

30 – Meter DEM

National Elevation Dataset

US Geological Survey/ UM Geoinformatic Center



**** General information ****

1.
Title : 30-meter Elevation Data of Mississippi.
Filename : county_name.e00 (grid)
File Type : ArcInfo Interchange File (.e00)
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Web Site : <http://umgc.olemiss.edu>
Client : UMGC, MARIS

**** File information ****

Date : 14 Sep 2001
Scale : 1:24 000

Projection(s) : Mississippi Transverse Mercator (MSTM)
: See <http://www.maris.state.ms.us/> for more
: info about the projection or see bottom.
Software used : ArcInfo <grid>
: gzip (<http://www.gzip.org>)
File Size : .e00 = 30 MB (7.5 MB zipped) Approxiamte
: File size varies per county
Resolution : 30 meter
Page Size : N/A
: N/A

**** Description ****

The USGS has the National Elevation Dataset (NED) available for download. The NED is seamless Digital Elevation Model (DEM) data at the 1:24,000-scale. The downloaded NED files were merged using the Gridder Aid scripts in ArcView 3.2. The result was 10-0.5° latitude DEMs stretching the width of the state. These 10 files were then merged using the MERGE function of the GRID module of Arc/Info. Using the LATTICECLIP function in Arc/Info, the merged DEM was clipped to the each of the county boundaries.

**** Projection information ****

Mississippi Transverse Mercator (MSTM) PROJECTION

The MARIS Technical Center (MTC) and the Mississippi Department of Transportation (MDOT) jointly developed a map projection for Mississippi called the Mississippi Transverse Mercator (MSTM) Projection. When viewing geographic data on a statewide level, the MSTM projection alleviates the multiple-zone conflict inherent in UTM and State Plane systems.

The problem with both of these systems is that each divides the state into an east and west zone that cannot be digitally displayed together.

The MSTM projection is a customized Transverse Mercator projection designed to more evenly distribute convergence and scale-factor, and is based on the North American Datum of 1983 (NAD83). The projection parameters of the MSTM projection are as follows:

Scale Factor: 0.9998335

Central Meridian: -89 45' 00''

Central Latitude: 32 30' 00''

False Northing: 1,300,000 meters

False Easting: 500,000 meters

Projection Units: meters

****Additional Information ****

If you have ever downloaded SDTS format 7.5 minute DEM from USGS, you have thought to yourself that there needs to be a better way.

Here are a few of the problems with the "old" SDTS DEMs:

- (1) SDTS import issues
- (2) Confusing file naming scheme
- (3) All UTM projection and contending with a zone shift.
- (4) Z-units nonuniform, mix of meters and feet
- (5) Gaps in data at quadrangle boundaries

The USGS has addressed these concerns and have assisted geospatial data users to better utilize their products. The USGS then developed the NED.

These files are available through the USGS GeoData website (<http://gisdata.usgs.gov>).

The reproduction cost for the entire State of Mississippi was ~\$1600. USGS suggested that a 10MB subset of the NED is available for free with no limitations.

It was then decided to download 125 10MB sections of the NED covering the State of Mississippi. The requests were stretch over a two month period.

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