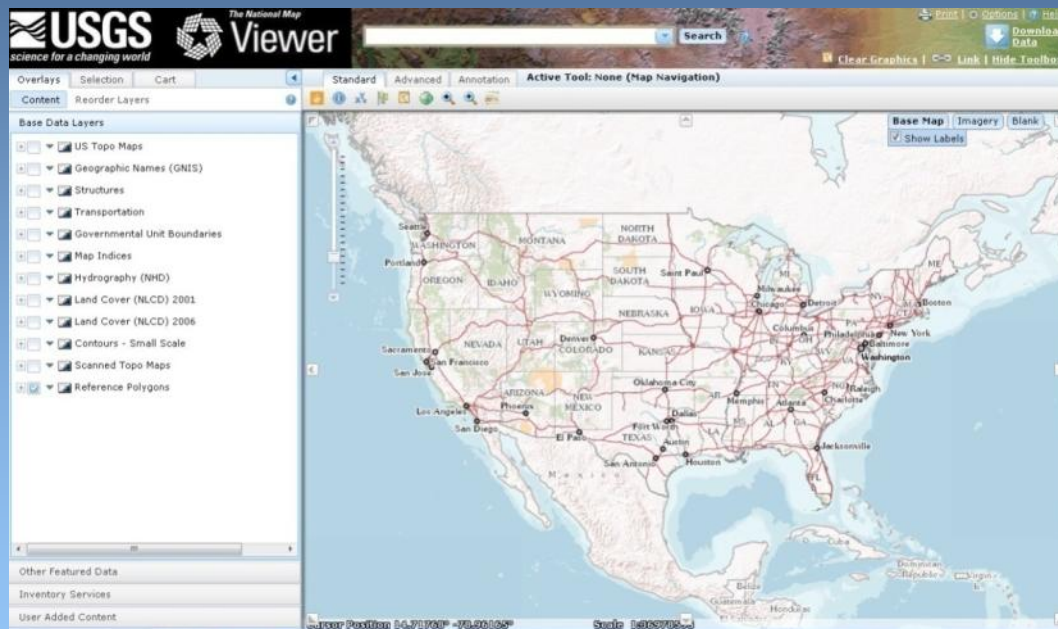


The National Map Delivery Services



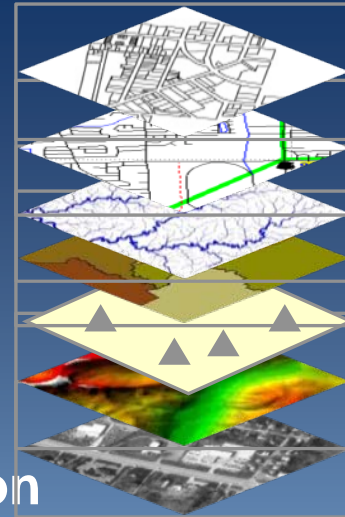
The National Map Includes

■ Data

- Elevation – National Elevation Database
- Hydrography – National Hydrography Dataset
- Orthoimagery – National Orthoimagery Database
- Geographic Names – Geographic Names Information System (GNIS)
- Land Cover – National Land Cover Datasets
- Boundaries (Governmental Units) National Boundaries Database
- Structures – National Structures Database
- Transportation – National Transportation Database

■ Products and Services

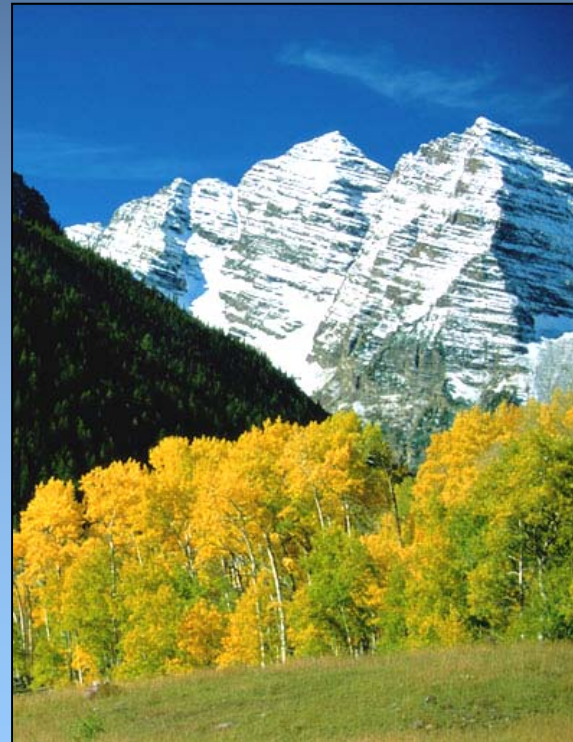
- Data for download
- Current “US Topo” maps and scanned historic topo maps and
- Web map services



Data Services

- **USGS is the lead or co-lead Federal agency for geospatial data for:**

- Elevation
- Geographic Names
- Hydrography
- Orthoimagery
- Land Cover



Data Access

- **Web viewing and download services**

- *The National Map Viewer*

- www.nationalmap.gov

- **Seamless Server**

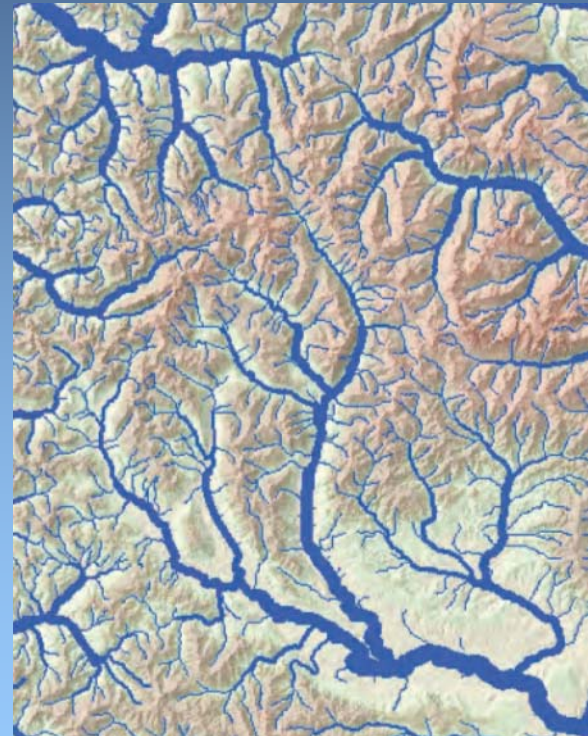
- <http://seamless.usgs.gov>

- **Hydrography Portal**

- <http://nhd.usgs.gov/>

- **Geographic Names Info. System**

- <http://geonames.usgs.gov>

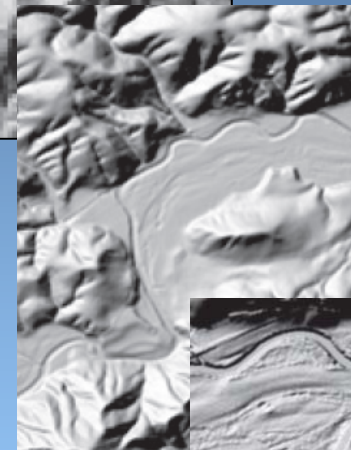


National Elevation Dataset

- Seamless raster data
- Multiple resolutions
 - 30m, 10m, 3m (60m – AK)
- Horizontal – NAD 83
- Vertical – NAVD 88
- Units – meters
- Partnerships in place for higher resolution data, primarily from LIDAR



30-meter



10-meter



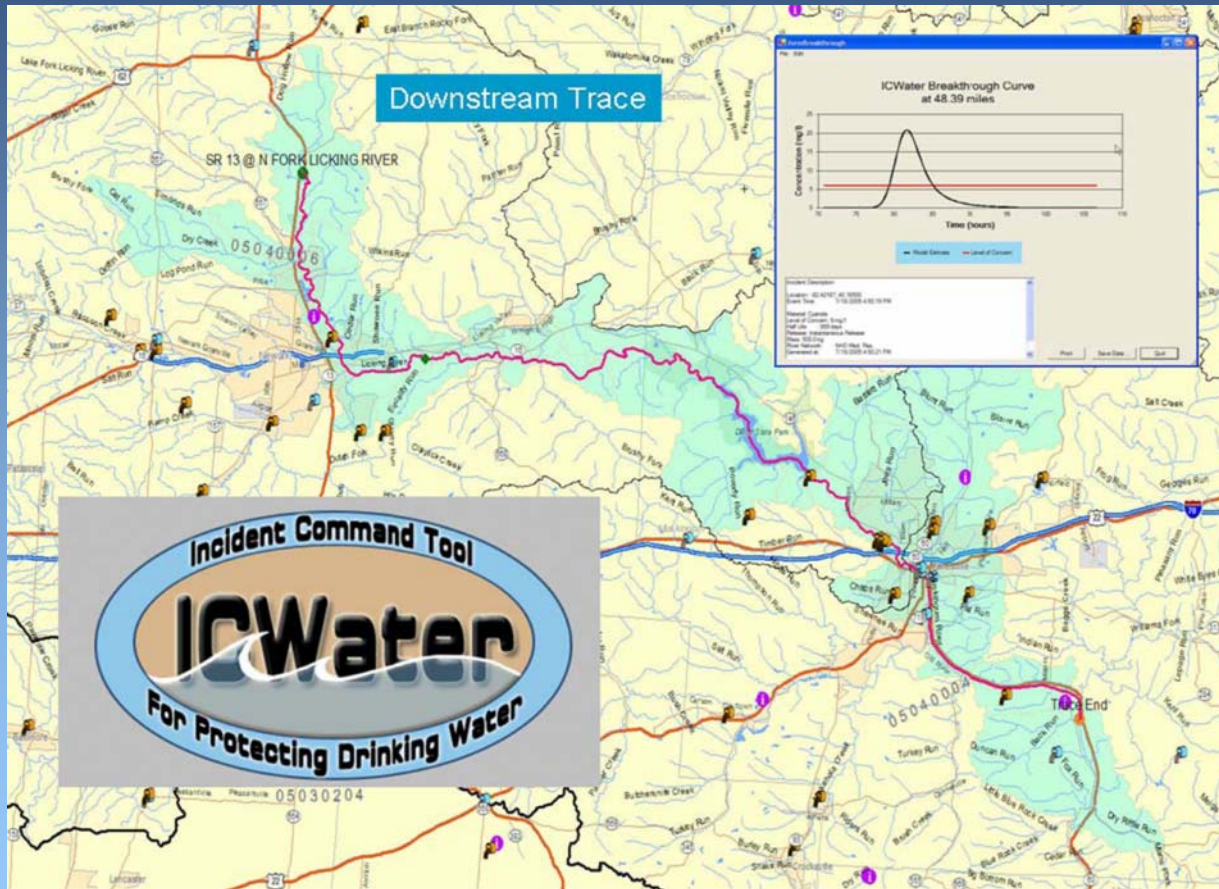
3-meter

National Hydrography Dataset

- Multi-resolution
- Surface water
 - Supports mapping and water systems analysis
- Feature-based
- Topological structure enables upstream and downstream analysis
- Companion Watershed Boundary Dataset
 - Nested drainage basins



Why the NHD Matters



Geographic Names

- Geographic Names Information System (GNIS) is the official Federal database of standardized names

Feature Detail Report for: Victor

ID: 792701

Name: Victor

Class: Populated Place ([Definitions](#))

Citation: U.S. Geological Survey. Geographic Names Phase I data compilation (1976-1981). 31-Dec-1981. Primarily from U.S. Geological Survey 1:24,000-scale topographic maps (or 1:25K, Puerto Rico 1:20K) and from U.S. Board on Geographic Names files. In some instances, from 1:62,500 scale or 1:250,000 scale maps.

