# The Next Generation of USGS Topographic Maps

US Topo maps
Historical Map Collection





## US Topo maps

The new generation of digital topographic maps from the USGS. Arranged in the traditional 7.5-minute format, digital US Topo maps look and feel like the traditional paper topographic maps for which the USGS is so well known. At the same time, US Topo maps provide modern technical advantages that support wider and faster public distribution and enable basic, on-screen geographic analysis.



## US Topo Status

- By the close of FY 2012 US Topo maps will be available for conterminous US.
- 1/3 of the conterminous US is being updated annually. One full cycle of coverage complete.
- Each year additional layers are being added.
   More structures and PLSS in the west for 2013
- What about Hawaii and Alaska? Starting in 2012





## Product Description

- Made from The National Map (TNM) data, which is integrated from Federal, State and local data sources where available
- A set of nationally consistent topographic maps that can be used electronically or plotted
- A national digital topographic map GeoPDF format
- Limited GIS characteristics,
- Contains the US National Grid
- Released with historic versions of the map



## **Product Characteristics**

- GeoPDF format
  - ✓ TerraGo Technologies extension to the Adobe PDF file format
- Georeferenced
  - ✓ Locations defined in terms of map projection or coordinate systems
- Layered (select layers, turn layers on/off)
- Limited interactive capabilities, free tools
- File Size about 15-20 Mb



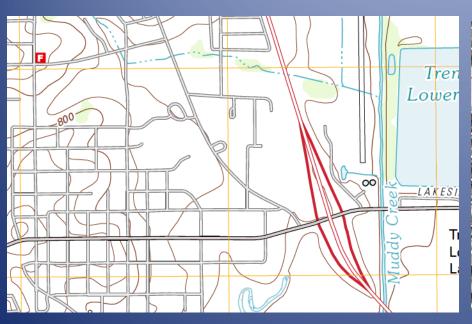


## TNM Data Sources for the Maps

- Source data from The National Map datasets
  - Orthoimage National Orthoimage Dataset
  - Elevation National Elevation Dataset, LiDAR where available
  - Hydrography National Hydrography Dataset
  - Transportation National Transportation Dataset
  - Boundaries National Boundaries Dataset
  - Structures National Structures Dataset
  - Vegetation National Landcover Dataset
  - Names (Geographic Names Information System)
  - Grids and quad level metadata
  - High-resolution scans of historic maps



## 2012 Trenton







## Strategy

- Evolution
  - Data layers added as they become available in *The National Map*
  - Features added as technical processes are perfected
  - Full topographic quadrangle map content (ultimately)
  - Bundled with scanned historical quadrangle maps
  - Additional User requirements added over time
    - State leaf off orthos
    - State transportation data





## Key Advantages

- Accessible on line from a personal computer
- Interactive & enhanced
- Evolving & improving over time
- Plot / print ready
- Authoritative content
- Quality assured to standards
- Public domain
- Free download
  - ✓ Through the USGS Store
  - ✓ Through the Hazards Data Distribution System (HDDS)





## US Topo Website http://nationalmap.gov/ustopo

About US Topo Maps

Download Maps (Map Store)

Frequently Asked Questions

User's Guide-Quickstart (1.2 MB pdf)

Fact Sheet

125 Years of Topographic Mapping

The National Map

Emergency Response Map Index Tool

Contact Us

#### A New Generation of Maps

US Topo is the new generation of digital topographic maps from the <u>U.S. Geological Survey</u> (USGS). Arranged in the <u>traditional 7.5-minute quadrangle</u> format, digital US Topo maps look and feel like the traditional paper topographic maps for which the USGS is so well known. At the same time, US Topo maps provide modern technical advantages that support wider and faster public distribution and enable basic, onscreen geographic analysis.

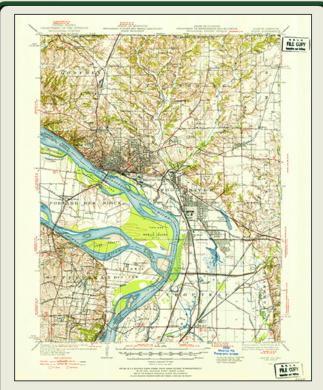
US Topo maps are available free on the Web through the <u>USGS Store</u>. Each map quadrangle is constructed in PDF format with geospatial extensions (GeoPDF®) format from key layers of geographic data – <u>orthoimagery</u>, <u>roads</u>, <u>geographic names</u>, <u>contours</u> and <u>hydrographic</u> features – found in <u>The National Map</u>. The National Map is a nationwide collection of integrated data from local, State, Federal, and other sources. The most recent US Topos include boundaries and woodland.

