename the file, you may leave the **RENAME FILE PREFIX TO**: box blank, and select only the geodata subdirectory to store the file in. The original name will be preserved for the new file. This will be especially helpful if you want to move a large number of ortho images, or topographic images, and do not want to rename all of them during the consolidation. Notice the ortho_imagery and topographic_images subdirectories have been moved to the top of the drop down list for added convenience.

After you are finished with the first file, select the next file you wish to rename/move and repeat the process described above. The utility allows you to continue renaming and moving files repeatedly.

➲ *At anytime during the "rename/move" operation you can stop the session and save it using the "Save Current Session" button. You may resume the session at the point you left off, by opening the Geodata Conversion Utility and clicking on the Resume Session button.*

Once you are satisfied with the file names and directory locations you are ready to commit the changes in your database. Before clicking on the **Commit Changes** button, choose the "Update APR Files" and the "Overwrite Files" options you would like to use during the consolidation.

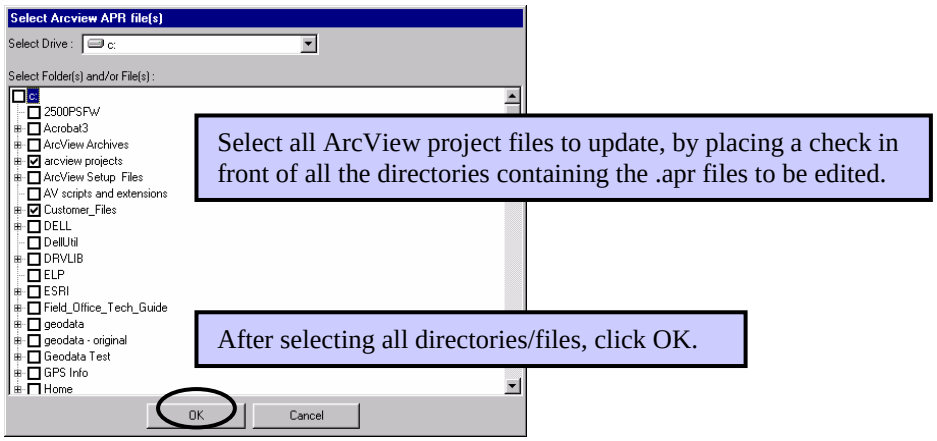


➲ *In most cases you will want to update the ArcView project files so the paths/filenames for each theme are updated, and the projects will open successfully in ArcView.*

Once you have selected your options for updating **ARCVIEW** project files, and overwriting duplicate files, click the **[Commit Changes]** button.

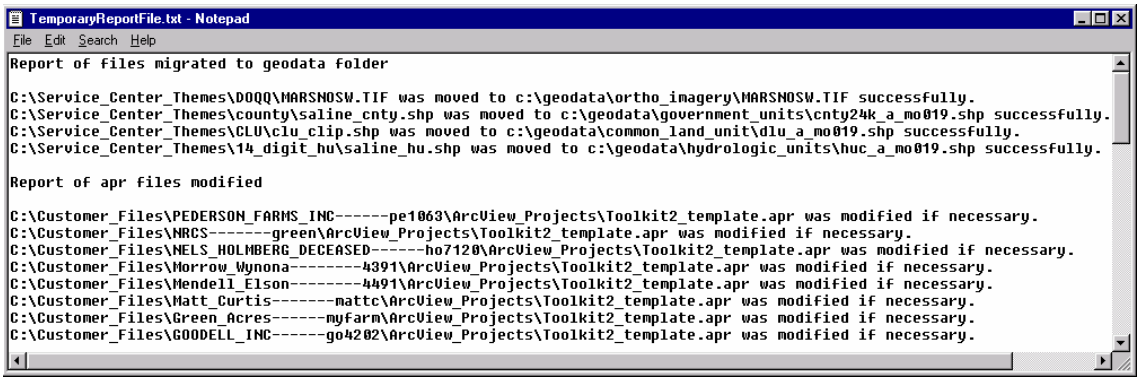
If you chose to update **ArcView** project files, after committing changes a new window will open allowing you to select directories that contain the **ARCVIEW** project files. The default drive is C:, but you may change it with the drop down arrow.

Check all boxes next to the directories that contain ArcView project files. Directories may be expanded to select specific subdirectories and/or files. When all directories have been selected, click **[OK].**



The utility will begin processing the data and commit the changes you have made. A status bar will be displayed to monitor the progress as files are moved to the new geodata directory. After the utility is finished consolidating the data, and updating the ArcView project files, a report will be displayed in Notepad.