Entry Date: 04-Apr-1980

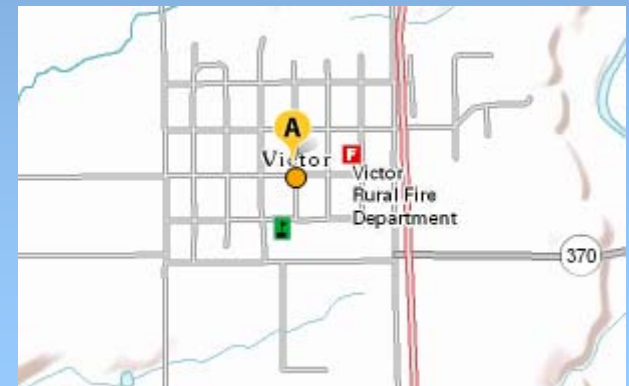
*Elevation: 3415/1041

*Elevations in feet/meters from the [National Elevation Dataset](#)

Result of searching GNIS for “Victor, MT”

- Includes cultural and physical feature names (not roads/streets)
- More than 2 million records

Link from GNIS to *The National Map Viewer*



Orthoimagery Dataset

- **Primary source**
 - **USDA National Agriculture Imagery Program**
 - ✓ 1-meter resolution, leaf-on imagery
 - ✓ 3-year cycle
- **Higher resolution data**
 - Sources include NGA, State and local governments and tribal partners



NAIP Orthoimage – Eureka, CA

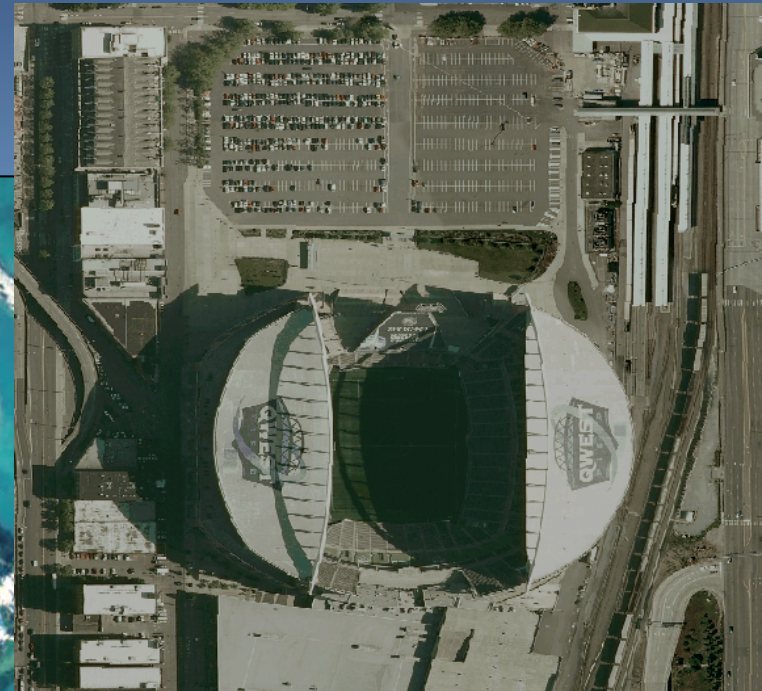
Multiple Resolutions and Sources



Hoover Dam, NV-AZ
NAIP

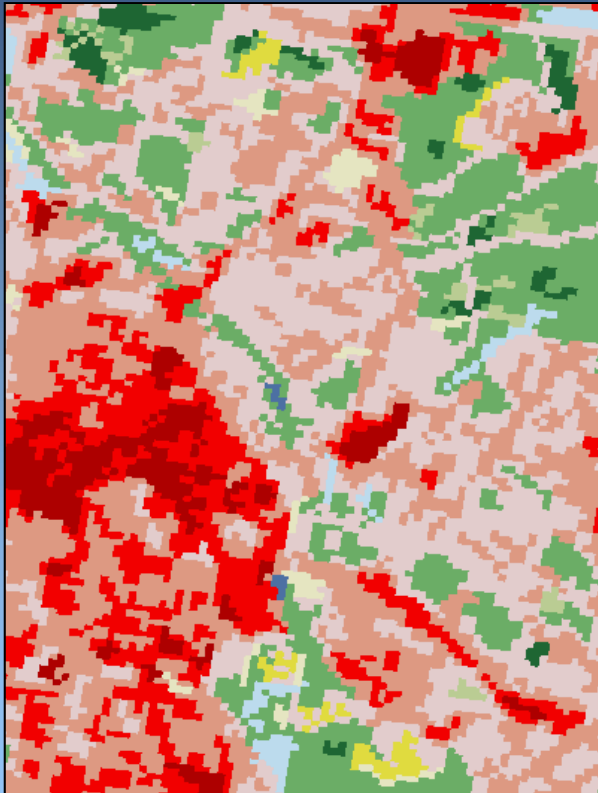


Duck Key, FL
Monroe County



Qwest Stadium
Seattle, WA
NGA

National Land Cover Database



Athens, GA

- Consistent land cover for all 50 States
- Normalized Landsat imagery for 3 time periods
- 16 classes of land cover data
- Ancillary data include 30-meter elevation, surface imperviousness, and tree canopy

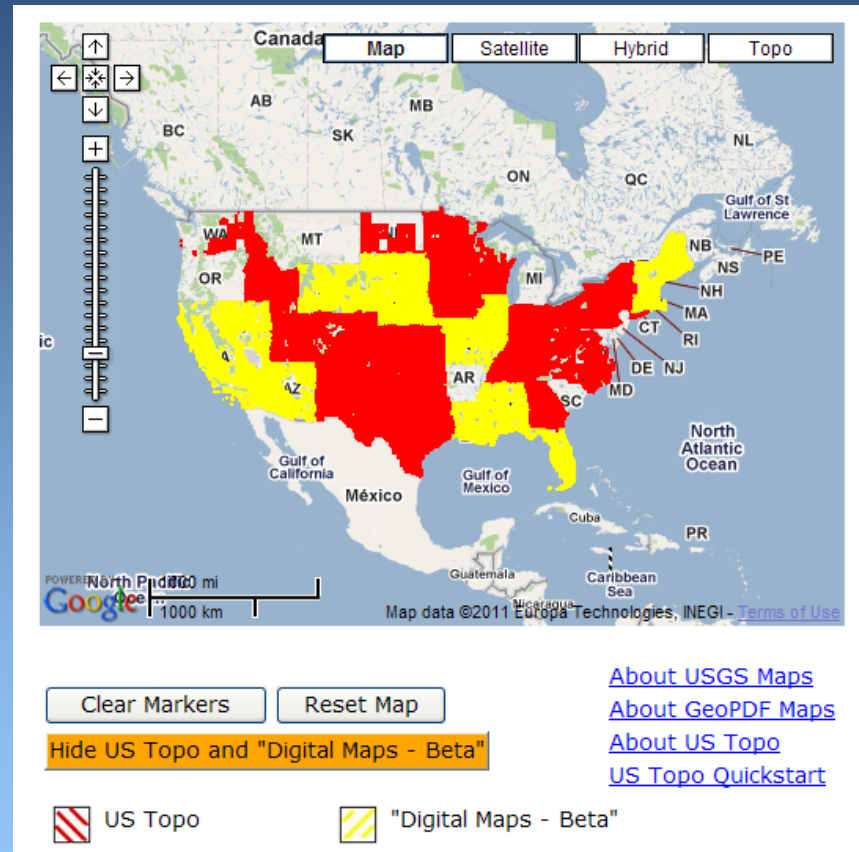
Interactive Mapping

- US Topo is the new generation of USGS topographic maps
 - Built from core data layers of *The National Map*
 - Digital - GeoPDF format
 - Available free on the Web
 - Accessible from *The National Map* viewer and the USGS Store
 - Includes an image base
 - Selectable feature layers
 - Maintained by frequent update



US Topo Access

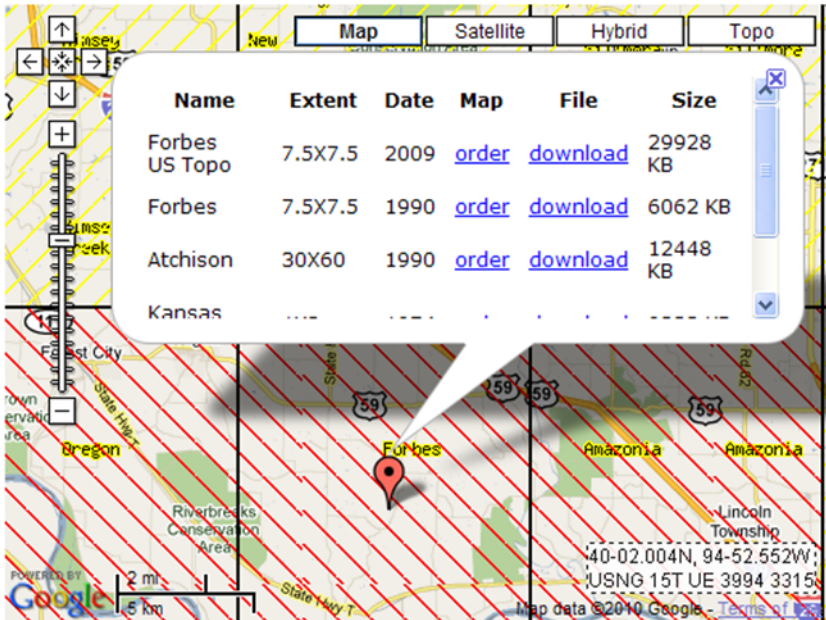
- **USGS Store**
 - Yellow: available “Digital Maps – Beta” (US Topo predecessor)
 - Red: available US Topos
- Status shown as of April 11, 2011



