

All GIS data have limitations

MEGA 2007[®] is a colupendium of digital data from a variety of sources. It is not intended for site specific determinations. To determine actual conditions on-site, field investigations are necessary. Collection methods, reporting accuracy, measurement errors and a large number of other factors all contribute to limitations. Scale often indicates this limitation with 1:24,000, 1:100,000 and 1:1,000,000 scales. Associated limits are about 60, 240 and 2,400 ft. accuracy, respectively. Accuracy is also reduced by factors other than scale. Completeness, date of collection and data editing also limit data. Most of the data in the MEGA[®] project was collected before 2006. Data collection dates vary (for example, *Well_Certified* data collection did not start until 1987). Also, data attributes can change with time and operations (for example, static water levels in wells vary over time and may change because of casing operations or reconstruction). Most limitations, timeliness, accuracy and other issues are discussed in the metadata for each layer. Metadata files on this CD_ROM have the same name as the layer they pertain to and a *.txt* or *.xml* extension.

The ‘.xml’ files are only useful for ArcGIS™ users. Appropriate use of the data and understanding of limitations are the responsibility of the user.

Sources

MoDNR	Missouri Department of Natural Resources
DGLS	Division of Geology and Land Survey
DSP	Division of State Parks
DEQ	Division of Environmental Quality
WPS	Wellhead Protection Section
WPP	Water Protection Program
PDWB	Public Drinking Water Branch
MoDot	Missouri Department of Transportation
USGS	United States Geological Survey
USDA	United States Department of Agriculture
MSS	Missouri Speleological Society
MAAC	Missouri Appellate Apportionment Commission
CARES	Center fo Agricultural, Resource and Environmental System

Computer File Name	Source	Approximate Limitations
--------------------	--------	-------------------------

Point Themes

Dye_Inj_Pts.shp	MoDNR, DGLS	1:24,000
Dye_Rec_Pts.shp	MoDNR, DGLS	1:24,000
Well_Certified.shp	MoDNR, DEQ, WPS	1:100,000
Well_Logs.shp	MoDNR, DGLS	1:100,000
Pub_Wells.shp	MoDNR, PDWB	1:24,000
Sinkholes.shp	MoDNR, DGLS	1:24,000
Springs.shp	MoDNR, DGLS	1:100,000
IMOP.shp	MoDNR, DGLS	1:100,000
NPDES_Outfall.shp	MoDNR, WPP	1:24,000

Line Themes

Dye_Paths.shp	MoDNR, DGLS	1:24,000
Geostruc.shp	MoDNR, DGLS	1:100,000
Major_Rivers.shp	USGS	1:100,000
Roads.shp	MoDOT	1:100,000
Losing_Stream.shp	MoDNR, DGLS	1:24,000
Impaired_2002.shp	MoDNR, WPP	1:24,000
GW_Depth.shp	MoDNR, DGLS and DEQ, WPS	1:500,000
GW_Elevation.shp	MoDNR, DGLS and DEQ, WPS	1:500,000
Sink_Areas.shp	MoDNR, DGLS	1:100,000
TDS_Aquifers.shp	MoDNR, DGLS	1:500,000
Top_Rock_Elev.shp	MoDNR, DGLS	1:100,000
Overbur_Thick.shp	MoDNR, DGLS	1:100,000

Polygon Themes

Alluvium.shp	MoDNR, DGLS	1:500,000
Bedrock.shp	MoDNR, DGLS	1:500,000
Cave_Density.shp	DGLS and MSS	1:24,000
County.shp	CARES	1:100,000
Drill_Areas.shp	MoDNR, DEQ, WPS	1:100,000
House_2006.shp	MAAC and DGLS	1:24,000
Lakes.shp	USGS and MoDNR	1:100,000
PLSS.shp	CARES	1:24,000
Senate_2006.shp	MAAC and MoDNR, DGLS	1:24,000
Surficial.shp	MoDNR, DGLS	1,000,000
Urban_Areas.shp	Bureau of the Census	1:100,000
Quad_24k.shp	Geographic Resources Center	1:24,000
MoDNR_Lands.shp	MoDNR, DSP	1:100,000
HUC_8.shp	USDA	1:24,000
HUC_14.shp	USDA	1:24,000

Image Themes

Selected Topographic Maps	USGS	1:24,000
Minerals Map	MoDNR, DGLS	1:500,000

MEGA 2007 Datasets and Georeferenced Images

Alluvium

This dataset (produced by DGLS) displays the areas underlain by alluvial sediments and is unchanged from the original version except for updated metadata.

Bedrock

This dataset (produced by DGLS) displays the uppermost bedrock units of the state and is unchanged from the original version except for updated metadata.

Cave_Density

This is a new dataset that replaces the Cave_Area dataset. This dataset has been approved for distribution by the Missouri Speleological Survey. It contains the number of known caves per 1:24,000 scale quadrangle in Missouri.

County

This is a public domain dataset that outlines Missouri Counties and the City of St. Louis. It has no changes from the earlier version of MEGA.

