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science for a changing world

Accessing Geospatial Data on the Web

Latest Developments from the U.S. Geological Survey

Depository Library Conference
Cartographic Users Advisory Council Session
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U.S. Department of the Interior
U.S. Geological Survey

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USGS Libraries

- **Then**
  - **USGS Director**
    - **Geospatial Information Office**
      - **Science, Information, and Education Office**
        - » **Natural Science Network**
          - » **Science Information and Library Services**
            - » **National Library Coordinator**
              - » **Branch Libraries under Regional Offices**
- **Now**
  - **USGS Director**
    - **Core Science Systems Mission Area**
      - **USGS Libraries Program**
        - » **Library Director**
          - » **Branch Libraries directly report to Library Director**

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Overview

- **USGS is the primary land mapping agency for the U.S. federal government**
  - **National Oceanic and Atmospheric Administration, Coast and Geodetic Survey has responsibility for waterways and bathymetry**
- **The vast majority of USGS Products are produced today in digital-only formats**
- **The USGS provides a distribution system that supports the complete spectrum of distribution:**
  - **Digital distribution online through the USGS Web site**
  - **Print-on-Demand access to digital-only products**
  - **Access and support for print products**

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The National Map

- As one of the cornerstones of the USGS National Geospatial Program, *The National Map* is a collaborative effort among the USGS and other Federal, State, and local partners to improve and deliver topographic information for the Nation.
- *The National Map* is easily accessible for display on the Web, as products and services, and as downloadable data.
- The geographic information available from *The National Map* includes
  - orthoimagery (aerial photographs), elevation, geographic names, hydrography, boundaries, transportation, structures, and land cover.

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National Map Viewer

- The National Map has transitioned its data assets and viewer applications to newer visualization and delivery methods with foundational base maps and integrated download services.
  - This new visualization and download platform is based on National Geospatial Intelligence Agency (NGA)'s Palanterra x3.
- Replaces:
  - *The National Map* Legacy Viewer http://nmviewogc.cr.usgs.gov/
  - *The National Map* Seamless Server http://seamless.usgs.gov/
  - *The National Map* 'National Hydrography Dataset' Viewhttp://nhdgeo.usgs.gov/viewer.htm

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National Map Viewer (continued)

- The new *National Map* viewers features include:
  - Fast base map
  - 100% *National Map* content
  - One stop to download *National Map* data, and
  - Direct access to the US Topo product.
- Use *National Map* services in other viewers - or add services to make your own view.

http://viewer.nationalmap.gov/

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US Topo

- US Topo is the next generation of digital topographic maps from the USGS.
- Arranged in the traditional 7.5-minute quadrangle format, digital US Topo maps are designed to look and feel like the traditional paper topographic maps.
- 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 for all users.
  - US Topo maps are available free on the Web.
  - Each map quadrangle is constructed in GeoPDF® format.

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US Topo (continued)

- US Topo users 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.
- Additional analytical tools are available free for download.
- File size for each digital 7.5-minute quadrangle is about 15-20 megabytes.

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US Topo (continued)

- The prototype of US Topo, "Digital Map–Beta," has been available since June 2009 and covers 17 states.
- US Topo maps include all of the content of the earlier "Digital Map–Beta," plus integrated contours and hydrographic features.
  - 16 states were completed in FY2010
  - An additional 15 states are planned for FY2011
  - Alaska, Hawaii, and the U.S. Territories are planned for FY2012 or beyond
- As the US Topo product evolves, the USGS will incorporate additional geographic data layers from *The National Map*.

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http://nationalmap.gov/ustopo/about.html#status

Historical Topographic Maps

- USGS is currently digitizing its entire historical collection of topographic maps
  - Estimated at over 250,000 map sheets, All editions, all scales
  - Over 2,000 maps/week are being scanned from the USGS Reston Library
  - Scanned maps go through quality assurance and geo-referencing
- Historical collections will become available along with new US Topos in the near future
- Historical maps will be found through the National Map Viewer, the USGS Store, and data.gov

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Access through the USGS Store

- US Topo Maps and historical topographic map products can be identified and downloaded through the USGS Store's Map Locator and Downloader tool
- Products can be downloaded or ordered either from existing print inventory or as Print-on-Demand products
- Currently, printed copies of US Topos have all layers turned on, including the ortho-imagery

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Other Spatial Data Products

- There are a number of other sources for spatial data from the USGS:
  - The National Atlas
  - Geographic Names Information System (GNIS)
  - National Geologic Map Database
  - USGS Publications Warehouse
  - NBII Metadata Clearinghouse
  - EarthExplorer: Satellite Images and Aerial Photos

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Data.gov

- The USGS is making all of its geospatial data holdings available through Data.gov
- Data.gov provides access to 3 services:
  - "Raw" Data Catalog
  - Tool Catalog
  - "Geospatial" Data Catalog
- US Topo maps, National Map layers, and many other USGS data products are available through these catalogs

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Thank You!

Questions and Discussion

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