The report will list the source path/filename, the destination path/filename, and the action taken for each geospatial file. It will also list actions taken on the ArcView project files.



You may print or save the report using the normal functionality provided in Notepad.
When you are finished with the report, close the report window.

➲ *If you have ArcView projects located on more than one drive, immediately click on the Commit Changes button again, and select the additional source drive containing the project files. Check the boxes to the left of the directories containing the .apr files to update, then click OK. Repeat this process for each drive containing ArcView project files BEFORE continuing to rename or move additional geospatial files, or exiting the application.*

Once all **ARCVIEW** project files have been updated, you are ready to consolidate additional files, or migrate the geodata files to the server.

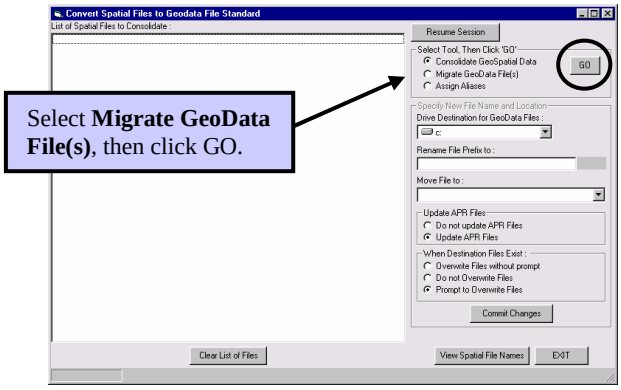
If you wish to consolidate more geospatial files, click the **[Clear List of Files]** button, then click **[GO]**. **Repeat** the procedures described above for consolidating any additional geospatial files and updating ArcView projects files.

You may exit the application when you are finished with the data consolidation. To migrate the geodata files to the server, follow the instructions for using the "Migrate GeoData Files" tool.

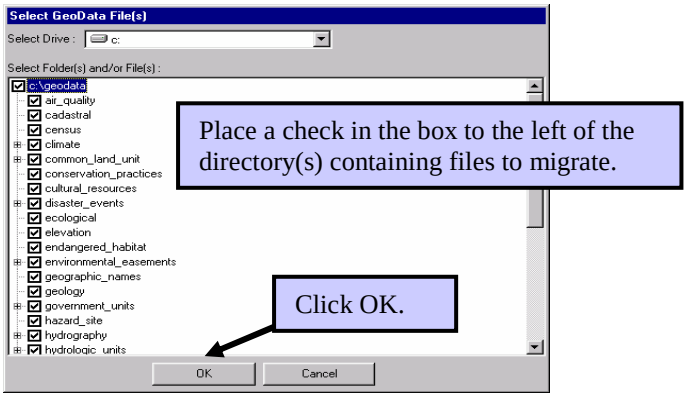
E.4.4.2 USING THE "MIGRATE GEODATA FILE(S)" TOOL:

Once the geospatial data has been renamed and consolidated under the geodata directory, it is ready to be migrated to the server.

To begin, start the Geodata Conversion Utility. Select the **Migrate GeoData Files** option, then click **[GO].**

