Cartographic Resources from the Federal Government

A ROADMAP TO YOUR GEOSPATIAL DESTINATIONS

John Olson – Librarian for Government and Geo-Information Syracuse University – jaolson@syr.edu FDLP Academy Webinar - July 20, 2023

Goals of this Session

- 1. Workflow for breaking down a map related reference inquiry
- 2. Know the lingo
- 3. Locating sources of print and digital cartographic materials

Map reference question workflow

- 1. Detail (scale)
- 2. Time period
- 3. Type of map or content / subject
- 4. Print or digital (raster or vector)
- 5. How will it be used

Know the lingo

Agency names

Types of print maps and their digital equivalents

Geospatial formats

USGS, CDC, DOT, NOAA, NASA, ASCS, SCS, AAA, OSS, DMA, NIMA, DRG, DOQ, VMAP, DCW, e00, SHP, MXD, LYR, JSON, DXF, DWG, TIF, GeoTIF, GeoPDF, J2P, MrSID, DBF, CSV

Commonly Requested Maps

Topographic maps Geologic maps Soils maps Census maps (demographic) Voting maps Brownfield maps Health related maps Flood map
Land use / land ownership
Fire insurance maps
Aerial photography
Weather related maps
Wetland maps
Historical maps

Real-time vs. Interactive vs. Static maps

Real-time or near real-time

• Maps that continually update data in real-time or on a regular timed interval (near real-time). May be able to view and/or download archived content.

Interactive sites

• Maps that allow various data points or layers to be added, and capable of geospatial data downloading or custom map creation that you can save or download.

Static sites

• Contains single or a series of map images that you can view or download and are of a fixed time and place.

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Real time geospatial content

USGS – Real-time Data

Earthquakes, Volcanoes, floods, wildland fire, landslides, drought <u>https://www.usgs.gov/products/data/real-time-data</u>







AirNow https://www.airnow.gov





Soil maps

https://websoilsurvey.nrcs.usda.gov/app/





Topographic maps



Accessing USGS Topographic Maps Has Never Been Easier

TopoView highlights one of the USGS's most important and useful products, the topographic map. In 1879, the USGS began to map the Nation's topography. This mapping was done at different levels of detail, to support various land use and other purposes. As the years passed, the USGS produced new map versions of each area. TopoView shows the many and varied topographic maps of each of these areas through history. This can be particularly useful for historical purposes, View and Download such as finding the names of natural and cultural features that have changed over time.

This interface was created by the National Geologic Map Database project (NGMDB), in support of topographic mapping program managed by the National Geospatial Program (NGP). Geologic mapping and topographic mapping at the USGS have a long tradition together (see 1888 report). The NGMDB project is proud to assist the NGP in bringing these maps to the Web.

Packed With New Features And Downloadable File Formats

The maps shown through topoView are from the USGS's US Topo series and earlier Historical Topographic Map Collection (HTMC). The term "US Topo" refers specifically to quadrangle topographic maps published in 2009 and later. These maps are modeled on the familiar 7.5-minute quadrangle maps of the period 1947-1992, but are mass-produced from national GIS databases on a repeating cycle. US Topo maps repackage geographic information system (GIS) data in traditional map form. This benefits non-specialist map users, as well as applications that need traditional maps.

The goal of the HTMC, which started in 2011, is to provide a digital repository of USGS 1:250,000 scale and larger (more detailed) maps printed between 1884 (the inception of the topographic mapping program), and 2006. Currently, there are more than 178,000 maps in the HTMC and the collection continues to grow. NGP is accurately cataloging and creating metadata to accompany high-resolution, georeferenced digital files of each of these printed maps.



https://ngmdb.usgs.gov/topoview/

Other sites:

- USGS Store •
- **US National Map Viewer**
- USGS Historical Topo Map Explorer

Learn more about the NGMDB project

maps now



demo

Check out our video

Geologic maps

National Geologic Map Database https://ngmdb.usgs.gov/ngmdb/ngmdb_home.html





USGS Publications Warehouse and the USGS Library websites <u>https://pubs.er.usgs.gov/</u>

USGS Publications Warehouse Explore v Documentation v Contact USGS Publications Warehouse provides access to over 170,000 publications written by USGS scientists Search for Publications image: science decoder in the science of the scienc

Aerial photography

EarthExplorer

Feature (GNIS)

Feature Name

PENNSYLVANIA

Feature Type

State

All



The provided maps are not for purchase or for download; they are to be used as a guide for reference and search purposes only; they are not owned or managed by the

USGS Earth Explorer <u>https://earthexplorer.usgs.gov/</u>



TIGER/Line Geodatabases

View the available TIGER/Line geodatabases from the Geography program.

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NHGIS (National Historical Geographic Information System) <u>https://www.nhgis.org/</u>



FEMA – Flood maps

https://msc.fema.gov/portal/home

🛞 FEMA

Navigation

Q Search

MSC Home

MSC Search by Address

MSC Search All Products

LOMC Batch Files Product Availability

MSC Email Subscriptions

Contact MSC Help

MSC Frequently Asked Questions (FAQs)

MSC Products and Tools
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Looking for a Flood Map? 🛛

Enter an address, a place, or longitude/latitude coordinates:

Looking for more than just a current flood map?

Visit Search All Products to access the full range of flood risk products for your community.

FEMA Flood Map Service Center: Welcome!

About Flood Map Service Center

The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program (NFIP). Use the MSC to find your official flood map, access a range of other flood hazard products, and take advantage of tools for better understanding flood risk.

