

U.S. National Spatial Data Infrastructure

**Evolving From Vision to
Geospatial One Stop ...
And Beyond**

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Chile GIS Conference

May 11, 2004

The Power of Information

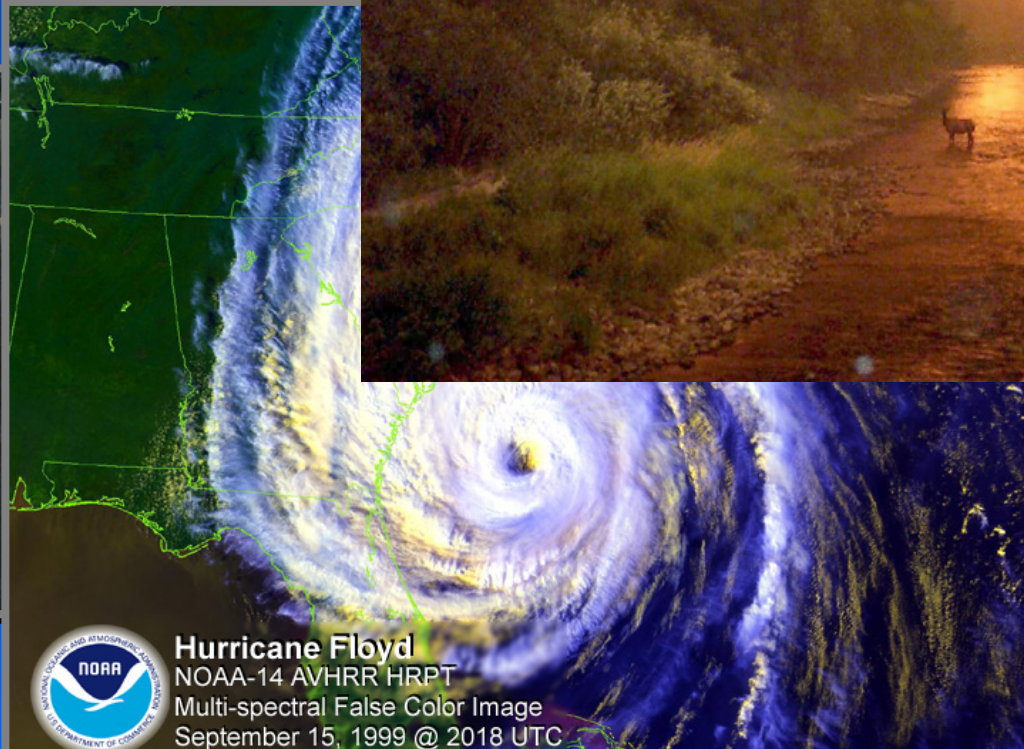
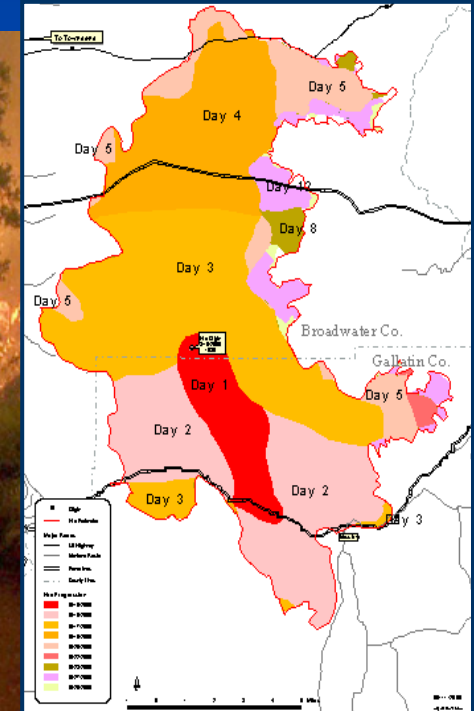
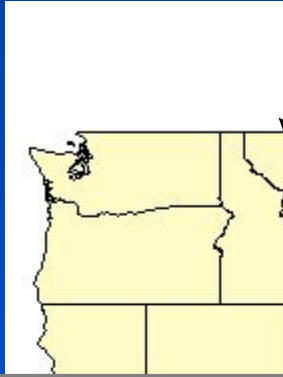
- Government programs have a wealth of information - Asset
- Displaying information geographically transforms it into a strategic asset
- Virtually all government information is geographic

Business of Government

- Reducing crime
- Enhancing public safety
- Transportation planning
- Managing growth
- Providing social services
- Protecting the environment

All these activities occur in places, they cross government boundaries, and they affect communities.