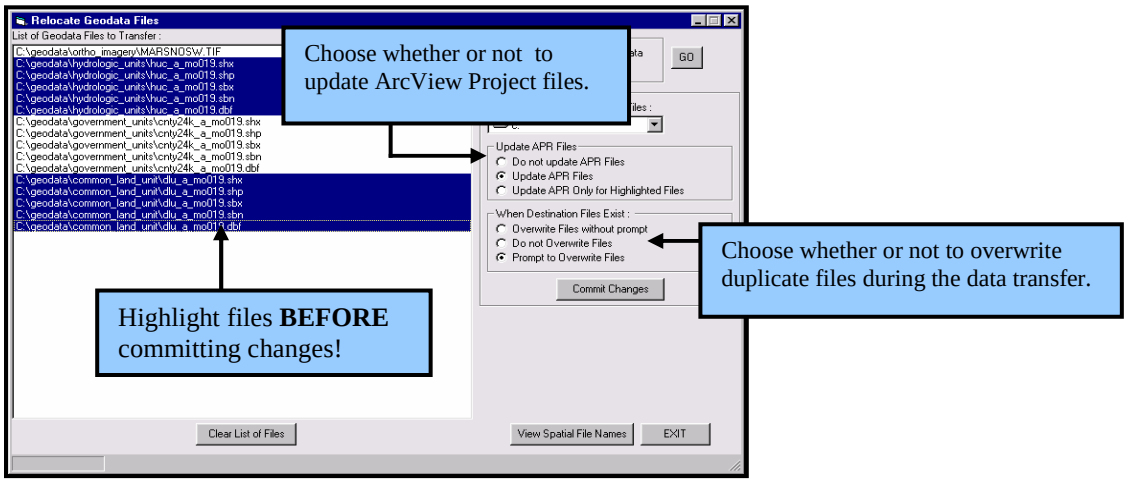


A window will open displaying the geodata directories on the C: drive (the default drive is C: if you have geodata on a different drive use the drop down arrow and select the source drive.) Place a check in the box to the left of all directories containing files you wish to migrate to the server. You may expand the list of directories to select specific subdirectories or files. To move the entire geodata directory, place a check in the box preceding "C:\geodata". Once you have selected the directories containing the files you wish to migrate, click **[OK].**



A message will be displayed instructing you to select the destination drive on the server, (in most cases this will be the F: drive). The message also instructs you to choose the files you wish to remove (delete) from your local drive during the migration.

After reading the message click **[OK].** A list of files found in the selected directories will be displayed. To highlight the individual files you wish to REMOVE from the local geodata directory during the migration, click on each of them while holding down the Control Key. (To highlight all files in the list, use the Shift key and click on the first and last filename.) If you do not want to remove files from your local hard drive, do not highlight any of the files in the list.

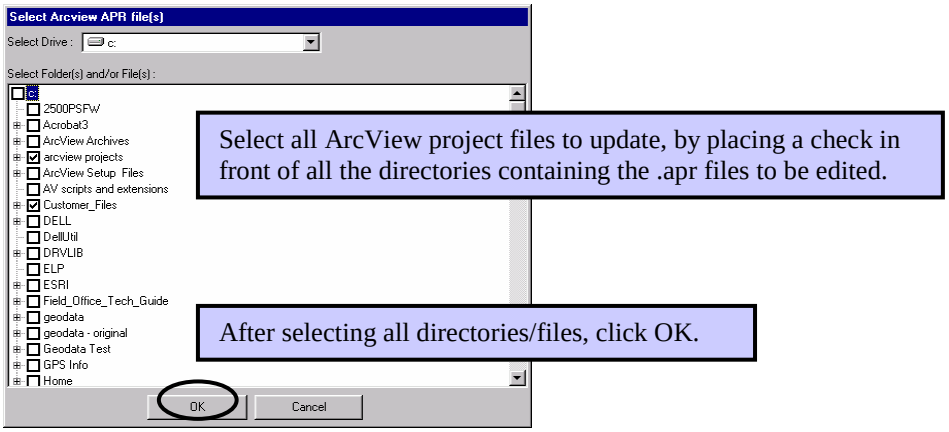


After all files that are to be deleted have been highlighted, select the appropriate options for updating APR files and for overwriting duplicate files. If the **Update APR Files** option is selected, the ArcView project files will be updated to find **all** geodata files on the server. If the **Update APR Only for Highlighted Files** option is selected, the ArcView project files will be updated to look at the server **only for the selected files**. All other files will continue to be accessed from the local geodata directory.

Once you have selected your options for updating **ARCVIEW** project files and overwriting duplicate files, click the **[Commit Changes]** button.

If you choose to update **ARCVIEW** project files, after committing changes a new window will open allowing you to select directories that contain the project files. The default drive is C: but you may select a different drive from the drop down list.

Place a check in the boxes to the left of the directories that contain **ARCVIEW** project files. Directories may be expanded to select specific subdirectories and/or files. After selecting the appropriate directory(s), click **[OK].**



The utility will begin processing the data. A status bar will be displayed to monitor the progress as files are migrated to the server. After the utility is finished migrating the data, and updating the **ARCVIEW** project files, a report will be displayed in Notepad. The report will list the files that have been transferred and the **ARCVIEW** project files that were updated.

You may print or save the report using the normal functionality provided in Notepad. When you are finished with the report, close the report window.

If you have ARCVIEW projects located on more than one drive, immediately click the [Commit Changes] button, and select the additional source drive containing the project files. Select the directories containing the .apr files to update, then click [OK]. Repeat this process for each individual drive containing ARCVIEW project files that need to be updated BEFORE continuing with the migration, or closing the application.

Once all **ARCVIEW** project files have been updated, you may continue to migrate data by clicking the **[GO]** button and repeating the procedures outlined above. When you are finished you may close the application by clicking the **[Exit]** button.

E.5 POST CONSOLIDATION/MIGRATION PROCEDURES:

After completing both the consolidation and migration of the geodata files, check the original source directories for any "extra" files left behind.