Drill_Areas

This is a new dataset (produced by the Wellhead Protection Section) that contains the boundaries of official and unofficial special well drilling areas located in the State of Missouri. The metadata describes special well drilling construction requirements.

DyeTraces

This dataset (produced by DGLS) is actually three sets in one: dye injection points, dye recovery points (dye_rec_pts) and the dyepaths (dye_inj_pts) between the two. The data has been updated by adding 87 traces and new metadata produced to reflect the changes.

Geostruc

This dataset (produced by DGLS) displays approximate location of known faults, folds and other structures of the state. It is unchanged from the original version except for updated metadata.

GW_Depth

This is a new dataset (produced by DGLS) that contours approximate depth to static water levels of Missouri groundwater in wells as determined from the well driller reports submitted to MoDNR.

GW_Elevation

This is a new dataset (produced by DGLS) that contours approximate static water levels of Missouri groundwater in shallow wells as determined from the well driller reports submitted to MoDNR.

House_2006

This is an existing dataset that has been improved for MEGA[®]. It displays Missouri House of Representatives districts. “Political Party” and “Representative Name” fields have been added.

HUC_14

While this is new to MEGA[®] it is a public domain dataset that details hydrologic watersheds. It has no changes.

HUC_8

While this is new to MEGA[®] it is a public domain dataset that details hydrologic watersheds. It has no changes.

IMOP

This is a new dataset (produced by DGLS) that displays the inventory of Mines, Occurrences, and Prospects in Missouri.

Impaired_2002 – 303D streams

This dataset was produced by DEQ in 2002 and shows streams that have impaired water quality. It is new to MEGA[®].

Lakes

This is a public domain dataset that outlines Missouri lakes. It has no changes from the earlier version of MEGA[®].

Losing_Stream

This is an updated dataset produced by DGLS. 297 classified streams have been added and the metadata has been updated.

Major_Rivers

This is a public domain dataset that outlines Missouri rivers. It has no changes from the earlier version of MEGA[®].

MoDNR_Lands

This dataset, provided by Missouri State Parks and Historic Sites, outlines State Parks and Historic Sites that are owned by the State of Missouri. It is new to MEGA[®].

NPDES_Outfall

This dataset was produced by DEQ, and shows sewage discharge points. It is new to MEGA[®].

Overbur_Thick

This generalized Missouri-wide data set has been contoured to display the thickness in feet of unconsolidated materials (overburden or surficial materials) above generally consolidated formation that are older than Quaternary in age.

PLSS

This is a public domain dataset that outlines the Public Land Survey System (Township, Section and Range). It has no changes from the earlier version of MEGA[®].

Pub_Wells

This is an updated dataset that displays an additional 472 Public Water Supply Wells.

Quad_24k

While this is new to MEGA[®] it is a public domain dataset that details USGS 7 ½ minute quadrangle boundaries. It has no changes.

Roads

This public domain dataset shows the location of many Missouri roads.

Senate_2006

This is an existing data set that has been improved for MEGA[®]. It displays Missouri Senate districts. *Political party* and *Senator name* fields have been added.

Sink_Areas

This is a significant improvement of the older MEGA[®] sink area coverage that was produced by DGLS. This version shows the perimeter of known sinkholes as determined from USGS topographic maps.

Sink_Areas

This is a significant improvement of the older MEGA[®] sink area coverage that was produced by DGLS. This version shows the perimeter of known sinkholes as determined from USGS topographic maps.

Sinkholes

This is a significant improvement of the older MEGA[®] sinkhole point coverage that was produced by DGLS. It shows the location of known sinkholes as determined from USGS topographic maps.

Springs

This is an updated dataset (produced by DGLS) that displays an additional 80 springs or groundwater resurgence points.

Surficial

This dataset (produced by DGLS) displays the areas of Missouri underlain by different surficial materials. It is unchanged from the original version except for updated metadata.

Top_Rock_Elev

The generalized Missouri-wide data set has been contoured to display the elevation in feet (relative to mean sea level) of the top of consolidated geologic formations that are older than Quaternary in age. In most locations the contour depicts the top of consolidated bedrock by in some locations (such as the Southeastern Lowlands) the material older than quaternary is poorly consolidated.

TDS_Aquifers

This dataset (produced by DGLS) was published in 1981 as Plate 4 in Geologic Aspects of Hazardous-Waste Isolation in Missouri by Christopher J. Stohr, Gary St. Ivany, and James Hadley Williams. It displays approximate levels of total dissolved solids in aquifers in northern Missouri and is new to MEGA[®].

Urban_Areas

This is a public domain dataset that outlines cities and towns across Missouri. It has no changes from the earlier version of MEGA[®].

Well_Certified

This dataset is constructed based on wells reported to be drilled by drillers. It has been updated to add 55,968 wells.

Well_Logs

This is a significant improvement to the old Well_Logs coverage that displayed logged well locations and related data. The new version (produced by DGLS) includes a simplified well log in the data attributes.

Georeferenced Images

Mineral Resources and Industry Map of Missouri – 2003 published by DGLS

Selected 1:24,000 scale topographic maps published by the USGS