

The National Map - Texas Pilot Project

The Nation Needs *The National Map*

Governments depend on a common set of geographic base information as a tool for economic and community development, land and natural resource management, and health and safety services. Emergency management and defense operations rely on this information. Private industry, nongovernmental organizations, and individual citizens use the same geographic data. Geographic information underpins an increasingly large part of the Nation's economy.

Available geographic data often have the following problems:

They do not align with each other because layers are frequently created or revised separately,

They do not match across administrative boundaries because each producing organization uses different methods and standards, and

They are not up to date because of the complexity and cost of revision.

The U.S. Geological Survey (USGS) is developing *The National Map* to be a seamless, continuously maintained, and nationally consistent set of online, public domain, geographic base information to address these issues. *The National Map* will serve as a foundation for integrating, sharing, and using other data easily and consistently.

In collaboration with other government agencies, the private sector, academia, and volunteer groups, the USGS will coordinate, integrate, and, where needed, produce and maintain base geographic data.

The National Map will include digital orthorectified imagery; elevation data; vector data for hydrography, transporta-

tion, boundary, and structure features; geographic names; and land cover information. The data will be the source of revised paper topographic maps.

Many technical and institutional issues must be resolved as *The National Map* is implemented. To begin the refinement of this new paradigm, pilot projects are being designed to identify and investigate these issues. The pilots are the foundation upon which future partnerships for data sharing and maintenance will be built.

The Texas Pilot Project

With the maturity of the Texas StratMap program, Texas is a natural choice for a National Map pilot. Texas Natural Resource Information System's (TNRIS) StratMap data holdings contain most of the data components envisioned as part of *The National Map* concept. Texas has already implemented many of the strategies inherent in *The National Map*, such as Web-accessible data (see figure 1) and maintenance partnerships for acquiring data from other producers.

The Rocky Mountain Mapping Center's decision to collocate the Texas Area Maintenance Office (AMO) with the USGS Water Resources Division (WRD) office in Austin will provide opportunities to explore mutually beneficial relationships with the many partners and cooperators of TNRIS and WRD. These relationships should help foster data sharing partnerships, stimulate exploration of integrated science opportunities, and make the USGS suite of products available to a wider audience.

The primary partner in *The National Map* AMO of Texas will be TNRIS, the State agency that is a subsidiary of the Texas Water Development Board. TNRIS is responsible for building and maintaining StratMap, Texas' Statewide

geographic database, which includes primary layers that *The National Map* has defined as its base categories, including hydrography, hypsography, transportation, orthoimagery, and boundaries. Additionally, TNRIS, as the State Earth Science Information Center, can use this pilot to evaluate customer satisfaction as a test bed of *The National Map* products. TNRIS will cooperate with the USGS to establish a linkage between *The National Map* and StratMap, which will allow the USGS to serve *The National Map* data and products to customers.

In the building and maintenance of StratMap, TNRIS has developed its own network of State, county, local, and private enterprise partnerships. There are many geographic information system (GIS) activities at all levels of government and private industry in the State. In addition, TNRIS plans to explore further integration of local datasets into StratMap and to automate updating and maintenance. As the USGS/TNRIS relationship grows, it is expected that the USGS will develop ties to many of these partners as it supports TNRIS wherever possible in facilitating partnerships in data information gathering, integration and maintenance processes.

In addition to data partnerships resulting from the USGS relationship with TNRIS, it is envisioned that the USGS will develop partnerships with various other Federal, State, and local agencies, primarily as a result of the collocation partnership with WRD and the USGS formation of the Texas Federal Geography Information Workgroup. This includes the many organizations and individuals that are interested in natural resource planning, water quality and availability issues, and emergency response work throughout the State. This will enhance prospects for integrated science and will allow the

USGS to offer its geographic science expertise to facilitate the study of these issues and other socioeconomic problems.

Initial National Map Pilot Activities - An agreement to develop a cooperative pilot project for **The National Map** has already been signed with TNRIS. The initial phase of the Texas pilot, which consists of five high-visibility quadrangles in Brownsville near the Texas-Mexico border, calls for the integration of the StratMap data layers, including transportation data acquired from the Texas Department of Transportation and the Lower Rio Grande Development Council. The purpose of the Texas pilot is to create and store the data in the StratMap database, link **The National Map** to the data, and serve prototype graphic and digital outputs for the five quadrangles over the Web. The result will be a demonstration of **The National Map** dataset, complete with Web user interface and prototype digital and graphic standard products (which may not be identical to present standard products). Once connectivity to StratMap data is established, the initial technical interface for **The National Map** requirement for the State of Texas will have been completed.