The consolidation tool will not move imported ArcInfo coverages. These files will consist of unique directories and their corresponding info directories. If you wish to move these files, be sure to move the info directory with the primary directory. They must be stored together in order to access the data in **ARCVIEW.**

Some examples of other files that may not be moved with the consolidation/migration tools include: soils.mdb files that may have been used with Soils Data Viewer, extra **ARCVIEW** legend files (.avl files), or .dbf files that may have been joined to another table in an **ARCVIEW** project (i.e. a HEL look-up table joined to the common land unit table).

These extra files may be left in their original location, or they may be moved manually to the geodata directories on the local hard drive and/or the server using the cut and paste functionality in **WINDOWS EXPLORER**.

If the files are moved to a new directory, and they are being used in any of the **ARCVIEW** projects, the .apr files will need to be edited in order for ArcView to find the data in its new location. See D.4 Manually Updating ArcView Project Files located in Appendix D.

Image catalogs files containing any files moved during the migration will need to be recreated since the file name and path contained in them will no longer be valid. The original image catalog file may be deleted, and a new one recreated using the instructions under the section entitled, D.5 Rebuild ArcView Image Catalogs, located in Appendix D.

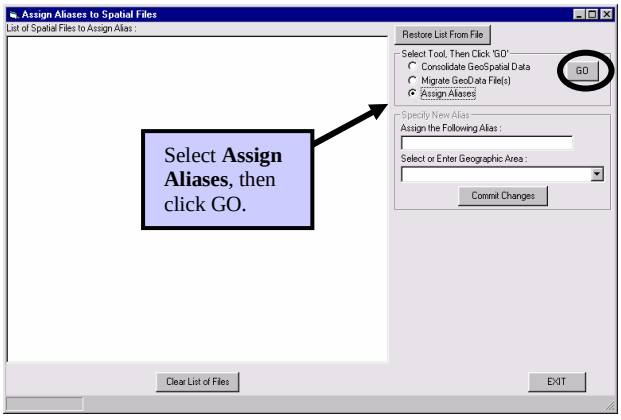
E.6

Using the Assign Aliases Tool

After completing the consolidation/migration process outlined in the *Manual for Managing Geospatial Datasets in Service Centers*, you can use the Assign Aliases Tool to develop the alias text file for use with the Service Center Data Loader.

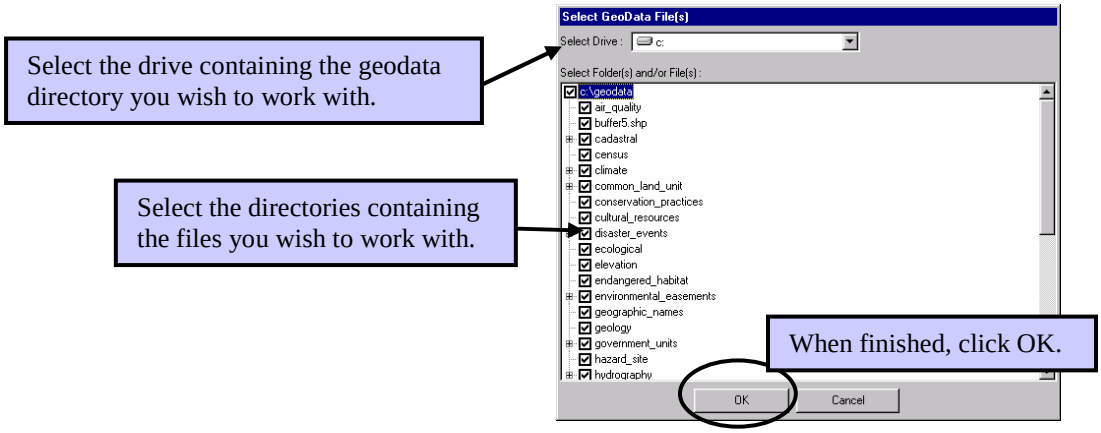
Start the Geodata Conversion Utility, by double-clicking on the shortcut icon on the desktop, or from the Start menu, choose Programs, Geodata Conversion Utility. (You can also start the application through **WINDOWS EXPLORER** by navigating to C:\Program Files\usda\Geodata Conversion Utility and double clicking on Convert2GeoData.exe.)