US Topo <u>users</u> can turn geographic data layers on and off as needed; zoom in and out to highlight specific features or see a broader context; and print the maps, in their entirety or in customized sections, on a wide variety of printing devices. Viewing and analytical tools are available free for download from <u>Adobe</u> and <u>TerraGo Technologies</u>. File size for each digital 7.5-minute quadrangle is about 15-20 megabytes.

Production of the US Topo prototype, "Digital Map-Beta," began in June 2009. Production of US Topo maps began in October 2009. The newer US Topos include all of the content of the earlier "Digital Map-Beta," plus integrated contours and hydrographic features. US Topos are modeled on the prior, printed USGS 7.5-minute topographic quadrangle map series which was completed in 1992.

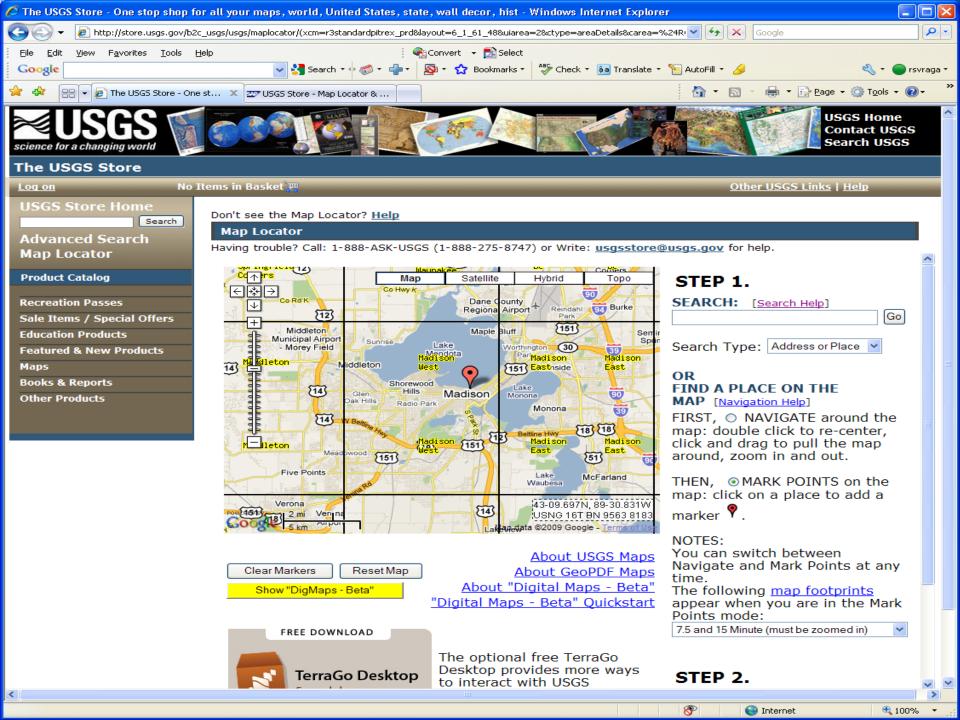
As the US Topo product evolves, the USGS will incorporate additional data layers from *The National Map*. More information about US Topo maps <u>can be found here</u>.

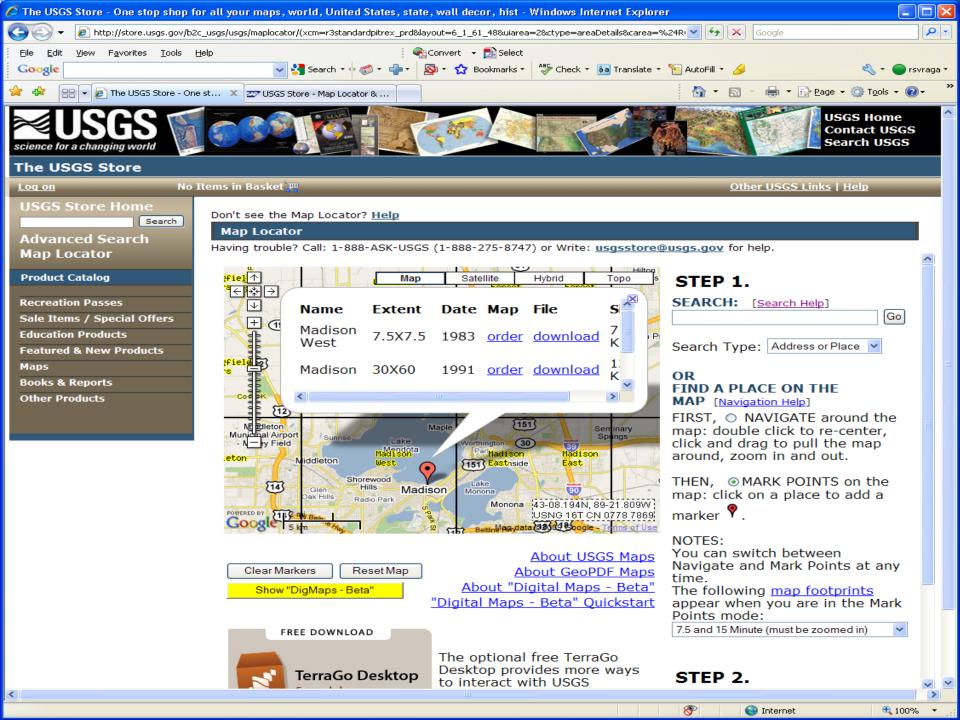
The USGS also provides digital versions of earlier edition topographic quadrangle maps through the <u>Historical Topographic Map Collection</u>. These maps also are available for download through the <u>USGS Store</u>.