Another partnership is being implemented with the Department of Housing and Urban Development for monitoring the status of economically disadvantaged communities, or colonias, along the U.S.-Mexico border to determine where services should be provided. The initial test area will be in Eagle Pass and will involve the integration of local datasets into StratMap for inclusion in **The National Map**. TNRIS will also be involved in this pilot development.

Next Step in The National Map Pilot - In addition to the Brownsville and Eagle Pass quadrangles, follow-on pilot activities for fiscal year 2002 involve implementing **The National Map** in areas where there are many GIS activities and local datasets to which StratMap has or will establish data integration linkages. The plan is to expand the scope of initial pilot development activities to allow for the integration of these local datasets into StratMap, make them available through a Web interface, and develop an automated update and maintenance system based on the local data. A USGS GIS data specialist will work with StratMap personnel in the data integration/linkage process and ensure that integrated or linked data are consistent with **The National Map**.

Volunteerism - The opportunity also exists to establish partnership between the USGS and TNRIS for a volunteer internship program that consists of certified volunteers who can add updates to **The National Map** through StratMap. This is consistent with **The National Map** vision and will be an opportunity to resolve data quality and validation issues associated with volunteerism.

More Information About The Texas Pilot Project

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More Information About The National Map

We welcome your comments on **The National Map** mission and strategies. You can view and download the full report at nationalmap.usgs.gov. Please share your thoughts about the vision with the USGS by e-mail at nationalmap@usgs.gov or by mail to USGS-National Map, MS 511 National Center, 12201 Sunrise Valley Drive, Reston, VA 20192.

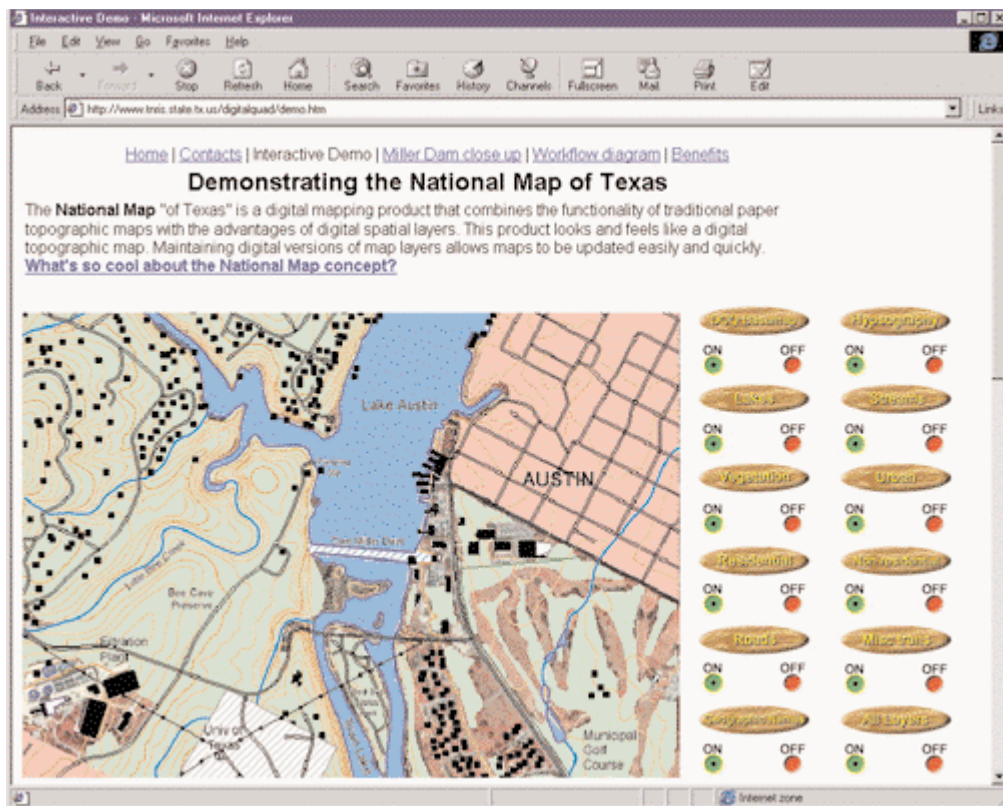


Figure 1. TNRIS web site featuring StratMap's National Map of Texas at <http://www.tnris.state.tx.us/digitalquad/demo.htm>