

Geospatial File Naming for Locally Derived Data

Users of GIS technology will frequently save data to various files in the course of their work. The source of this data may be text files from GPS applications, shapefiles derived from GPS applications, shapefiles from digitizing activities, or shapefiles from geoprocessing activities.

In nearly all situations, when saving data, the particular application being used will provide a default file name and location for the data. In many situations, the default filename and location will NOT be sufficient to identify the data. Data that is stored using default filenames also will place the user at risk of losing data because it may be overwritten when saving during a subsequent session when default file names are also used.

This situation is not unique to GIS activities. If a user saves an Excel spreadsheet using the default filename of *Book1.xls* and later creates another spreadsheet and also uses the default filename, this would overwrite the original. Some applications will check for this situation and prompt the user, but you should never rely on the software to protect your data.

FILE NAMES

When creating data files the user should use a name that is descriptive of the data being saved. There is a USDA-wide convention used for naming core geospatial data, locally acquired geospatial data and derived geospatial data in the *Manual for Managing Geospatial Datasets in Service Centers, Version 4.0*, available from the [Geospatial Technology](#) page on the Missouri NRCS web site. This document specifies the name should consist of:

- dataset theme
short version or acronym used to represent the business name of the dataset
- type of map features in the dataset
p – point, *l* – line, *a* – area, *t* – table, *d* – database/spreadsheet, *g* – grid, *i* – index, *x* – gps data-unknown resolution, *xd* – differential resolution gps data, *y* – photograph
- spatial location or extent of the dataset
location or extent information such as a Federal Information Processing Standard (FIPS) code or State Soil Survey Area ID (STSSAID) number

Example:

You are creating a shapefile which contains line data representing the location of fences for tract number 1234. An acceptable name for this data file would be

fence_l_t1234.shp

This name contains all of the required information. The business name of the dataset is *fence*. This tells the user what the data represents. We can determine that this is a line theme because of the *l* designation. The extent of the data is given as *t1234* – tract 1234. The final part of the filename is the extension – *shp*. This is provided by the software and cannot be changed.

LOCATIONS

The other decision that must be made when saving geospatial data is the location.

F:\geodata is where data available to all users in the service center are stored. These files will have application for many users and uses. Full-Control access to most of the folders located in *F:\geodata* is restricted to only those persons in the service center with training in the management of geodata files – the LGA’s.

Most data that needs to be shared between different agencies and employees within the service center should be saved to *F:\geodata\project_data\<agency>\gps_data*. When data is saved which is to be shared, it will be necessary to inform others about the data. Use whatever method is most efficient to notify those who need to know. This may be a simple face-to-face contact, or perhaps an email to the entire service center.

For example, if you, an NRCS employee, have created a shapefile which contains points to identify the boundaries of a field border on tract 1234 which needs to be incorporated into the FSA common land unit shapefile, you could save the file to *F:\geodata\project_data\nrcs\gps_data*. You could name the file *fldbrd_p_t1234.shp*. After saving you would notify the FSA CLU editor about the name and location of the shapefile.

CUSTOMER SERVICE TOOLKIT DATA – NRCS EMPLOYEES

Most data which is derived for a specific customer does not need to be shared with other agencies so the logical location to save this data will be in the Toolkit Customer’s folder. Guidance on the use of specific folders within the customer folder is found in the Toolkit *Managing Customer Data User’s Guide* available from the [User’s Guide 4.x](#) page of the Toolkit website. Figure 1 shows a typical toolkit customer folder arrangement.

The toolkit customer folder, *Allard_and_Burruss-----1031*, in this case, is the *Working Directory* for ArcView projects stored in the *ArcView_Projects* subfolder. Because this is designated as the *Working Directory*, this will be the default location for many ArcView file save operations. **NO FILES OF ANY KIND SHOULD BE SAVED AT THE TOOLKIT CUSTOMER’S FOLDER LEVEL.** All files should be saved into a sub-folder. The default location for many of the Toolkit tools will result in saving to the correct sub-folder.