<http://store.usgs.gov>

Download

- Select a quadrangle for list of available maps
- Choose “download” or “order”
 - GeoPDF files – free
 - Hard copy - \$15.00





Name	Extent	Date	Map	File	Size
Forbes US Topo	7.5X7.5	2009	order	download	29928 KB
Forbes	7.5X7.5	1990	order	download	6062 KB
Atchison	30X60	1990	order	download	12448 KB
Kansas

Map data ©2010 Google - [Terms of Use](#)

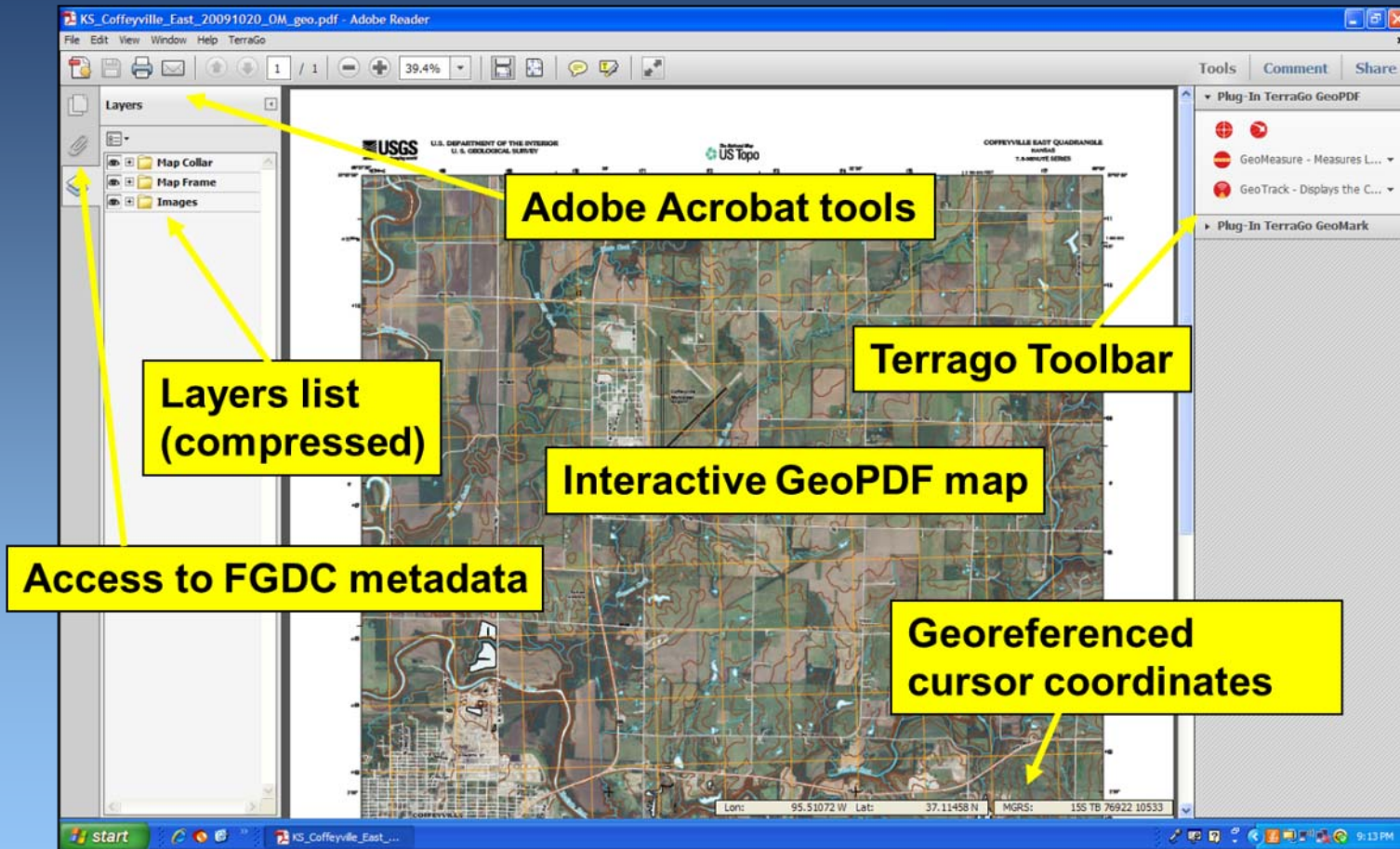
[About USGS Maps](#)
[About GeoPDF Maps](#)
[About US Topo](#)
[US Topo Quickstart](#)

Clear Markers Reset Map

Hide US Topo and "Digital Maps - Beta"

 US Topo  "Digital Maps - Beta"

Downloaded US Topo

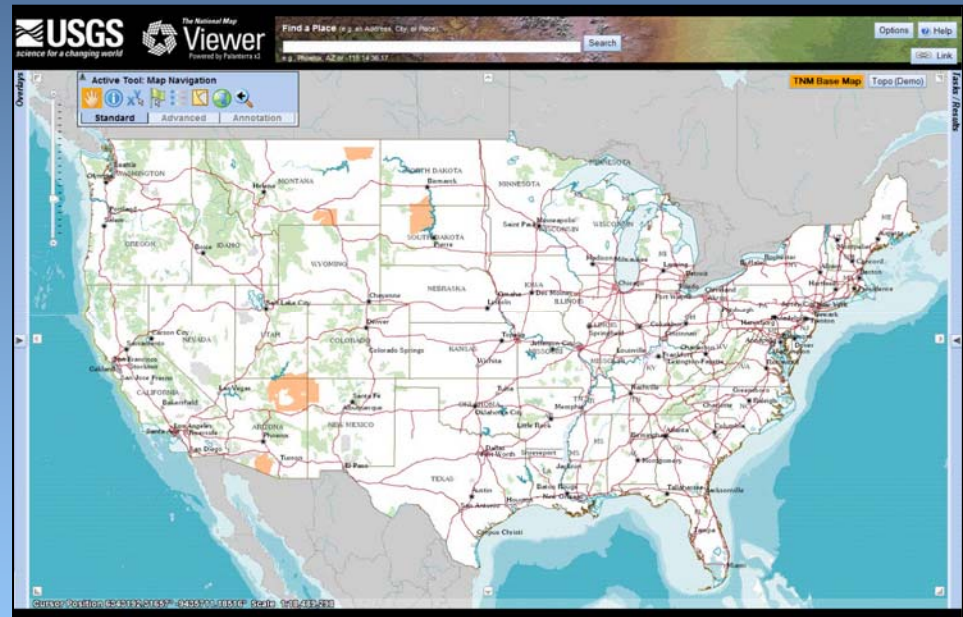


Adobe Reader X with
 TerraGo Technologies Toolbar

Data Visualization

■ *The National Map Viewer*

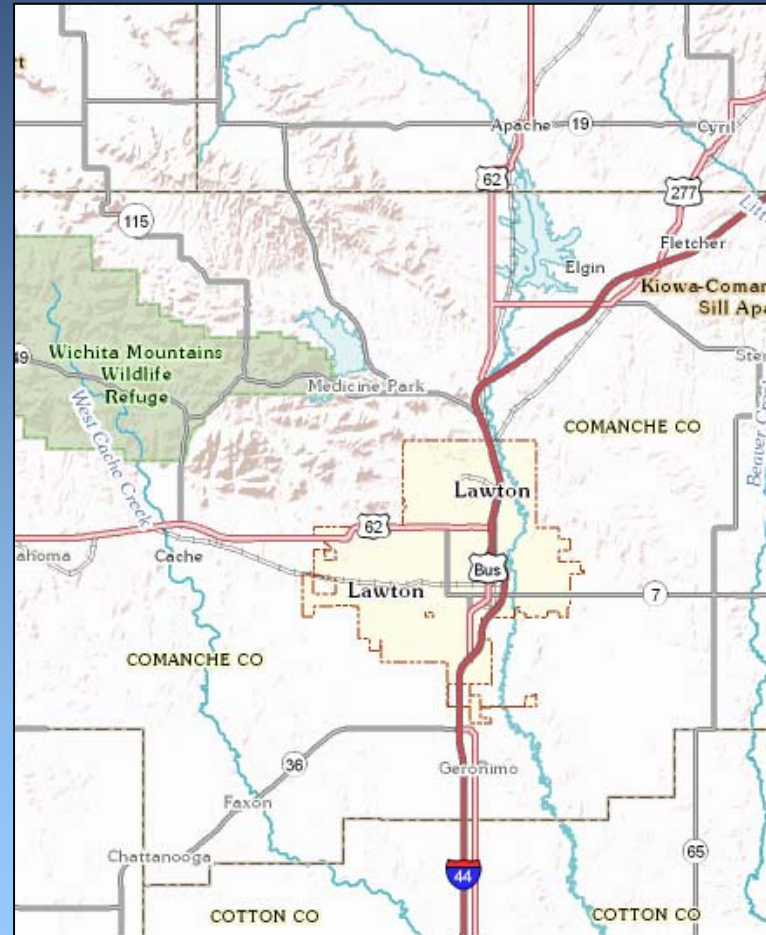
- Fast base map
- 100% *The National Map* content
- One-stop to download *The National Map* data and view services
- Direct access to topographic maps



<http://nationalmap.gov/viewers.html>

Download Capabilities

- “What you see is what you get”
- One place to download all base vector, raster, and graphic data products
- Selectable area of interest, multiple themes, and data formats for download
- Next: more data (land cover, historical topographic maps), more formats (KML, MXD, etc.) for interoperability