FEMA flood maps are continually updated through a variety of processes. Effective information that you download or print from this site may change or become superseded by new maps over time. For additional information, please see the <u>Flood</u> <u>Hazard Mapping Updates Overview Fact Sheet</u>

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NOAA – Weather related maps

Weather Maps

https://www.wpc.ncep.noaa.gov/index.shtml#page=ovw



National Hurricane Center - https://www.nhc.noaa.gov/



NOAA – Nautical charts

https://www.nauticalcharts.noaa.gov/



Office of Coast Survey ational Oceanic and Atmospheric Administration S. Department of Commerce	
Home Future of NOAA Charts • Charts • Publications • Data • Learn •	
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	Goto Historical Charts Map Selection Information
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Health related maps

NIH - GIS Portal for Cancer Research https://gis.cancer.gov/



CDC – Geospatial Data Resources https://www.cdc.gov/gis/geo-spatial-data.html

Centers for Disease Control and Prevention Q Search CDC 24/7: Saving Lives, Protecting People™ GIS and Public Health at CDC CDC > GIS Home > Explore GIS Resources **Geospatial Data Resources GIS Home** Print What is GIS? Geospatial Data Resources are organized into Events four topic areas; Public Health Resources, GIS Data, Social Determinants of Health Resources, GIS at CDC and Environmental Health Data Resources. Follow the links under your area of interest Interactive Web below to find publicly available datasets that are Applications & Data available for download and use in GIS. Explore GIS Resources Map Making Resources Public Health Resources \vee **Geospatial Data** Resources GIS Software & Tools **GIS Data** V **GIS Blogs & Forums** Social Determinants of Health Data Resources V **GIS** Training About GeoSWG **Environmental Health Data Resources** V

Wetlands maps



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Wetlands Mapper he Wetlands mapper is designed to deliver easy-to-use, map like views of America's Wetland resources. It integrates digital map data along with other resource information to produce current information on the status, extent, characteristics and functions of About Us wetlands, riparian, and deepwater habitats. The Wetland Mapper fulfills the U.S. Fish and Wildlife Service's strategic plan for the development, revision and dissemination of wetlands data and information to resource managers and the public. This information What We Do is intended to promote the understanding and conservation of wetland resources through discovery and education as well as to aid in resource management, research and decision making. Contact Us The wetlands displayed on the Wetlands Mapper show wetland type and extent using a biological definition of wetlands. There is no Get Involver attempt to define the limits of proprietary jurisdiction of any federal, state, or local government, or to establish the geographical scope of the regulatory programs of government agencies. Events **Getting Started** Library Please read the Disclaimer, Data Limitations, Exclusions and Precautions, and the Wetlands Geodatabase User Caution. News Find answers to Frequently Asked Questions Wetlands Mapper **Documentation and Instructions** Refer to the following links for documentation and instructions: Wetlands Data Ketlands Mapper Documentation and Instructions Manual Wetlands Mapping VIDEO: How to find and use the U.S Fish and Wildlife Service's Wetlands Mapper Status and Trends Launch the Wetlands Mapper Open either mapper by clicking on the links below (best viewed by maximizing your browser window): Wetlands Mapper

Image Details



Projects Mapper

US Fish & Wildlife

https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper



Other useful cartographic resources

GNIS – U.S. Placenames https://www.usgs.gov/us-

Global Files:

All_countries

Whole_world

board-on-geographic-names/domestic-names

CIA Factbook - https://www.cia.gov/the-world-factbook/



GNS - International placenames https://geonames.nga.mil/geonames/GNSData/



Historical maps

NARA - <u>https://www.archives.gov/research/cartographic</u>



Library of Congress

- G&M Division homepage <u>https://www.loc.gov/rr/geogmap/</u>
- Digital Collections page <u>https://www.loc.gov/maps/collections/</u>



Historical maps

Stanford – OSS maps WW-II https://exhibits.stanford.edu/oss-maps



HOLC / Redlining maps – Univ of Richmond https://dsl.richmond.edu/panorama/ redlining/#loc=4/41.218/-105.499



Univ of Texas – map collection archive https://maps.lib.utexas.edu/maps/index.html



GIS Geospatial Data Clearinghouses

- Federal site Data.gov, Agency: USGS, NOAA
- State gov sites All State will have at least one GIS clearinghouse site all will be different
- **County gov sites** Most counties will have clearinghouses, static maps, interactive maps
- **City gov sites** Most cities will have some data available





https://hub-cookcountyil.opendata.arcgis.com/



https://www.pasda.psu.edu/



https://opendata.cityofnewyork.us/



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Moon & other planets

IAU | USGS Astrogeology Science Center | NASA Gazetteer of Planetary Nomenclature https://planetarynames.wr.usgs.gov/





Lunar Mag: Interactive map of the Moon with a variety of information available for viewing, such as nomenclature and geology, on the PIGWAD web ster.

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List of lettered lunar craters: from NASA RP 1097, the NASA catalogue of lunar nomenclature (originally published 1982)

aries (polygons) are only intended for locating a specific named topographic or mor

Interactive Images & Maps

More Resources on the Web

Downloads & Inform

GIS Downloads

MOON nomenclature.zip MOON.nomenclature.KM https://planetarynames.wr.usgs.gov/ Page/MOON/target

https://planetarynames.wr.usgs.gov/ Page/MARS/target



Solar Eclipses

NASA Eclipse page https://solarsystem.nasa.gov/eclipses/home/



April 8, 2024 – Are you ready?? https://svs.gsfc.nasa.gov/5073



Ernie Wright, NASA Goddard Space Flight Published: April 12, 2023

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