Select the third function, Assign Aliases, and then click **[GO].**

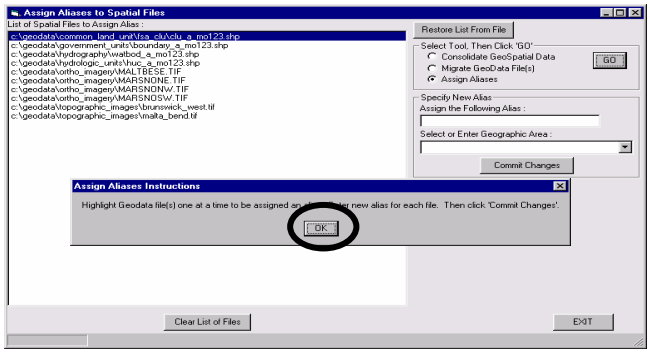


A dialog window will open allowing you to select the location of your geodata file.

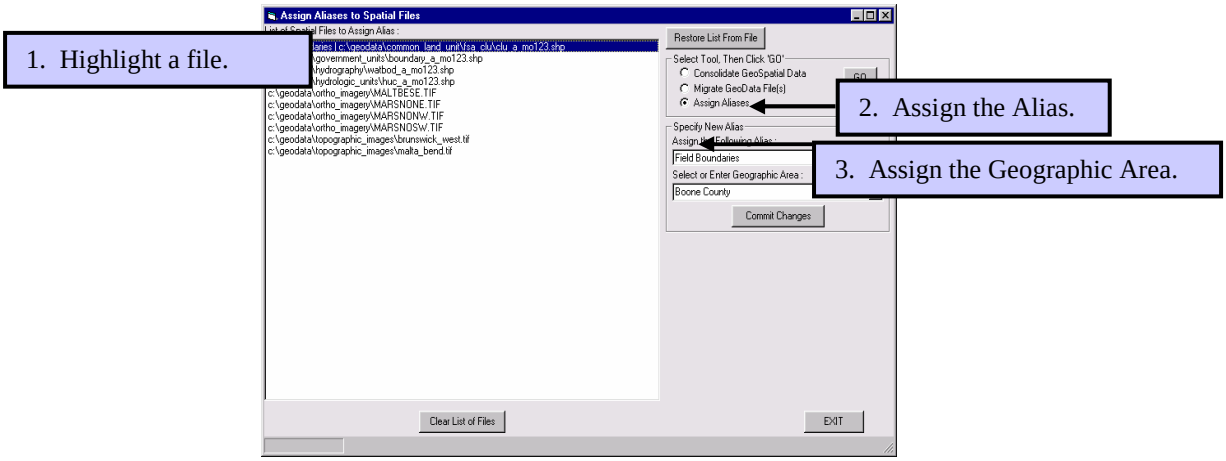
Select the drive location for the geodata directory you wish to work with, and then place a check in front of the directories you wish to access. Placing a check in the box preceding the geodata directory will select all subfolders. When finished click **[OK].**



A dialog window will open displaying all geodata files in the selected directories. A text box will instruct you to highlight geodata files one at a time to assign their alias. Click **[OK].**



Click on a file you wish to assign an alias for to select it. With the path/filename highlighted, type the desired Alias in the dialog box. Next type in the Geographic Region for the file.

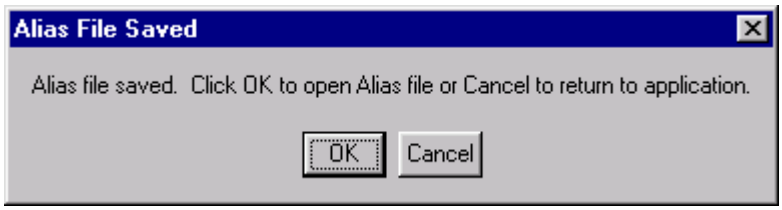


Continue to highlight filenames, assign aliases, and specify a geographic region for each file you wish to include in the Service Center Data Loaders choice list.

➲ *The Geographic Region will preserve the last area you specified, until you assign a different region.*

