

Mississippi Digital Earth Model (MDEM)

Elevation & Bathymetry Standards

In the past, the USGS has been the lead agency for production of digital elevation models. In addition, MDOT contracts for production of digital elevation data on a frequent basis to support highway planning and design. MDEQ is acquiring digital elevation data in a limited number of counties to aid in the development of Digital Flood Insurance Rate Maps (DFIRMs) for FEMA.

Digital elevation models and contours were traditionally developed using conventional photogrammetric mapping technology. Several new remote sensing technologies for elevation data capture have emerged over the past decade that allow for substantial savings of time and money.

The suggested digital elevation model for MDEM should be of adequate resolution to support development of topographic vector contours at three different intervals:

- One-foot contours for areas characterized as flat with subtle relief variation, such as the Gulf Coast and the Delta, to support hydrographic modeling and drainage analysis. This element covers approximately 10,000 square miles of the state.
- Two-foot contours in urban areas, including areas within the one-mile buffer of municipal corporate limits. This element covers approximately 6,500 square miles of the state.
- Five-foot contours in rural areas, which covers the remaining portion of the state. This element represents approximately 31,500 square miles of the state.

The staff, in conjunction with the PAC and the TUG, recommends:

1. The Council adopts the above listed specifications to be established as the initial elements to be included in the digital elevation layer of MDEM.
2. Data spatial accuracy should meet the parameters of National Map Accuracy Standards (NMAS) for 1" = 100' (1:1,200) scale mapping for the urban areas and 1" = 400' (1:4,800) scale mapping for the rural areas.
3. The elevation standards would not apply to bathymetry. Bathymetric standards are currently being developed on the Federal level.