Issues Affecting Citizens - Happen in Places



Hurricane Floyd
NOAA-14 AVHRR HRPT
Multi-spectral False Color Image
September 15, 1999 @ 2018 UTC



Genesis of the US National Spatial Data Infrastructure

- 1989-90 Federal Geographic Data Committee Formed
- Agency Guidance (OMB Circular A-16) already in place
- Federal distribution policy in place
- 1994 - National Spatial Data Infrastructure formed by Presidential Executive Order 12906
 - ‘...coordinating geographic data acquisition and access....’
 - Identifies the NSDI as a Presidential mandate

Create a National Spatial Data Infrastructure (NSDI)

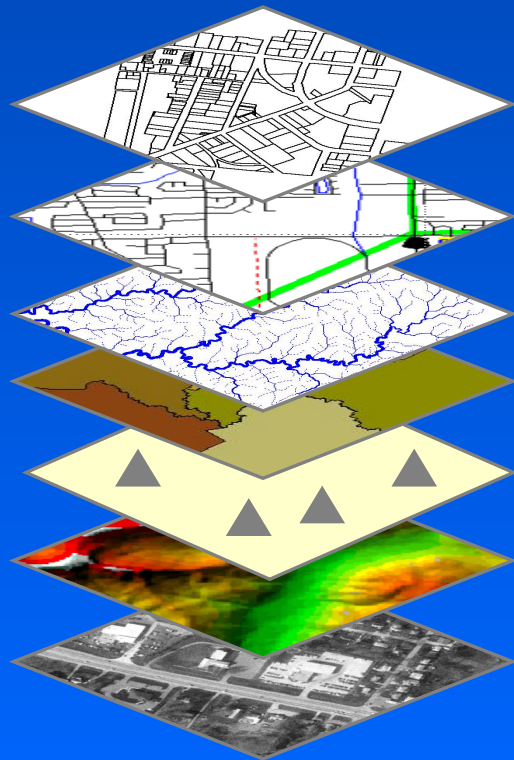
To encourage the collection, processing, archiving, integration, and sharing of geospatial data and information using **common standards** and **interoperable systems and techniques**