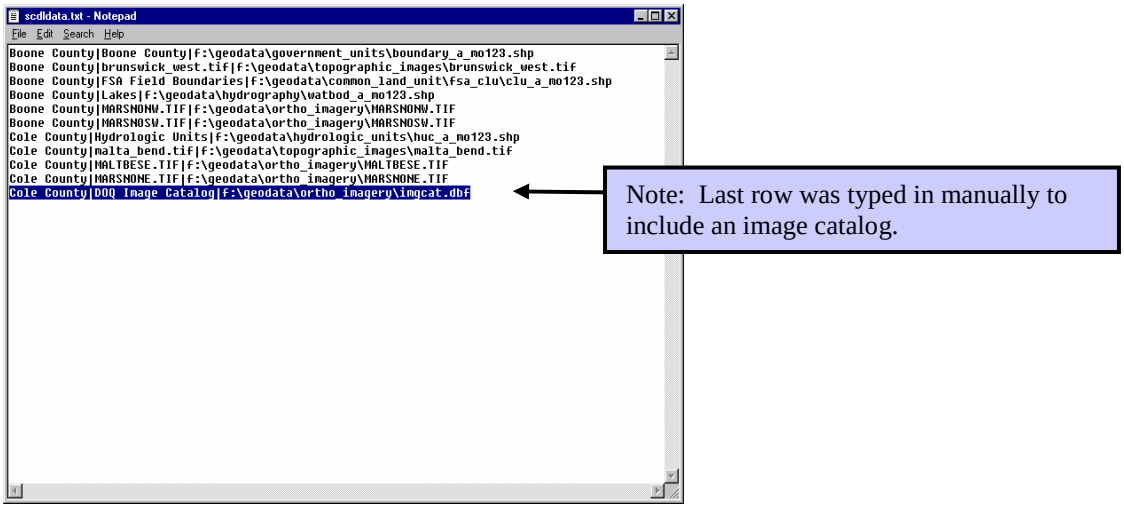
You may use the actual filename as the alias by simply double clicking on a filename. In this case the actual filename will appear in the dialog box, rather than an alias. This will allow you to sort data by geographic region when using the Service Center Data Loader, without assigning an alias for each dataset.

Once you have finished assigning the aliases and geographic regions, click **[Commit Changes].** A dialog box will open confirming the alias file was created. Click **[OK]** to view the file, or Cancel to return to the application.



If you click **[OK],** the text document will open in Notepad.

You can add other data to the list manually if you wish. Simply type in a line at the bottom of the list that contains the information you wish to include. This will be necessary if you wish to add image catalogs to your choice lists, since the Geodata Conversion Utility does not search for miscellaneous .dbf files.



When you are finished editing, save the document then close Notepad.

The scdldata.txt file is now available to serve as a choice list in the Service Center Data Loader (SCDL) Extension in **ARCVIEW**.

E.7 Service Center Data Loader User's Guide

Benefits of the SCDL:

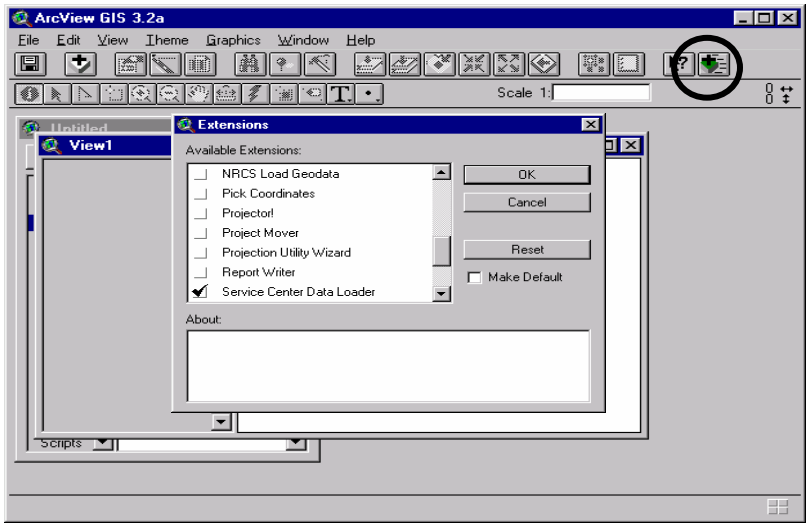
- When adding themes to a View, users can select the datasets by their alias, without knowing the standard filenames or directory locations of the geodata files.
- Themes (including both feature and image data) can be added to a View from multiple directories at one time, from a single choice list.
- The alias, rather than the actual filename, is displayed in the table of contents in the View. The alias is also displayed in the map legends.
- The SCDL allows datasets to be sorted by geographic region. This may be especially useful in managing geodata files in multi-county service centers.

