

NOTE: Please send your comments and suggestions to rensch@buffalo.edu

WARNING: Please NEVER use buttons outside the GeoWEPP Wizard and NEVER double-click in any procedure during an application of the GeoWEPP Wizard – doing so may cause errors or malfunctions!!!



Note: Answer the question with yes and then proceed by copying a grid file from any directory of your system.



Note: The hillshade view allows you to see some more details of the raw DEM data, such as aspect, smoothness of the terrain, terraces and other man made features, valley and drainage pattern. Please investigate your DEM for obvious errors you should take into account in proceeding with this data set.



Note: Please following wizard screens allow you to import publicly available DEM data for any location in the US.

•Download a Digital Elevation Model (DEM) into your project directory

•import the downloaded data files into usable format

•import USGS Digital Elevation Model

•import USGS Digital Raster Graphic (topographical map)

Help: Clicking this button will connect you through your browser instantly to the latest version of the User Manual on the GeoWEPP homepage.



Note: For the current version of GeoWEPP, you can choose any area in the US only. A click on the map allow you to zoom in to this area.

Case study: The area of interest may be in this case located in Northwest Indiana near the Wabash River.

URL source: http://lighthouse.nrcs.usda.gov/gateway/NextPage.asp



Note: A click on the map allow you to zoom in to a particular area of interest. Then select ordering button on lower right side of the screen and order data.

Case study: The area of interest may be in this case located around Lafayette, Indiana and the Wabash River.



Note: A click on the map allow you to zoom in to a particular area of interest by choosing a quad sheet name to access the available data sets. In some areas in the US there might be on data sets available for your area of interest.

Important Note: The current version of GeoWEPP can handle USGS DEM and DRG only!



Note: Make sure that you select image format (TIFF) and Projection UTM Zone with datum NAD27 (in case NAD83 is offered you may experience a small shift of the DRG overlay of up to 300m in North-South Direction). For further information you may want to read the USGS Digital Elevation Model GLIS <u>User Guide</u>.



Note: Provide personal data and select method to receive data files.



Note: Check your order and continue. In case you are surprised about the amount of data to download: there seem to be an over estimation of download file size by three orders of magnitude (actual file is 1000 times smaller!).



Note: Get order confirmed and download data through given link or ftp link on email.



Note: Select data set for download and make a note of your order number.

A click on the given link name initiate the download depending on the procedure set in your internet browser.



Note: Download data by saving file with suggested name in your current data directory, e.g. 'C:\geowepp2\MyArea'.



Note: Check all the steps in ordering the data and confirm with 'yes' after downloading data in your current working directory, e.g. 'C:\geowepp2\Myarea'.

B.2. Import Data from CD	
Select the two zipped files for the Enhanced Topographical Map (DRG) and the USGS Digital Elevation Model (1:24 000) you downloaded from the NRCS Data Gateway Internet Site or brownes the files delivered with your VEPPC to in the directory "geoweppdata" on your CD-R0M drive. OK	 Follow instructions given in screen
File Edit Vew Favorites Tools Help File Edit Vew Favorites Tools Help Help → → Bill Implementation Matrices myDownload → Size Type ImpDownload → Size Type ImpDownload → Size Type ImpDownload → Size Type 2 chiert(c) Matrix Mix Computer	 Select files to be copied into the project directory
La conjecto in the second sec	 Locate project directory to paste copied files

Note: Hit the 'import button to decompress data. Then proceed to import DEM and DRG (Step 3 and 4).

Case study: For using case study data you must have skipped entire step 1. Hitting the button for Step 1 will delete case study data in working directory!



Note:

Case study:



Note: The setting of the DEM theme in the view is 'active' and visualization setting is 'true' (tick mark). **Please do not change any of these setting during the entire GeoWEPP procedure in this regard** – changing active themes in View1 will cause errors.

Note: The hillshade view allows you to see some more details of the raw DEM data, such as aspect, smoothness of the terrain, terraces and other man made features, valley and drainage pattern. Please investigate your DEM for obvious errors you should take into account in proceeding with this data set.

Case Study: Since the hill shading in the eastern part of this map was derived from 30m-DEM with a vertical resolution of 1-meter steps the relief appears to be less smooth than the 30m-raster data in feet. The flat terrain of the terraces are represented differently in the merged DEM.



Note: The hills hade view is a simple tool for the user to quickly evaluate the DEM accuracy. Especially importing several DEMs next to each other allows you to evaluate the relative difference between the DEMs.

According to the USGS National Mapping Program Standards, the intend of DEM Production process is to produce DEM data sets that accurately represent slopes as well as elevation. Slope data is more critical for certain scientific applications than elevation. Due to the techniques used to derive DEMs, generally derived from contours (Level 2 and 3) DEMs represent slope more accurately than Level 1 DEMs (for more information see USGS National Mapping Program Standards at

http://rockyweb.cr.usgs.gov/nmpstds/demstds.html).

However, it also depends on the vertical resolution of the information. In case the DEM is in feet, the resolution is three times better than it would be in meters. So incase there are two 30 m-DEMs available for a quad sheet you should chose the one in feet rather than the one in meters.



Note: The overlay of the DRG on the hill shaded DEM allows you to locate yourself (tools will be provided after importing all DRGs).

Case Study: You can see the Wabash river (blue) following the valley between the elevated terraces in the Northwest and southern part of the DEM.



Need further Help?

If you have questions, comments or complains

please contact Chris Renschler: rensch@buffalo.edu