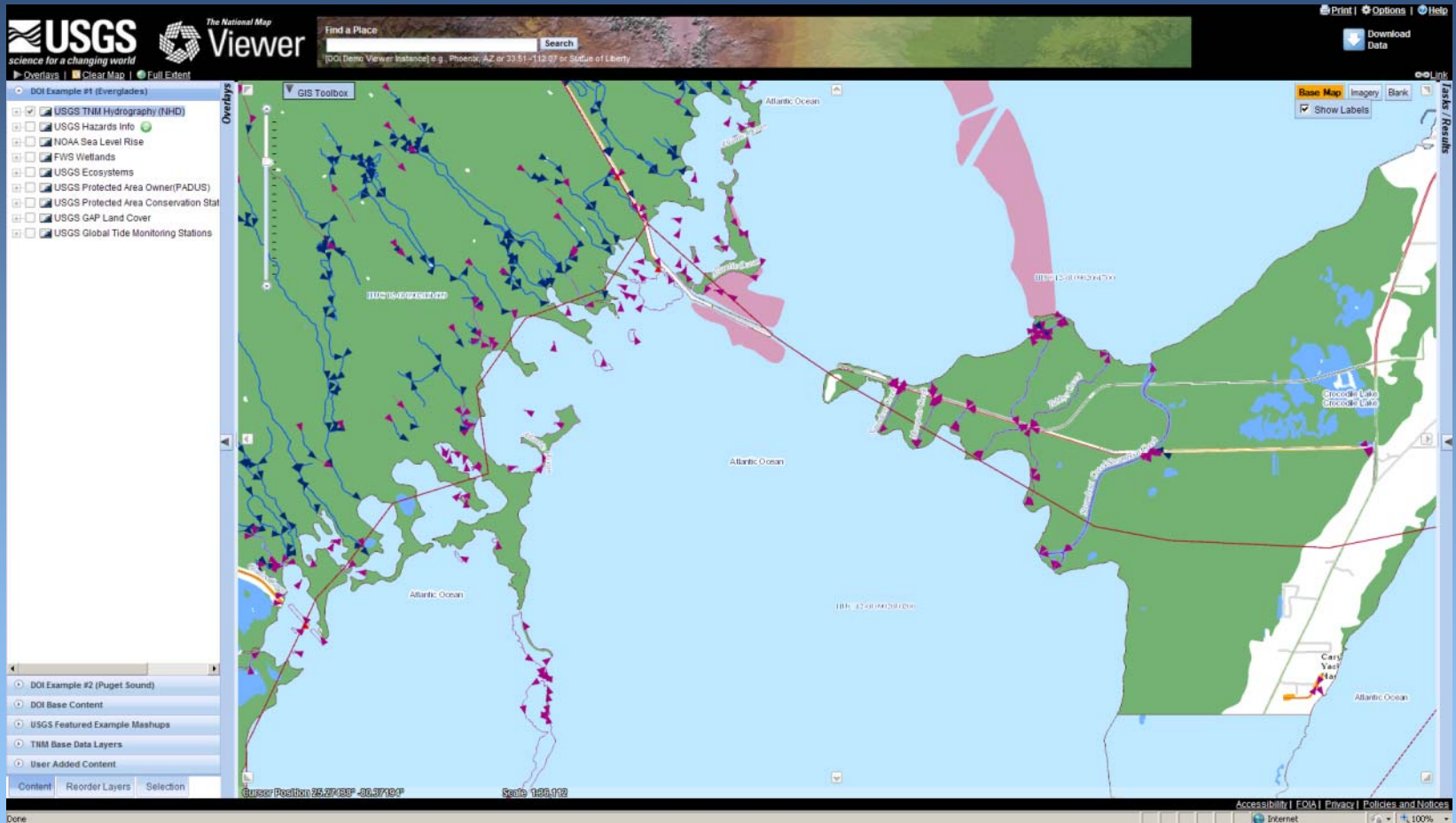


National Map Stats at a Glance

- Over 100 Million Features and 200K Files
- Over 18,000 US Topos produced /Yr
- ~ 1.4 million data downloads /Yr
- ~ 400 Terabytes of data delivered /Yr
- ~ 22 million visitors /Yr

Investigate The *National Map detail*

Example: National Hydrography Dataset



Link to additional feature detail

Example: Stream Flow Station Info.

The screenshot displays the USGS National Map Viewer interface. The main map shows a green area representing the Everglades, with a stream flow station marked by a red dot. A pop-up window provides details for the station: EVERGLADES 3 IN C-111 BASIN NR HOMESTEAD, FL. The details include: Layer: Stream Flow Stations; Station Name: EVERGLADES 3 IN C-111 BASIN NR HOMESTEAD, FL; Stage: 1.63; and Class: Not-ranked.

On the right side, a detailed data panel is visible, titled "USGS Real-Time Water Data for USGS 252043080302400 EVERGLADES 3 IN C-111 BASIN NR HOMESTEAD, FL". This panel includes a "Summary of all available data for this site" section, which lists "Gage height, PUBLISHED, feet" as the most recent instantaneous value (1.62) on 03-14-2011 at 10:00 EDT. Below this, a line graph shows the gage height over time, with the y-axis labeled "Gage height, PUBLISHED, feet" ranging from 1.45 to 1.80. The x-axis shows dates from Mar 07 2011 to Mar 14 2011. A legend indicates that the blue line represents "Graph of Gage height, PUBLISHED, feet".

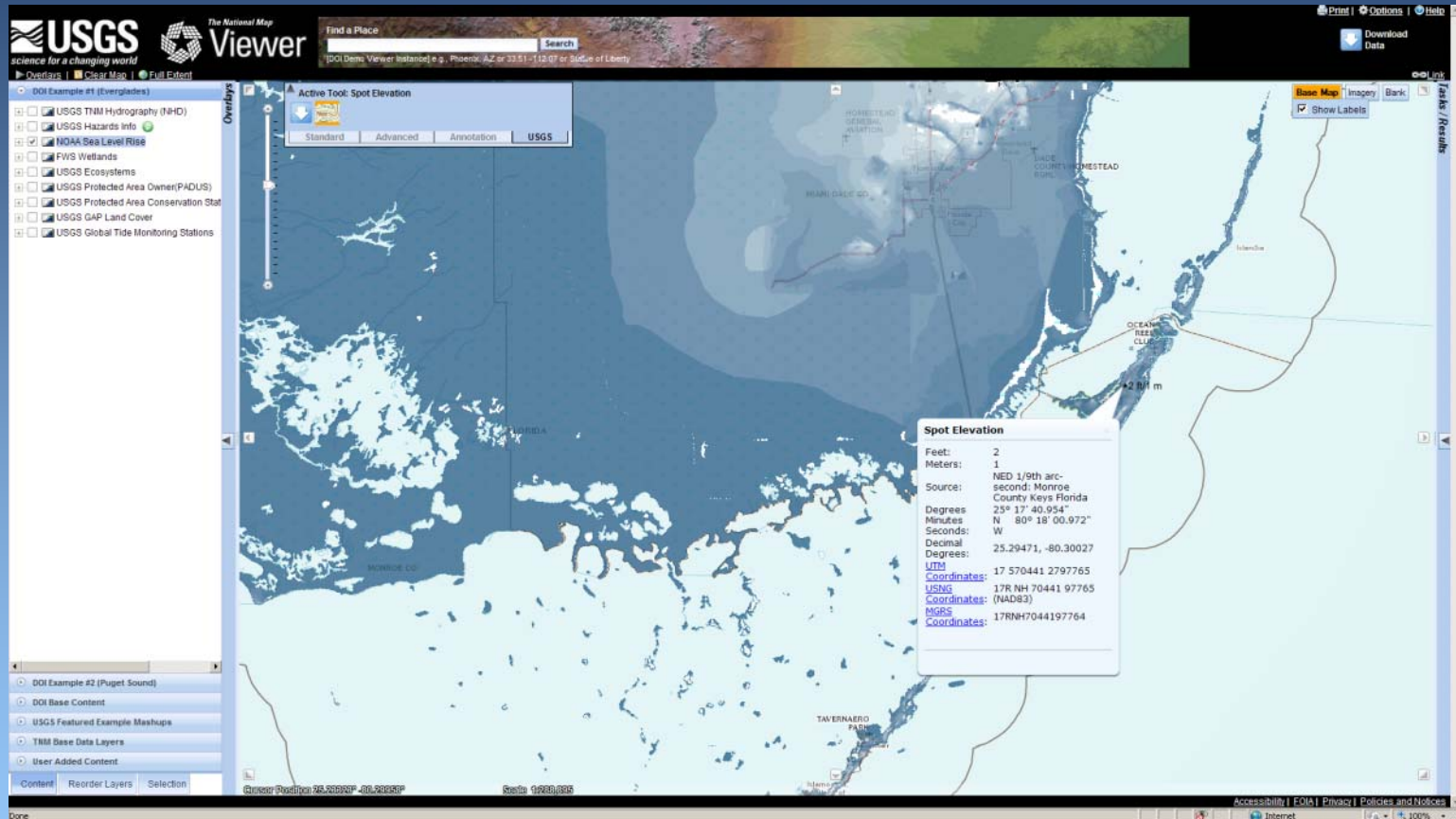
Date	Gage height (feet)
Mar 07 2011	1.65
Mar 08 2011	1.65
Mar 09 2011	1.65
Mar 10 2011	1.65
Mar 11 2011	1.65
Mar 12 2011	1.65
Mar 13 2011	1.65
Mar 14 2011	1.62

----- Provisional Data Subject to Revision -----

Create [presentation-quality](#) / [stand-alone](#) graph. Subscribe to [WaterAlert](#) P00065 DD01