..... and accessible **via the web**

Relationships Among Data

Build Once, Use Many Times

Framework Data



Land Ownership

Transportation

Surface Waters

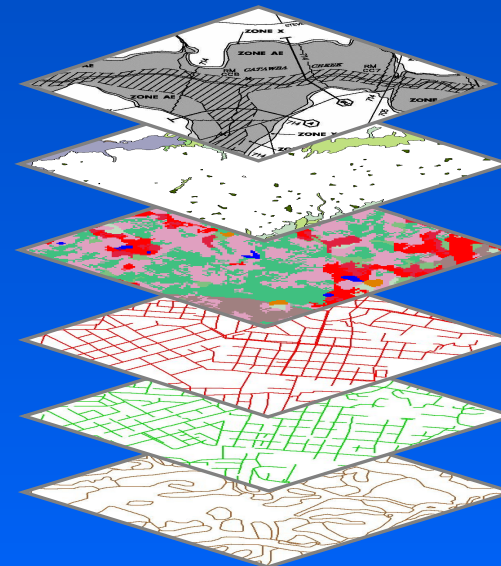
Boundaries

Geodetic Control

Elevation

Aerial Imagery

Other Thematic Data



Flood Zones

Demographics

Landcover

Water Lines

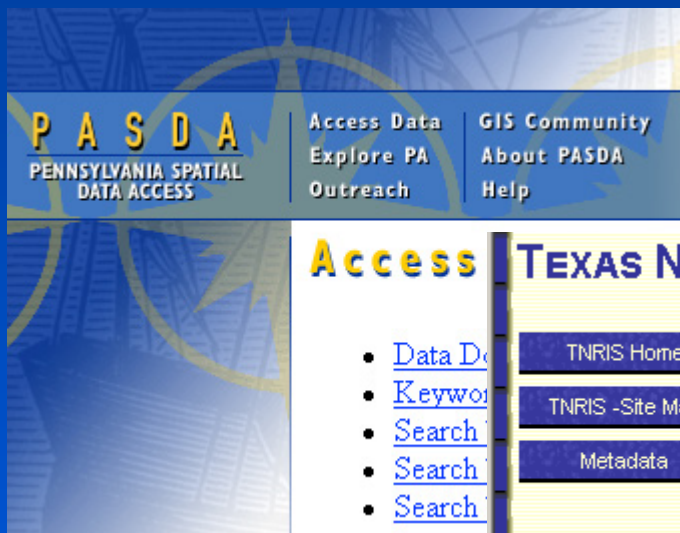
Sewer Lines

Soils

The FGDC facilitates the NSDI

- Federal – 19 cabinet level agencies & offices
- Many states, regional, & local governments
- Private sector
- NGOs
- Theme coordination committees - 13
- Working groups - 8

Geospatial Information



PASDA
PENNSYLVANIA SPATIAL
DATA ACCESS

Access Data
Explore PA
Outreach

GIS Community
About PASDA
Help

Access

- [Data Download](#)
- [Keyword Search](#)
- [Search](#)
- [Search](#)
- [Search](#)



California

The California Spatial Information Library



TEXAS NATURAL RESOURCES INFORMATION SYSTEM

TNRIS Home	News	Digital Data	Ordering	Research
TNRIS -Site Map	Information Services	StratMap	Border Center	Educational
Metadata	Links	About TNRIS	TNRIS - Hurricane Bret	

Welcome to TNRIS'
New Data Distribution System



Wisconsin Land Information Clearinghouse

<http://wisclinc.state.wi.us/>



njhome | business | government | state services A to Z | departments

njgin
new jersey geographic information network

Explorer > help Applications Data Maps/Documents

... is all over the map!!

Evolution within the Federal Government

- A-16 modified in 2002

www.whitehouse.gov/omb/circulars/a016/a016_rev

- Requires each department to:

- Inventory its geospatial information

- Identify how much effort to manage

- How it is complying with NSDI requirements

- Creation of Geospatial One Stop

Geospatial One Stop

Purpose of the project:

- Making it:
 - Easier
 - Faster
 - Less expensive

For all levels of government and the public to access geospatial information.

What is Geospatial One Stop?

- **E-Government Initiative**
 - The geographic component of the President's Management Agenda
 - OMB oversight
- **Focus is on partnerships, Portal, promoting standards – Implementing the NSDI**
- **National initiative, not just federal**
 - Intergovernmental Board of Directors

Geospatial One Stop

- **Raises the visibility and strategic value of geographic information.**
- **Increases federal agency accountability for the stewardship and sharing of geospatial resources.**
- **Establishes a collaborative model for directing an intergovernmental initiative.**

geodata.gov

The Government Portal For Geospatial Access

- Metadata Publishing
- Documentation and Organization
- Discovery and Access

The screenshot shows the geodata.gov website. The header features the logo "geodata.gov" with the tagline "your one stop for federal, state & local geographic data" and a background image of the Statue of Liberty and the Golden Gate Bridge. The main content area is divided into two columns. The left column contains a "Make a Map" section with a "Launch" button and a map of the United States, followed by a "Search for Data" section with a search bar and links for "About This Site", "Help", "The geodata.gov Marketplace", "Information Center", "Publish Data", "Login", and "What's New". The right column contains a paragraph about the Geospatial One-Stop E-Gov initiative, a section for finding data with specific criteria, and a "Featured channel" for the Lewis & Clark Bicentennial Commemoration. Below this is a list of "Data Categories" with arrows pointing to various topics. At the bottom, there is a link to "Learn About Specific Applications Areas".

geodata.gov
your one stop for federal, state & local geographic data

Make a Map
Launch
The Amazon River

Search for Data
Search all the data in the site

About This Site
How to find the maps & data you need and how to publish your data here.
GDS Partnerships

Help
Quick Start Guide
How Do I Publish Data Collection Activities
Contact Us

The geodata.gov Marketplace
Find out about the latest geographic data sharing and acquisition initiatives.

Information Center
Standards, tools, and resources

Publish Data
Login

What's New
Latest events

Geodata.gov is part of the [Geospatial One-Stop E-Gov initiative](#) providing access to geospatial data and information. For help use the [Quick Start Guide](#).

To find geospatial data that meets your specific criteria:
Select "Search all data in this site", in left column,
-- OR --
For quick access to featured geospatial resources by subject:
Click on one of the Categories below.