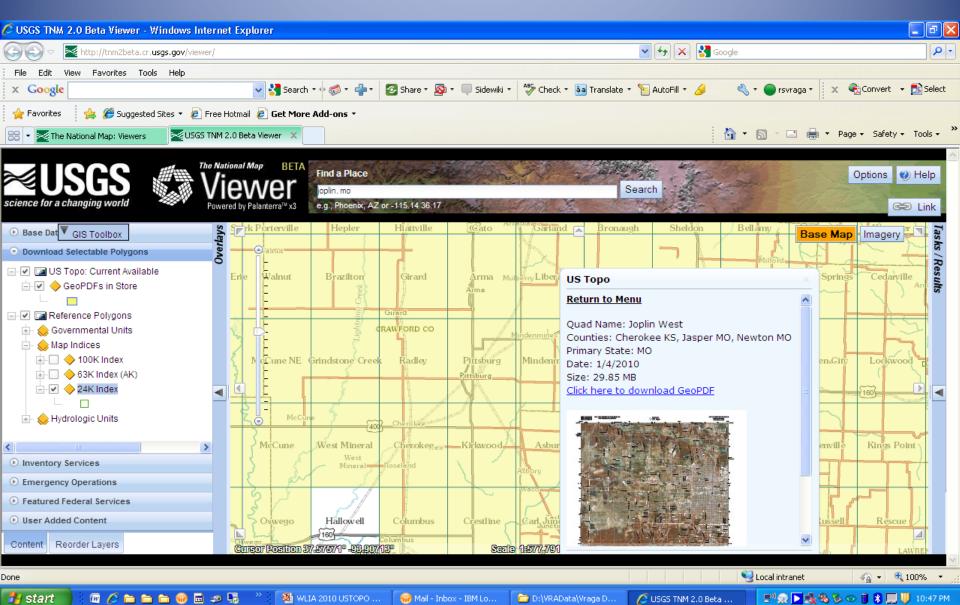
1927 ALTON, IL-MO (15-MINUTE SERIES)
HISTORICAL TOPOGRAPHIC MAP







## Download from Viewer



#### Hazards Data Distribution System (HDDS) http://hdds.usgs.gov/EO/



#### **Emergency Operations**



■ U.S. Disaster Response Imagery

View imagery from before and after a disaster.

- Quick Downloads of U.S. and International Imagery
   Access disaster response imagery in predefined tiled downloads (HDDS).
- Interactive GIS Map Viewer
  Use the interactive map to specify your area of interest and choose data layers.
- GIS Resources

Find Web map services.

**■** Digital Library

Locate related Web sites, resources, maps, products, presentations, meeting notes, and much more.