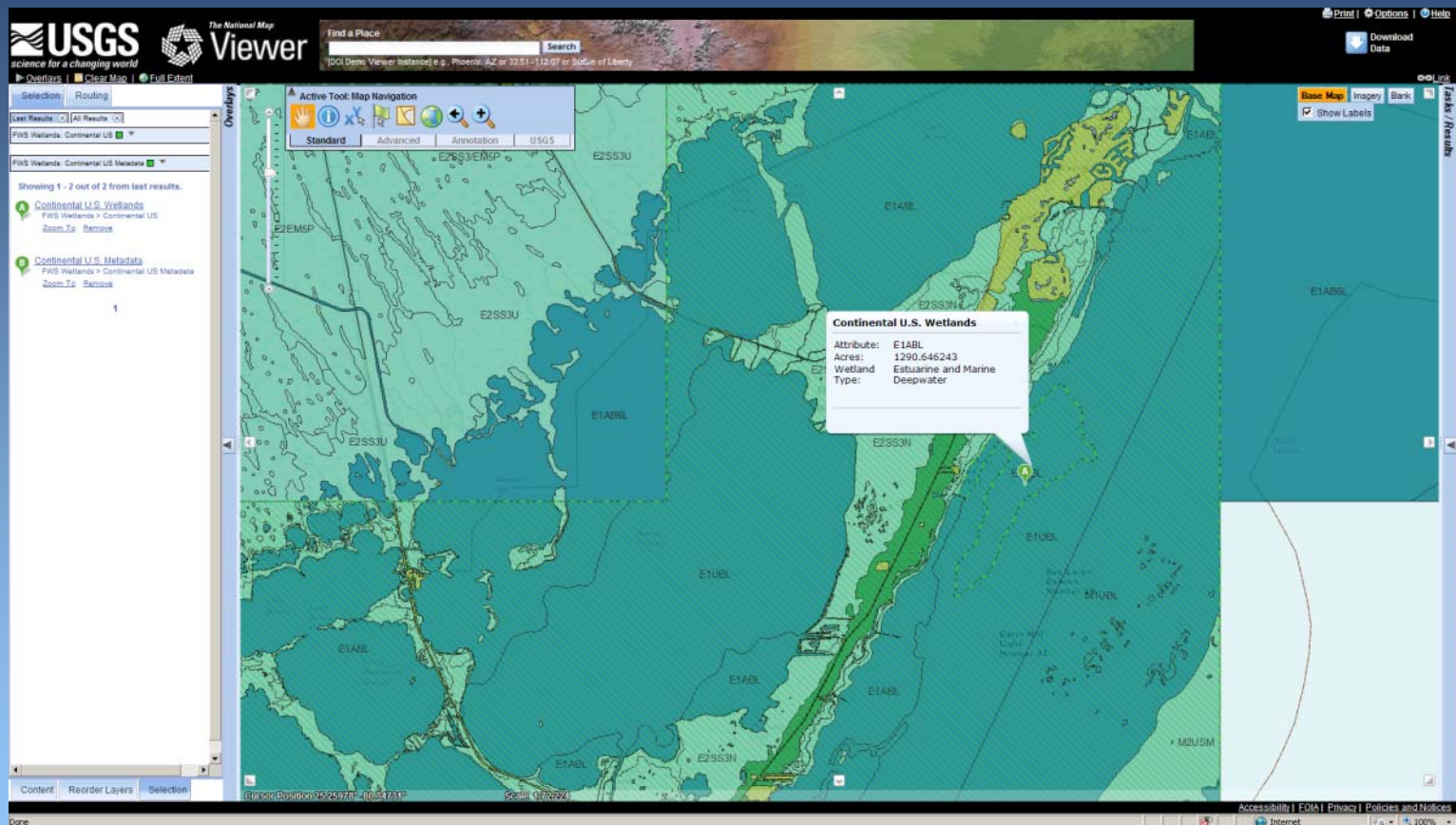
Add other Federal Services

Example: NOAA Sea Level Rise and USGS Spot Elevation Check



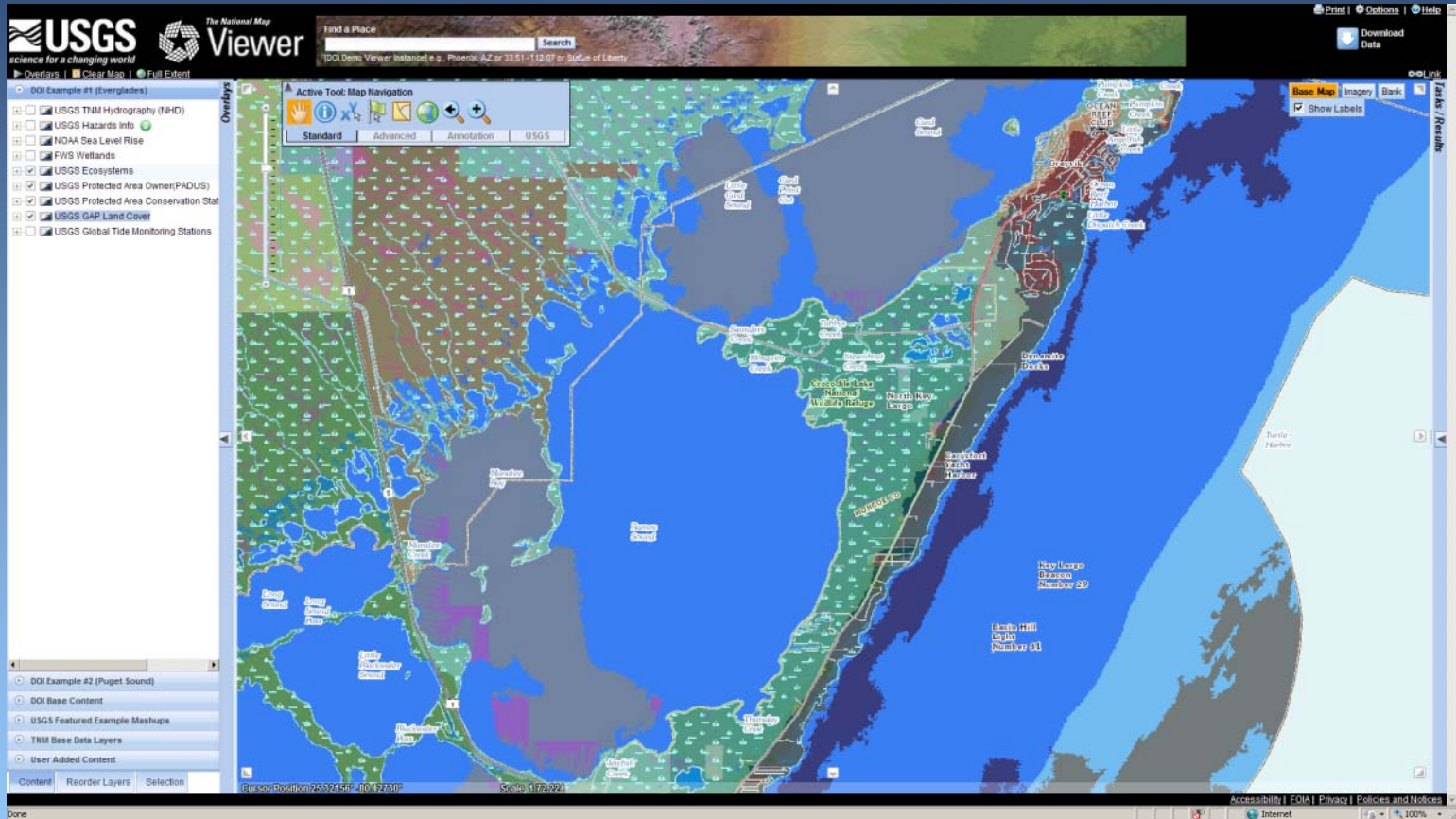
Examine DOI Datasets

Example: FWS Wetland Refuges



Examine USGS Science

Example: USGS Ecosystems, Protected Dataset (PADUS), GAP Land Cover



Many National Datasets

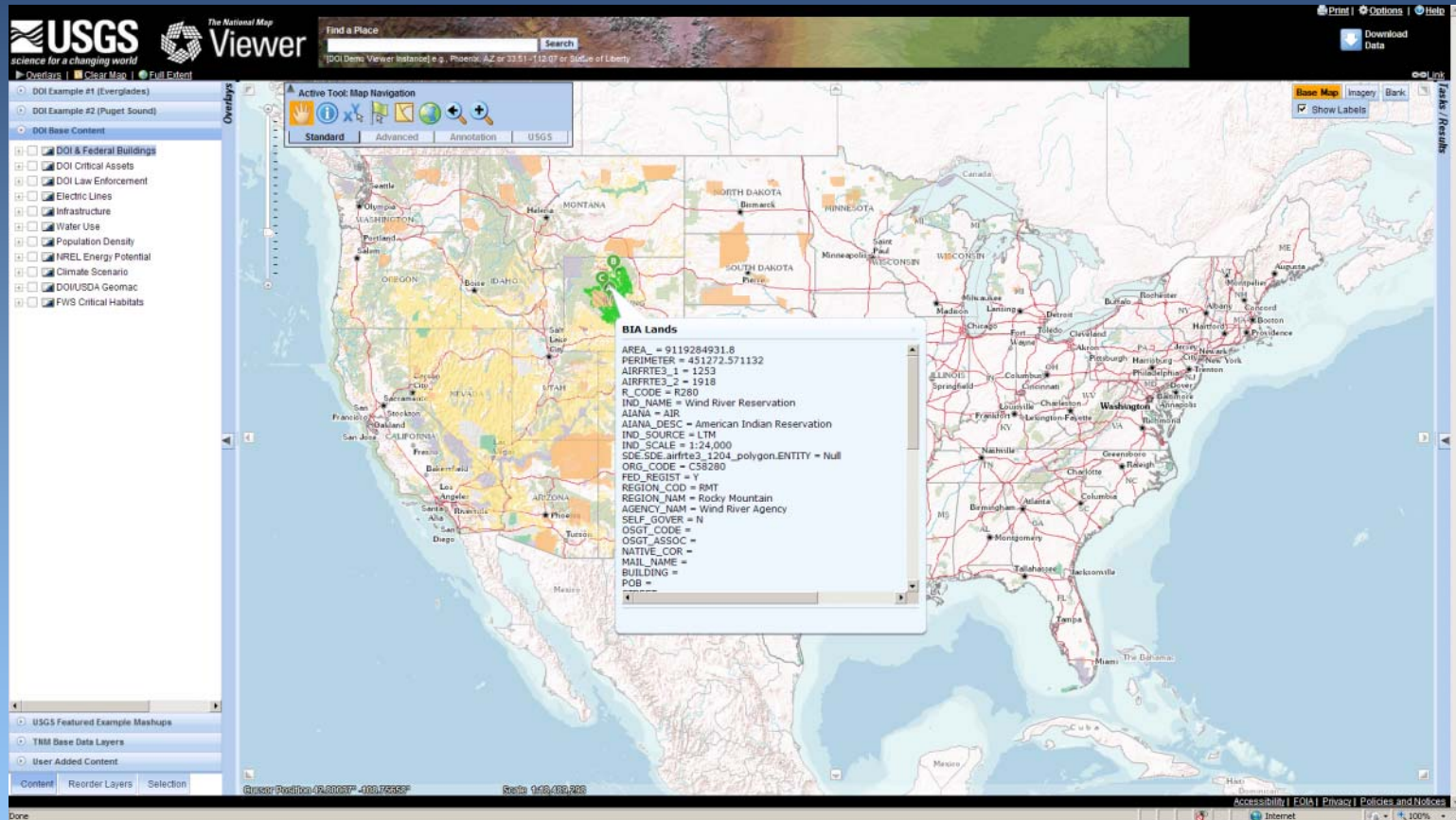
Example: NPS Air Quality Information

The screenshot shows a web browser window with two main content areas. On the left, the USGS National Map Viewer displays a map of the United States with a red outline highlighting the western region. A pop-up window for 'Olympic' provides the following information:

- Unit Code: OLYM
- Network Code: NCCN
- Air Quality: [Click for Detail](#)
- Info: [NPS](#)

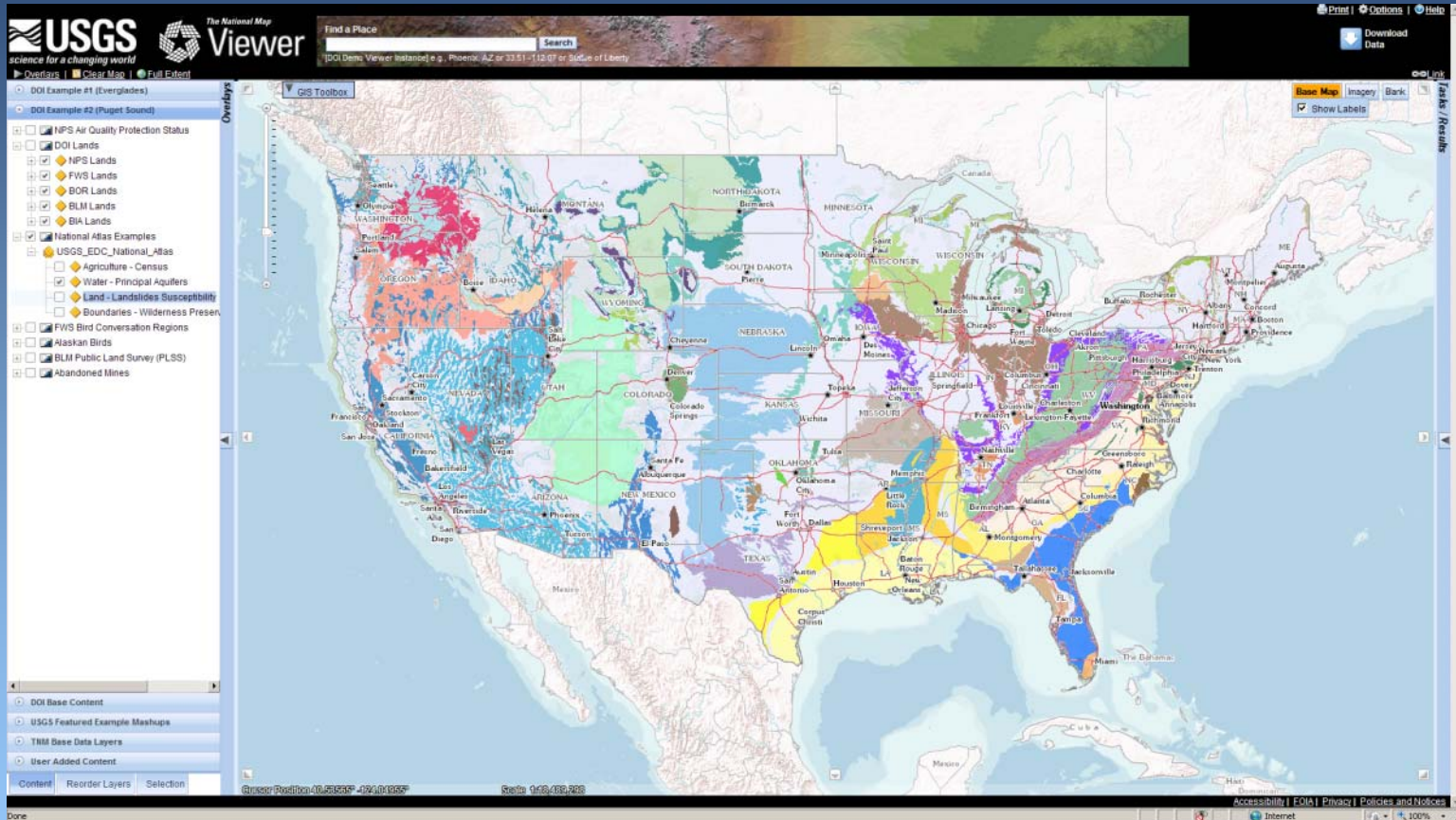
On the right, the National Park Service 'EXPLORE AIR' page for Olympic National Park is displayed. The page includes a navigation menu with categories like 'Nature & Science', 'NPS.gov', 'Explore Nature', and 'Find a Park'. The main content area features a header 'Olympic National Park' with a sub-header 'EXPLORE AIR'. Below this, there are three images showing scenic views of the park, with a caption: 'Air pollutants can affect visibility at Olympic NP, Washington (clear to hazy from left to right)'. A section titled 'What's in the Air?' explains that while air quality is generally good, the east side of the park can be affected by emissions from the Puget Sound area and marine vessel traffic. A map of the Pacific Northwest highlights the location of Olympic National Park. Another section, 'How is air pollution affecting Olympic National Park?', lists that airborne mercury and pesticides deposit on park lands and waters.

Integrate Interior OpsCenter Services (IOC) Example: DOI Lands Small-Scale Snapshot