Geospatial files are stored primarily in 5 folders located within the toolkit customer folder: *ArcView_Projects*, *Determinations*, *Engineering*, the subfolders under *Plan_Maps*, and *Resource_Maps*.

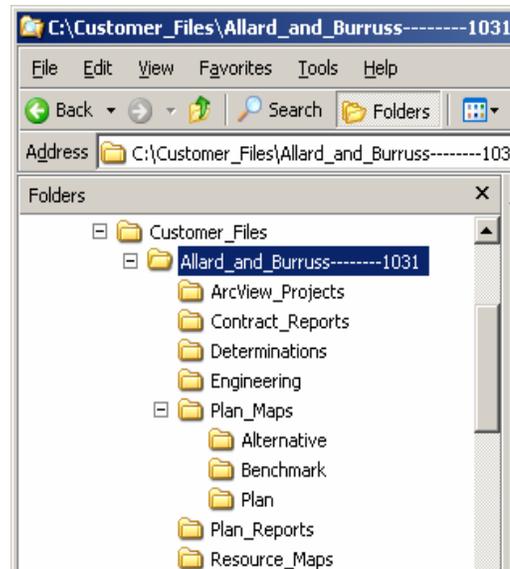


Figure 1 – Toolkit Customer Folder

The *ArcView_Projects* folder is reserved for ArcView project files. These are files with a file extension of *.apr* and does NOT include geodata files.

The *Determinations* folder would be the folder to save geospatial data relative to determinations. If the Wetland Determinations Toolkit is being used, data files will be saved in a subfolder *Wetlands* within the *Determinations* folder.

The *Engineering* folder would be the folder to save geospatial data relative to any engineering activities.

The subfolders under *Plan_Maps* would be the location to save geospatial data relative to conservation planning. This includes: Planned Land Units themes (default filename: *consplan.shp*), and Conservation Practice themes.

The *Resource_Maps* folder would be the location to save geospatial data relative to resource inventories. This would include soils or streams themes clipped to the farm boundaries, and data representing the location of gullies or eroding areas.

An additional subfolder could be created in the toolkit customer folder named *GPS_data*. The only files that should be stored in this folder should be GPS text files and not shapefiles. Saving GPS text files is described in the following section.

There may also be situations where data must be stored in the toolkit customer folder and also shared. In these situations, after saving the data, you will locate the files using Windows Explorer. Select the files and click *Edit – Copy*. Open the shared folder, and click *Edit – Paste*.

GPS Text Files

Another practice that can be used to help manage geospatial data and prevent the loss of this data is to develop the habit of saving GPS data as both a shapefile and a GPS text file. The GPS text file contains the actual data collected by the GPS unit and not the data as converted to a shapefile.

