

### Highlights

GDMIS created and photorevised 1:24,000 Digital Line Graphs (DLGs) for the entire state of Texas, over 4,400 DLGs.

Researched and developed efficient vector-based revision of quadrangle maps.

GDMIS developed high-resolution data for the National Hydrography Dataset (NHD), which supports stream ordering, linear referencing and GNIS naming conventions. NHD provides an easy way to link water related data to your GIS applications.

GDMIS is a leader in improved production standards and design of High-Resolution NHD.



**StratMap** is a program of the State of Texas to develop statewide GIS data layers in partnership with other public and private sector entities. Seed money from the State is combined with local, regional, federal, and private funds to create a digital basemap for Texas. The result of this multi-year effort is a statewide 1:24,000-scale database that includes orthoimagery, elevation, hydrography, soils, transportation, and boundaries.

### Project Highlights:

**Hydrography DLGs:** GDMIS produced photorevised hydrography data for StratMap using digital orthoimagery. For this Texas-sized project, GDMIS produced deliverable quantities not seen before from a single contractor in this technical field. In under two years, GDMIS produced 4,442 quadrangles of photorevised hydrography data. Throughout this process, GDMIS worked closely with the State and USGS to foster one of the most comprehensive and robust set of quality standards developed for photorevision. Additionally, GDMIS saved StratMap and USGS over \$400,000 in materials costs by developing a new and innovative scanning process.

**National Hydrography Dataset (NHD):** The NHD is a hydrologic model that describes surface water features and their interrelationships. Texas plans to use this model to integrate water-related databases across state agencies and enable advanced hydrologic analyses. To meet this need, GDMIS has developed a capability to create high-resolution 1:24,000-scale NHD data. GDMIS's process employs advanced data structures capable of storing the complexities of stream networks, allowing the majority of the processing to be reliably and efficiently automated. GDMIS is currently the only commercial firm that has developed a production process specifically tailored to high-resolution NHD.

**Vector Quadrangle Revision:** The 1:24,000-scale topographic quadrangle map is the primary product of the USGS' National Mapping Program. Although a valuable source of information, the typical quadrangle map is now over twenty years old. Due to high costs and limited funding, traditional map revision methods are unable to keep the series up to date. In response to this problem, GDMIS worked closely with StratMap and USGS to develop more efficient methods for map revision. Work on this project has demonstrated that GDMIS's vector-based approach can create updated maps for less than half the cost of traditional methods.



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