Integrate National Atlas Services

Example: Water – Principal Aquifers



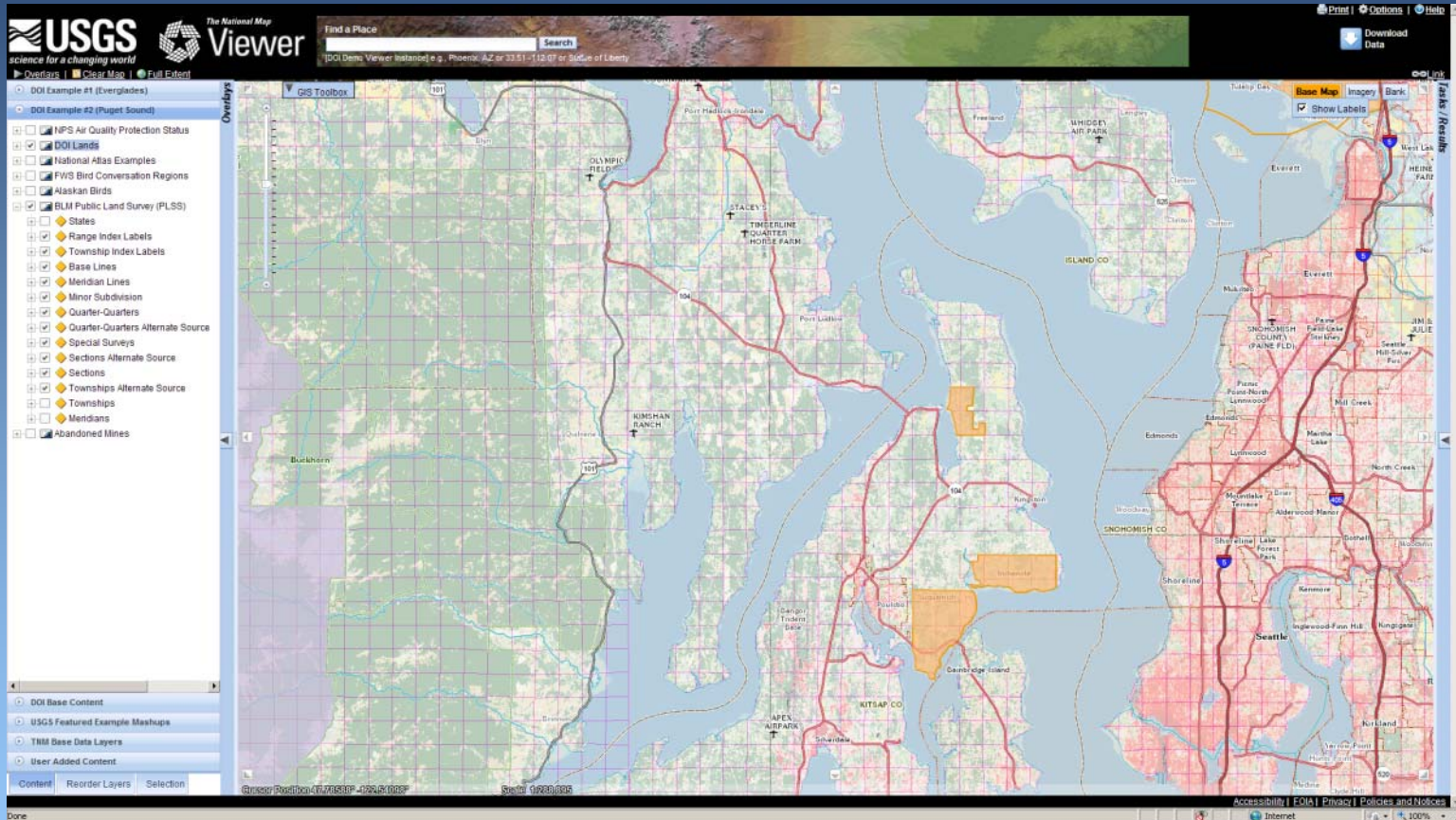
Examine DOI Datasets

Example: FWS Bird Conservation Regions



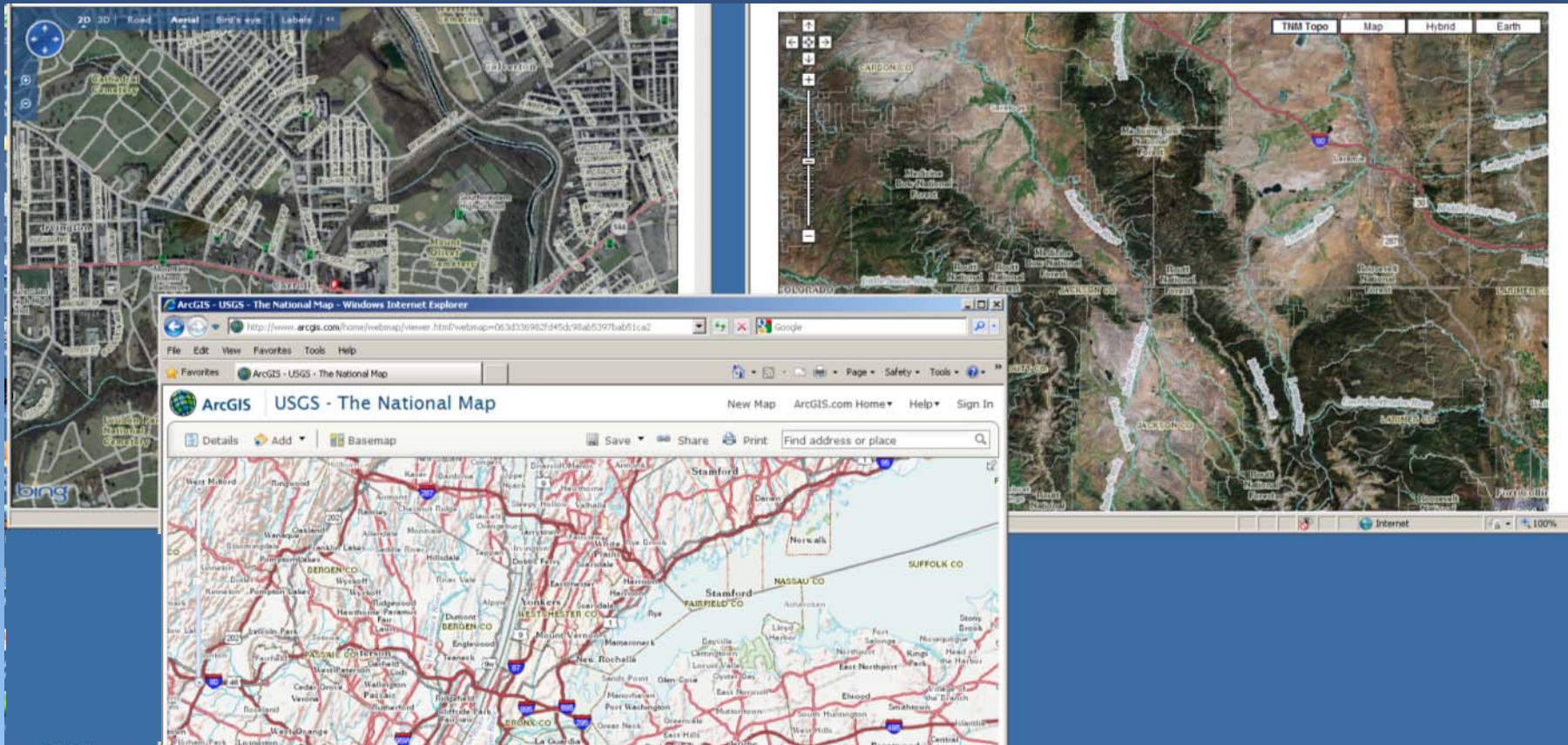
Examine DOI Datasets

Example: BLM Public Land Survey (PLSS)

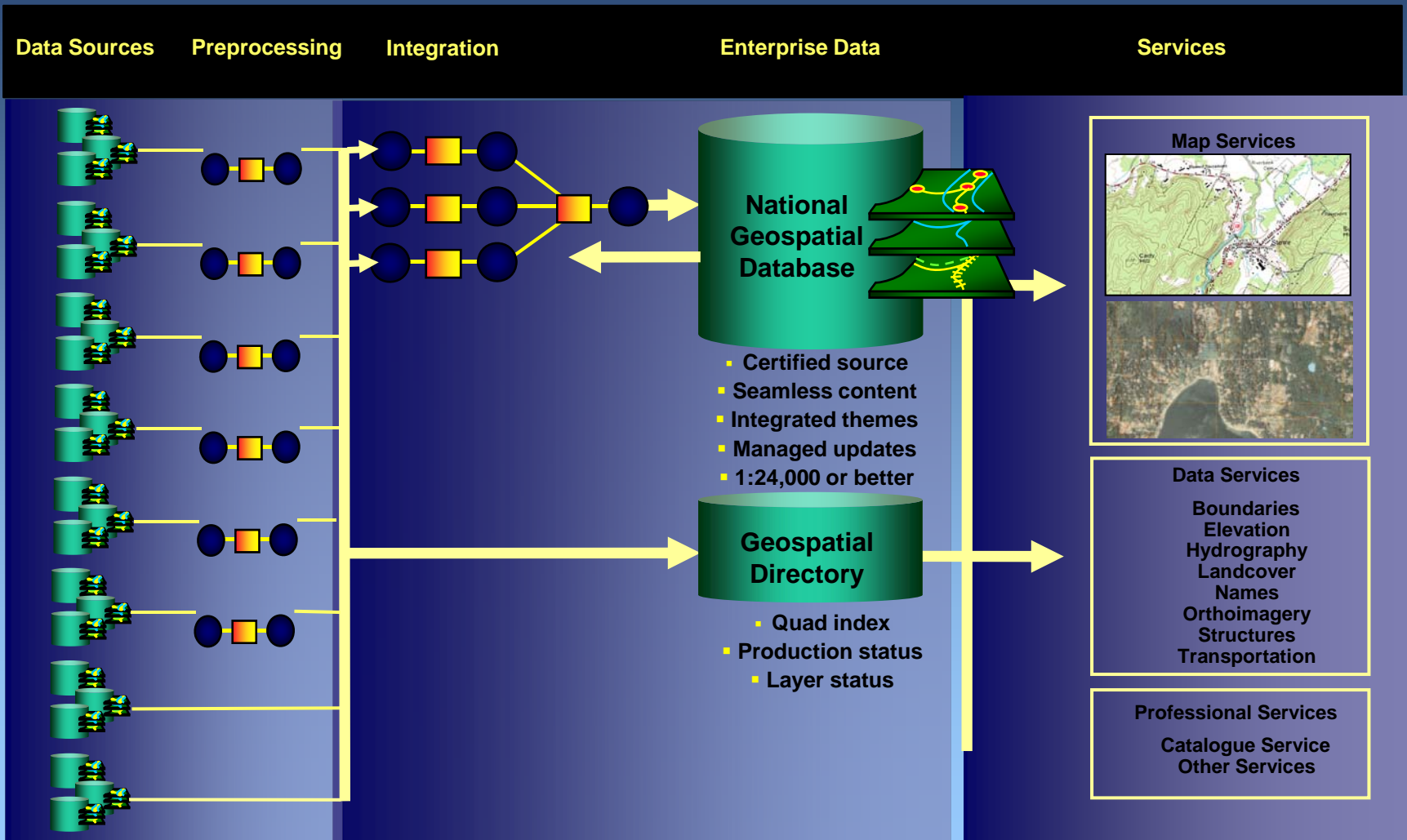


Show Services in any Popular Viewer

Example: Bing Maps, Google Maps, ArcGIS.com

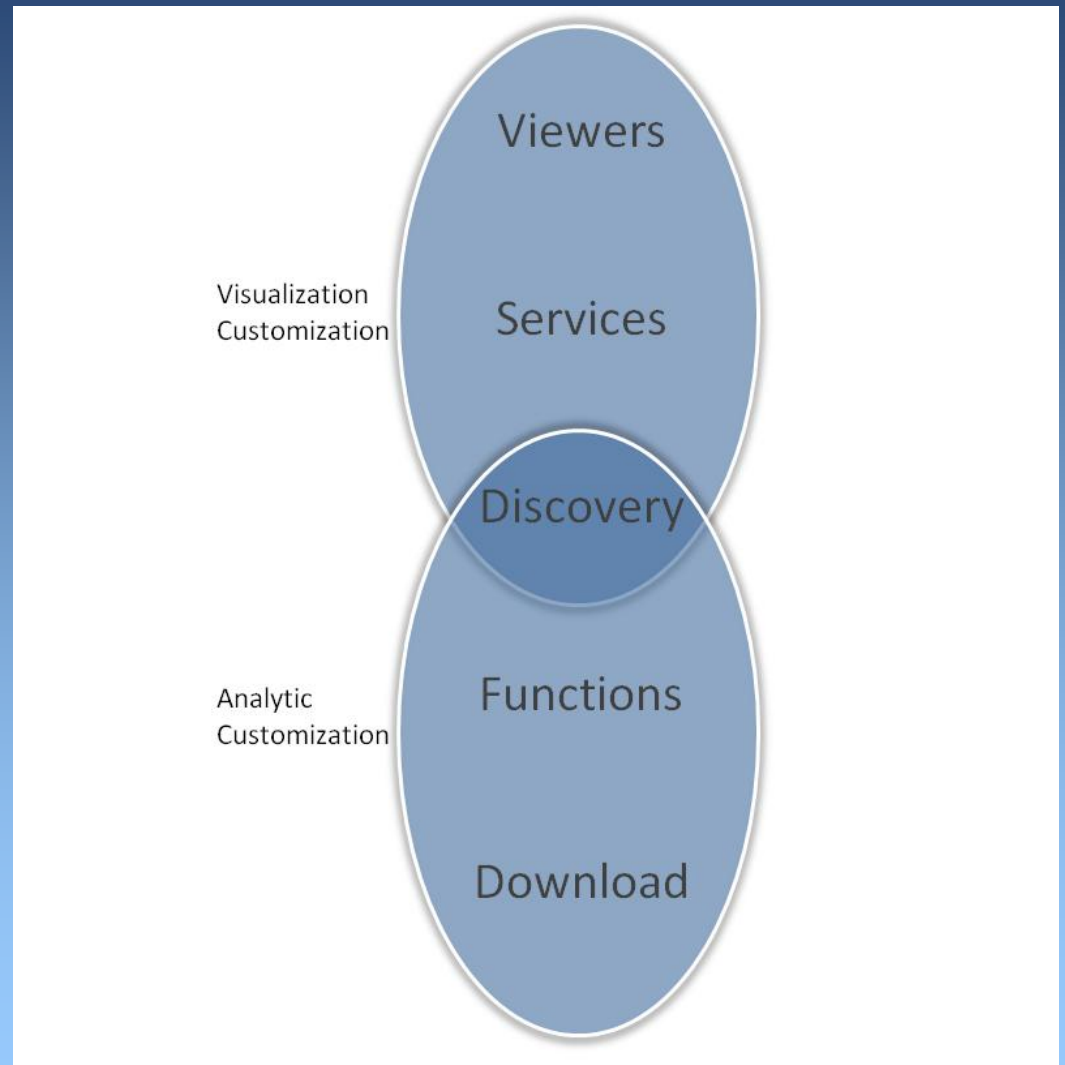


The National Map Information Flow



The National Map Delivery Services

- **The National Map Delivery is more than a viewer – it has 5 tracks supporting visualization and analysis capabilities**



Demo




USGS Home
Contact USGS
Search USGS

The National Map

- [The National Map Home](#)
- [US Topo](#)
- [National Map Viewers](#)
- [Products and Services](#)
- [Partnerships](#)
- [Reading Room](#)
- [News & Events](#)
- [The National Map Corps](#)
- [National Geospatial Program](#)
- [History of USGS Topographic Maps](#)
- [A Celebration of 125 Years of Topographic Mapping](#)

New National Map Viewer and Download Platform



- Fast Base Map
- 100% National Map Content
- One-stop to Download National Map Data
- Direct Access to US Topo
- Use National Map Services in other viewers - or add services to make your own view

[Click here to go to the Viewer](#)

Managed by the National Geospatial Program (NGP), TNM 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.