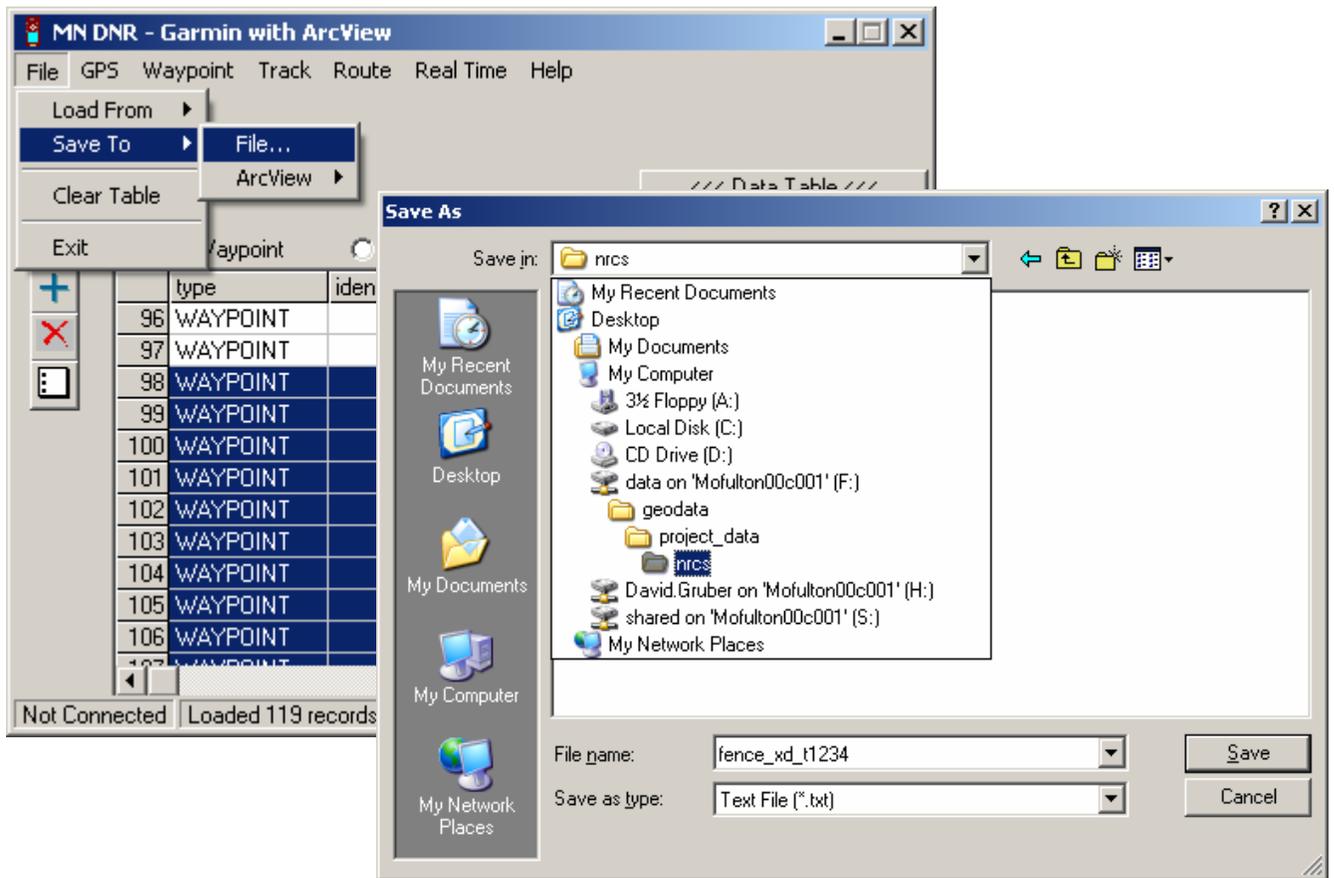
When saving GPS text files the user will likely need to select a subset of all downloaded points because the GPS data is often a mix of several projects collected during the same field trip to several farms. This convention will prevent the loss of data by overwriting files. The suggested naming is: *<dataset>_xd_<extent>.txt*

Where:

- <dataset>* – is the acronym representing the business name or acronym of the data contained in the file
- xd* – designates that the file contains gps data with differential resolution
- <extent>* – represents the extent of the data. This may be indicated by the FSA tract number, i.e. *t9999*, or the user could elect to instead represent the FSA farm number by the designation of *f9999*. If data represents several areas, the user will need to create a reasonable designation of the data extent, perhaps *t49nr8w*, if the data were all collected in the same plss township.

Users will still need to be cautious and aware if multiple files are created with the same dataset and extent. Appending and 1, 2, 3, etc. to the dataset, i.e. <dataset>2_xd_t9999.txt, will maintain unique file names in these situations.

GPS text files are saved using the DNR Garmin software. With the GPS data loaded in the DNR Garmin software, first select the points that you wish to save, click **File** ▶ **Save to** ▶ **File...** Enter the filename in the **Save As** dialog. Additional instructions can be found in *Technology Technical Note MO-1 Utilizing a Garmin GPSmap 76 for Field Data Collection in Missouri*, which can be found on the Missouri NRCS [Geospatial Technology](#) web page.



Example:

If the fence shapefile in the previous example was created using GPS data, the GPS text file would be named: *fence_xd_t1234.txt*

RECORD DISPOSITION

Each employee should also be aware that certain data may need to be maintained as a record after its primary use. This could involve data files that are used to certify conservation practice

completion, measurement services, etc. These records should be maintained according to agency policy.