Using the SCDL Extension:

The SCDL Extension may be downloaded from
www.itc.nrcs.usda.gov/toolkit/MoreTools.htm

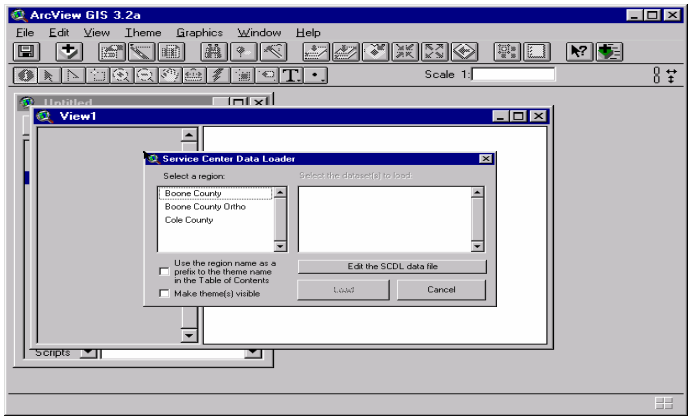
After downloading store the scdl.avx file in the C:\Program Files\esri\av_gis30\arcview\ext32 directory.

Open **ARCVIEW**. From the File menu, choose Extensions. Place a check in the box to the left of Service Center Data Loader. Click **[OK].** A new icon will be added to the right end of the button bar.

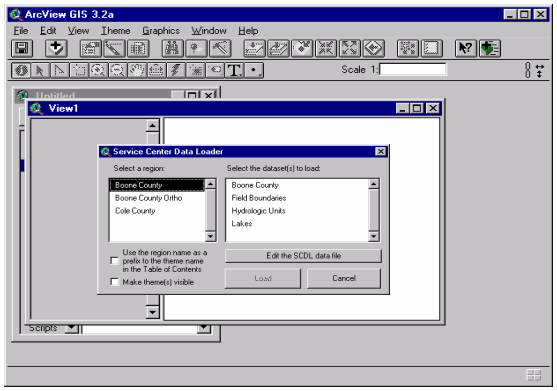


Click the **[SCDL]** icon.

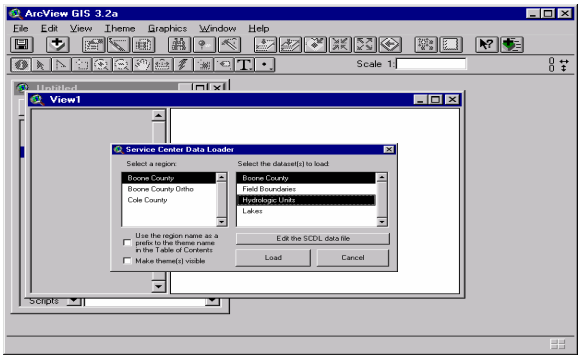
A dialog window will open displaying the list of Geographic Regions available to choose from on the left. Notice the “Edit the SCDL data file” button located above the Load and Cancel buttons. This option allows you to open the scdldata.txt file in Notepad and edit the file. Any changes to the file must be saved before they are made available through the SCDL Extension.



Highlight the Geographic Region you are interested in. A list of available themes for the selected region will be displayed on the right side of the dialog window.

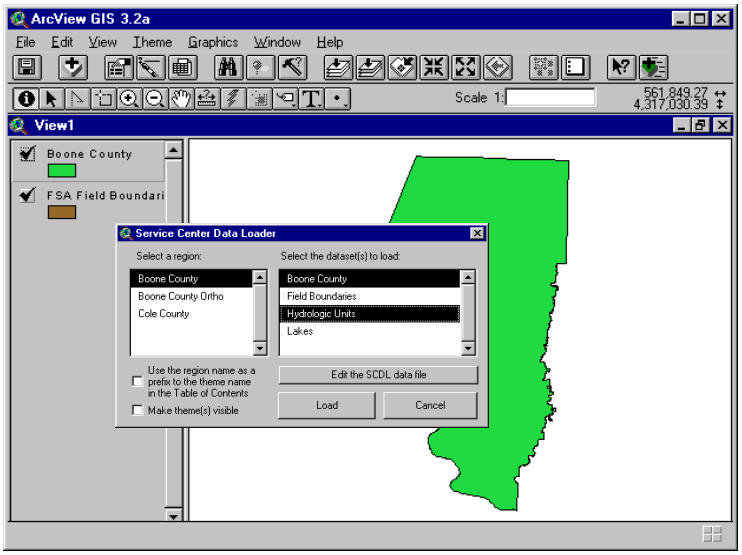


Click on each of the datasets you wish to add to the View.



There are two options available in the lower left corner of the dialog window. The first option is “Use the region name as a prefix to the theme name in the Table of Contents”. Choosing this option will concatenate the Region and Alias and display them together as the theme name in the Table of Contents. If you leave the box unchecked, only the Alias will appear as the theme name.
The second option is “Make theme(s) visible”. Choosing this option will result in all selected themes being turned on and made visible when you add them to the View. If the box is left unchecked the themes will be added to the View, but will not be displayed automatically.