### **Emergency Operations**

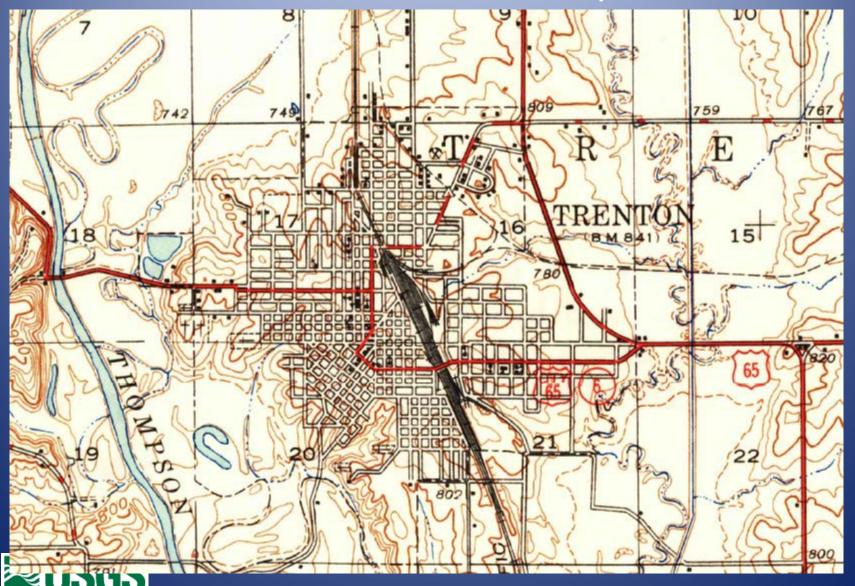
Explore critical pre- and post-disaster images and datasets online for immediate viewing and downloading. The U.S. Geological Survey (USGS) Emergency Operations, in support of the Department of Homeland Security, provides these images for use in disaster preparations, rescue and relief operations, damage assessments, and reconstruction efforts. We supply satellite and aerial images for analysis of disaster areas before, during, and after a disaster.

## Historic Map Collection

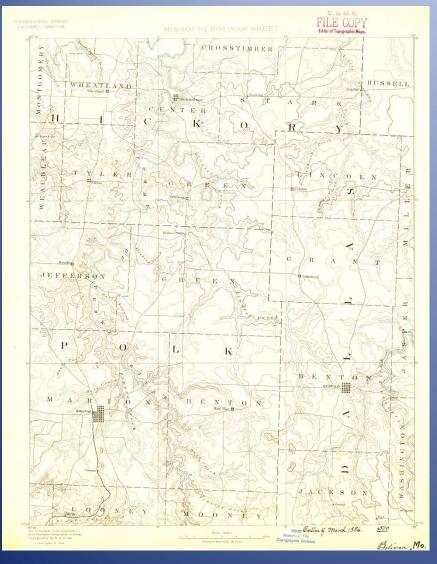
3,575 USGS Maps scanned and on-line for Missouri



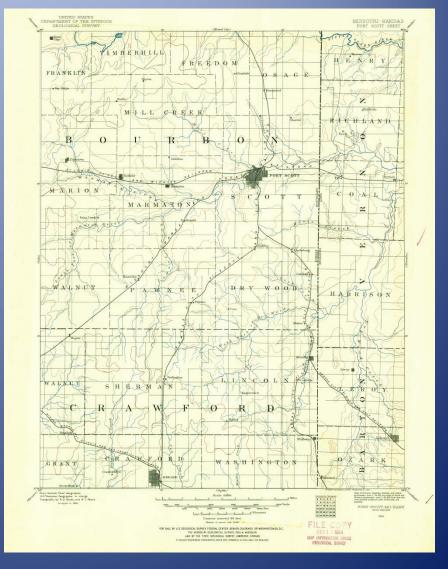
## Trenton 1:62,500 scale map, 1948



#### Missouri's Oldest Maps



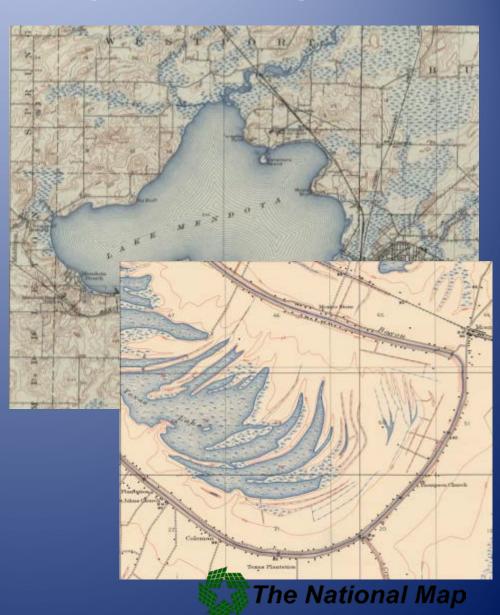
Bolivar, 1884, 1:125,000





## Historic USGS Quadrangle Scanning

- Scan complete collection of approximately 250,000 USGS quadrangles existing as paper copies, using consistent, high quality specifications
- Provide all editions and all scales matching US Topo release cycle
- All maps will have complete
   Metadata
- GeoPDF files available for download from USGS Store





## Questions?

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