[Click Here to Open Viewer](#)

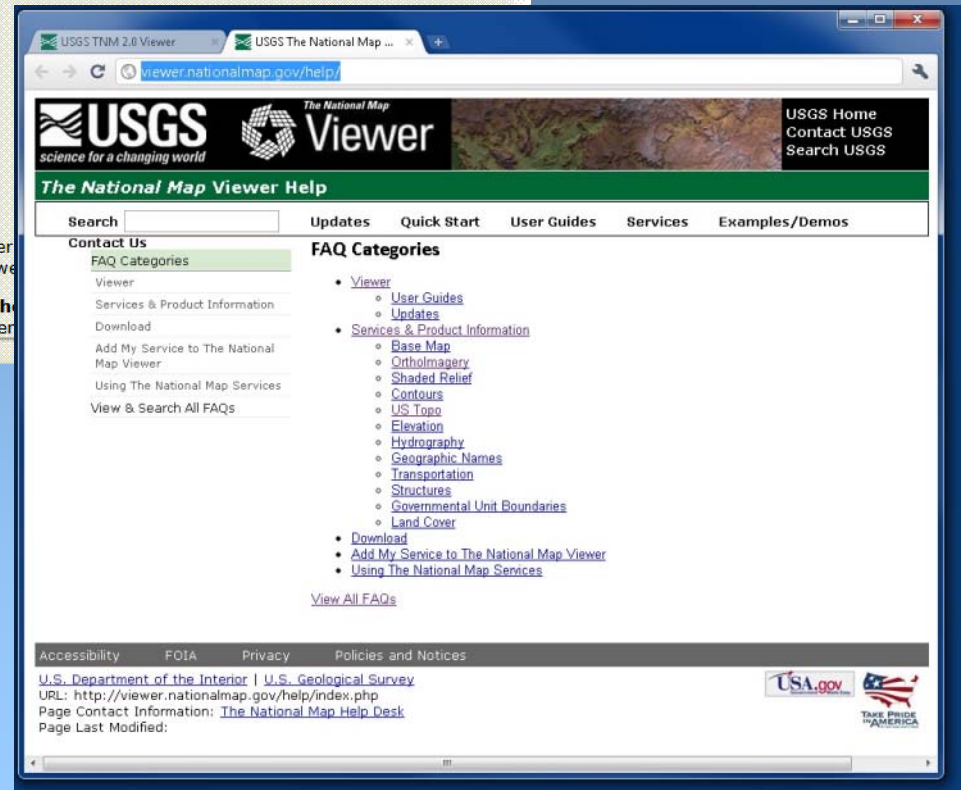
[Help](#) - QuickStart, Frequently Asked Questions (FAQs), Contact Us

Can't see Flash?
Install [Flash Player](#) or view [text version](#).
Recommended Browsers:
[Firefox](#) - [Chrome](#) - [Internet Explorer 7 or higher](#)

Legacy National Map Viewers

The National Map is constantly evolving to incorporate newer capabilities of these viewers will be replaced in the new viewer

All National Map products can now be downloaded via the noted, legacy viewers below will remain active through the end



USGS TNM 2.0 Viewer | USGS The National Map ...

viewer.nationalmap.gov/help/

USGS *science for a changing world* **The National Map Viewer**

The National Map Viewer Help

Search Updates Quick Start User Guides Services Examples/Demos

Contact Us

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- [Services & Product Information](#)
- [Download](#)
- [Add My Service to The National Map Viewer](#)
- [Using The National Map Services](#)
- [View & Search All FAQs](#)

FAQ Categories

- [Viewer](#)
 - [User Guides](#)
 - [Updates](#)
- [Services & Product Information](#)
 - [Base Map](#)
 - [Orthoimagery](#)
 - [Shaded Relief](#)
 - [Contours](#)
 - [US Topo](#)
 - [Elevation](#)
 - [Hydrography](#)
 - [Geographic Names](#)
 - [Transportation](#)
 - [Structures](#)
 - [Governmental Unit Boundaries](#)
 - [Land Cover](#)
- [Download](#)
- [Add My Service to The National Map Viewer](#)
- [Using The National Map Services](#)

[View All FAQs](#)

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey
 URL: <http://viewer.nationalmap.gov/help/index.php>
 Page Contact Information: [The National Map Help Desk](#)
 Page Last Modified:

USA.gov TAKE PRIDE IN AMERICA



Demo Training Time

Using

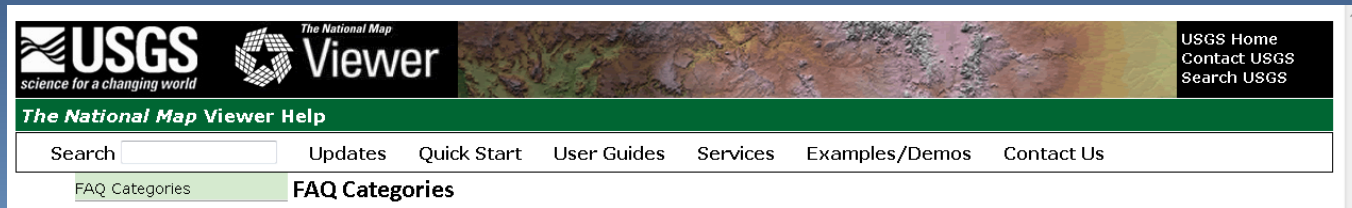
The National Map Services, Viewer Demo,
Download, and CDI Examples

Getting Started

- Today:
 - Review QuickStart Guide
 - Review Download Guide
- Using Firefox, Chrome, or IE - Open
 - Help Page - <http://viewer.nationalmap.gov/help>
 - Viewer - <http://viewer.nationalmap.gov/>

First Off, the help age

- Linked at top of help page



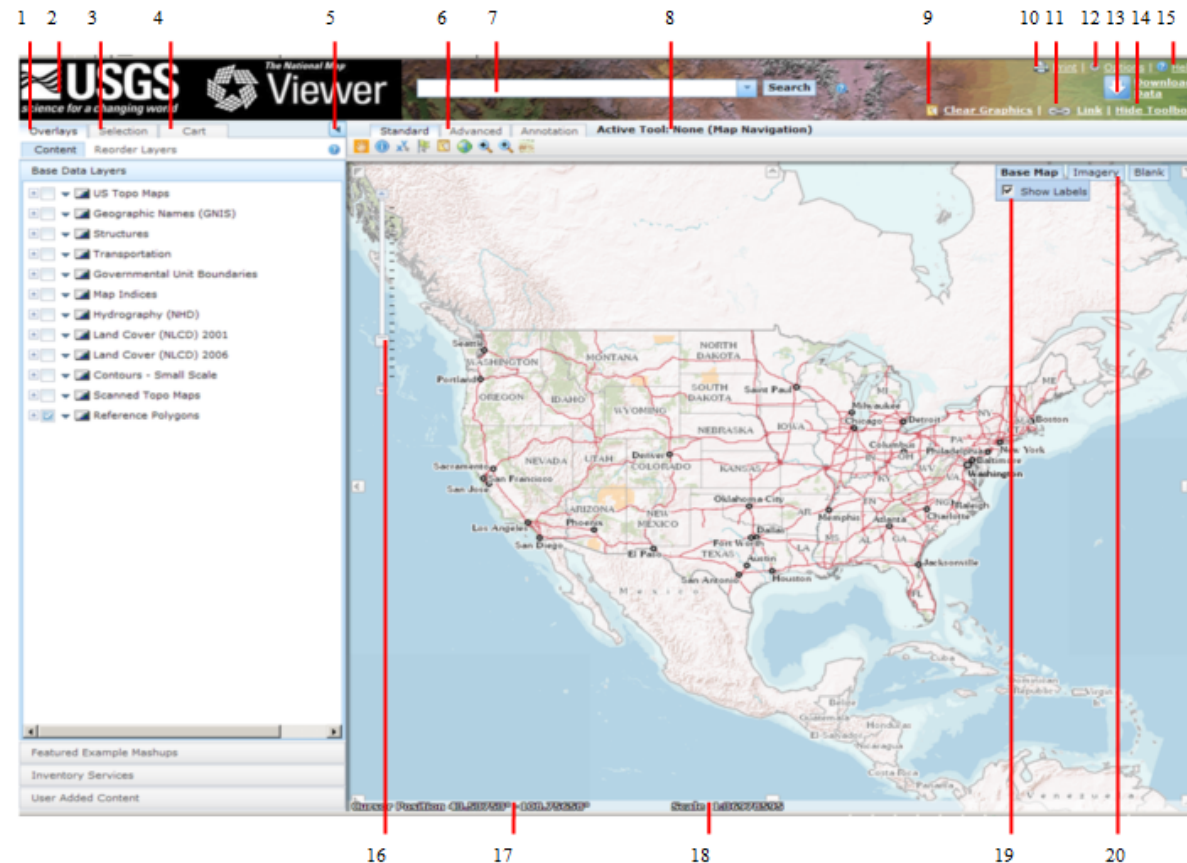
- Searchable FAQs
 - Titles (or the questions) are what is searched on currently

Open the QuickStart Guide

The National Map Viewer Quick-Start Guide

This document provides an overview of the interface and a quick description of some of the tools included in the National Map Viewer

User Interface



Roadmap

- **Remainder of 2011**
 - **Initiate creation new composite maps**
 - **Begin releasing High Quality Scans of Historical Maps**
 - **Download Enhancements**
 - **Names**
 - **Map Indices**
 - **Contours**

Roadmap

Next Year FY12

- **Hosting staged products on public cloud**
- **Web Feature Services (WFS)**
- **Web Coverage Services (WCS) (ArcGIS 10.1)**
- **Building 4 composite basemaps.**
- **Make easy to use our services in, and switch over to, any viewer**
- **Make finding TNM product anywhere easier (in search engines, other viewers, etc.).**
- **Beyond – Blueprinting to NGP Strategy**