After all themes have been selected, and any desired options selected, click the **[Load button].**



The selected themes will be added to the View. You may add additional themes from the selected region, or from another region, before closing the dialog window. When you are finished adding themes, click **[Cancel]** to dismiss the dialog window.

Appendix F. – FREQUENTLY ASKED QUESTIONS

Why isn't the geodata folder divided first into a series of county subfolders?

> This is probably the most frequently asked question. The geospatial applications need to use a consistent data structure from Service Center to Service Center. It is easier to develop applications that access multiple area data files within a subfolder than it is to have applications search for the same type of data through multiple geographic area subfolders. The applications will be delivered with methods to support rapid identification of the correct county geospatial data.

Where can I store geospatial data that I have obtained from non-USDA sources (e.g., state and local governments)?

> The short answer is that the non-USDA source geospatial data should be stored in the most appropriate subfolder. In some cases the choice of subfolder will be quite obvious. For example, local high resolution color DOQ data should be stored in the ortho_imagery subfolder. In other cases there may be a short list of subfolders that might make sense. For example, BLM strip mine data may be placed in either the land_use_land_cover or geology subfolders. Consult with the state geodata administrator to better ensure consistency in these choices.

Who should I contact if I have questions concerning this document and the outlined procedures?

You may contact the Help Desk at 1-888-311-1444, or you may log on to: http://helpdesk.itc.nrcs.usda.gov

Who are the Agency Point of Contacts for Geodata Provisioning?

FSA: Carol Ernst 202-720-7634
carol_ernst@wdc.usda.gov

NRCS: Kathy Green 303-236-8615
kgreen@itc.nrcs.usda.gov

RD: Dennis Crow 202-720-4721
dennis.crow@usda.gov

Appendix G. NATIONAL GEOSPATIAL DATA STEWARDS

Subfolder Name	Examples of Files in the Subfolder	National Data Steward	Agency
F:\geodata			
air_quality		Beth Sauerhaft	NRCS
cadastral	plss	Steve Nechero	NRCS
census		Dennis Crow	RD
climate\precipitation	precip	Jim Marron	NRCS
climate\temperature		Jim Marron	NRCS
common_land_unit	dlu	No National Steward	
common_land_unit\fsa_clu	clu, crp, wet	Sandy Bryant	FSA
conservation_practices		David McKay	NRCS
cultural_resources		Sara Bridges	NRCS
disaster_events	disaster_type	Lynn Tjeerdsman	FSA
disaster_events\fsa_facilities	ffl, ffsfl	Lynn Tjeerdsman	FSA
ecological		Marc Safley	NRCS
elevation	contour, ngs, ned, nez, nedshd, nezshd	Christine Clarke	NRCS
endangered_habitat		Marc Safley	NRCS
environmental_easements	wrp	Bruce Julian	NRCS
environmental_easements\fsa	flpce, flpct, dfn	James Forter	FSA
geographic_names	gnis	Steve Nechero	NRCS
geology		Steve Nechero	NRCS
government_units	blm, boundary, congdist, cities, cnty, manfetr, rcd, state, swcd, urban, zip	Steve Nechero	NRCS
hazard_site		Dennis Crow	RD
hydrography	damsites, femaq3, hydro, ntlhydro, ssara, watbod	Jon Werner	NRCS
hydrologic_units	huc, wbd	Jon Werner	NRCS
imagery	landsat	Jim Heald	FSA
imagery\compliance_fsa	comp, slides	Eloise Taylor	FSA
land_site	aboveground_storage, housing, lagoon, livestock_facility,	James Fortner	FSA

Subfolder Name	Examples of Files in the Subfolder	National Data Steward	Agency
	stackyd, storage, underground_storage, well		
land_use_land_cover	lulc, nonveg, nlcd, surfcvr	Steve Nechero	NRCS
land_use_land_cover\fsa_compliance	crl, land_use	Eloise Taylor	FSA
map_indexes	napp, quads	Kent Williams	FSA
measurement_services	meas_service	Eloise Taylor	FSA
ortho_imagery	ortho	Shirley Hall George Rohaley	FSA NRCS
public_utilities		Mark Plank	RD
soils	crpdata, mlra, soil, soilmosaic, ssa	Ken Lubich	NRCS
topographic_images	drg	Steve Nechero	NRCS
transportation	misctrans, railroads, roads	Dennis Crow	RD
wetlands	nwi, nwilfetr, wetland	Floyd Wood	NRCS
wildlife		Mike Anderson	NRCS
zoning		Dennis Crow	RD