Featured channel: Lewis & Clark Bicentennial Commemoration

Data Categories

- Administrative and Political Boundaries
- Agriculture and Farming
- Atmosphere and Climatic
- Biology and Ecology
- Business and Economic
- Cadastral
- Cultural, Society, and Demographic
- Elevation and Derived Products
- Environment and Conservation
- Geological and Geophysical
- Human Health and Disease
- Imagery and Base Maps
- Inland Water Resources
- Locations and Geodetic Networks
- Oceans and Estuaries
- Transportation Networks
- Utilities and Communication

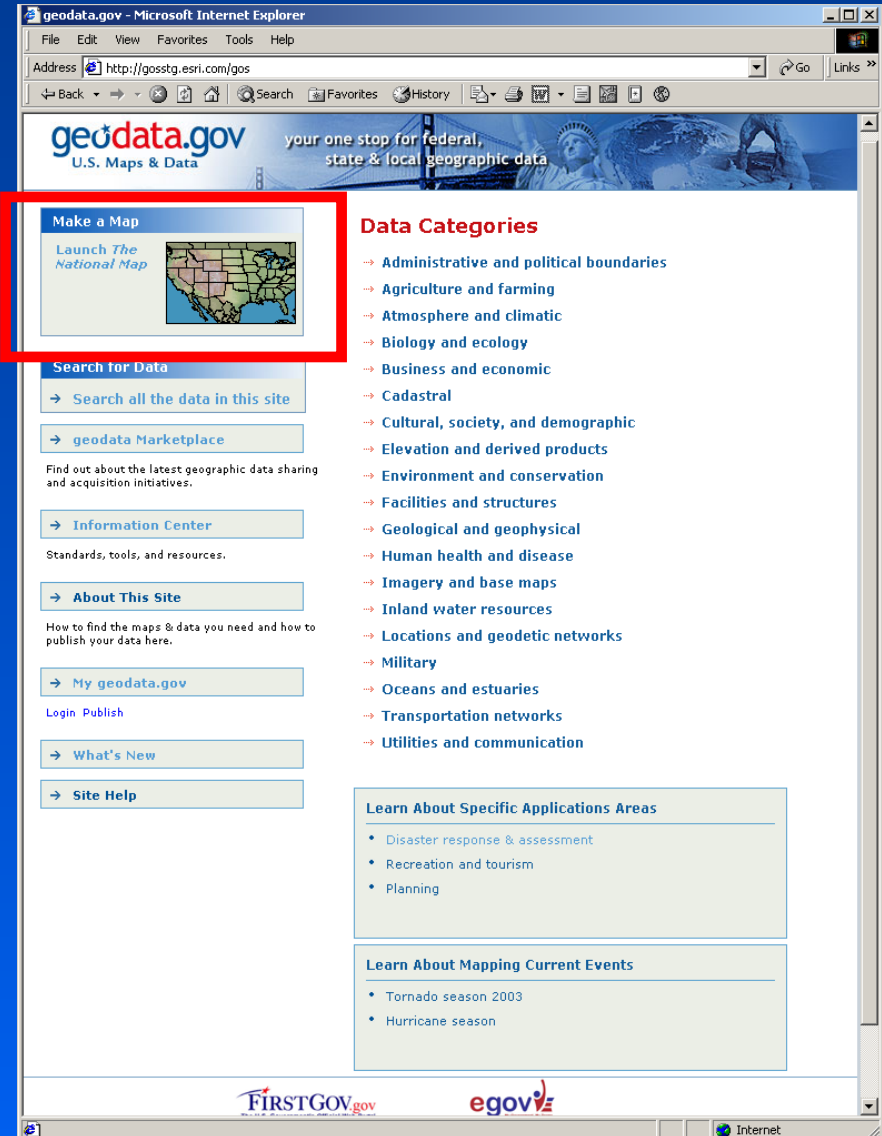
[Learn About Specific Applications Areas](#)

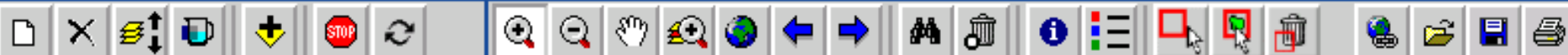
...the directory for NSDI

View Data

View The National Map and:

- Browse other datasets
- Query map data
- Interact with multiple WMS and IMS services
 - overlay maps services
 - set transparency levels
 - save maps for later use

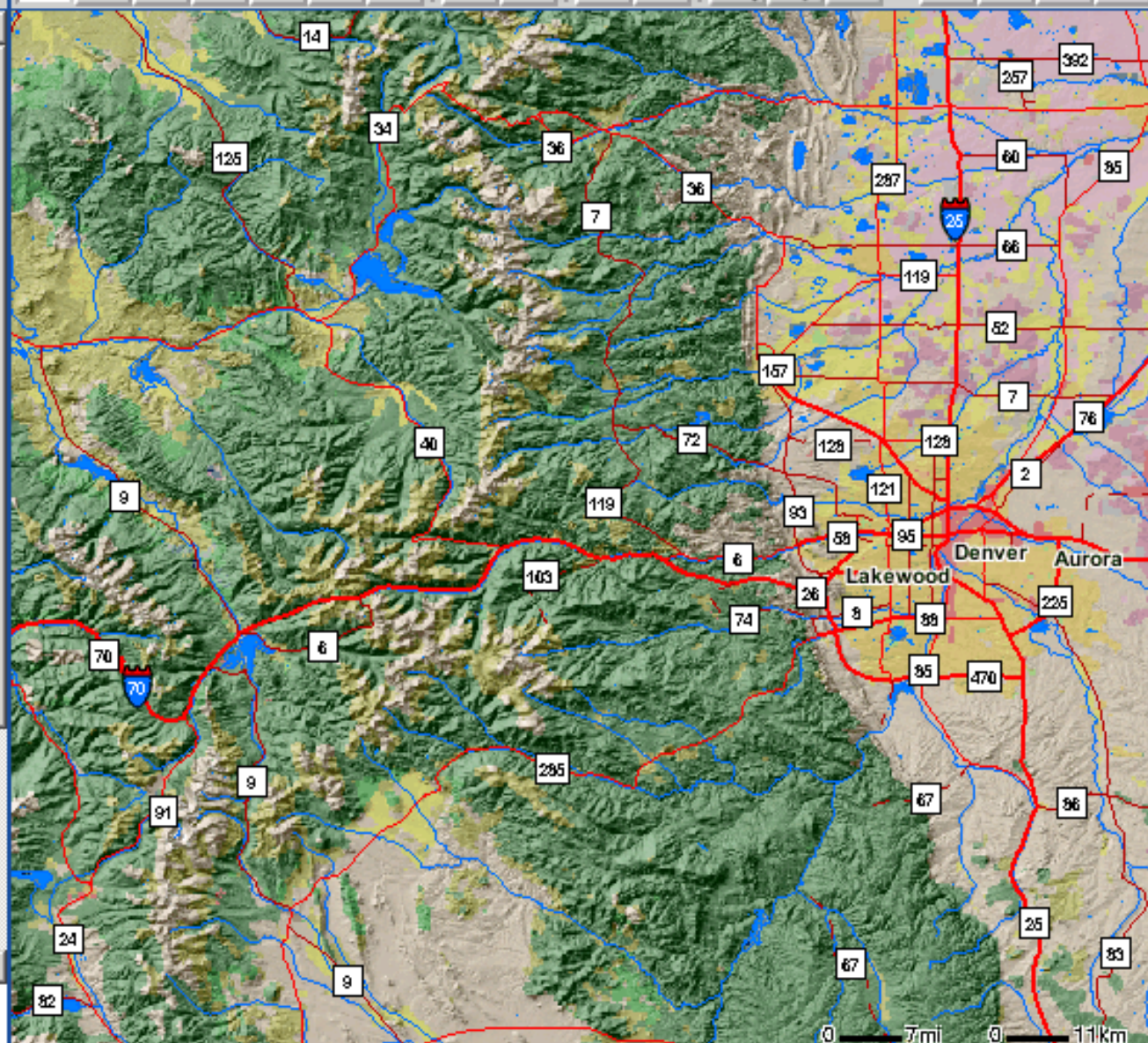


☒ **The_National_Map**

- ☐ Geographic Names (point)
- ☒ Geographic Names 100K
- ☒ Hi-Res Ortho Index
- ☐ County Labels
- ☐ Counties 2M
- ☐ State Labels
- ☒ States 2M
- ☒ Road Labels Atlas-2M
- ☒ Interstate Labels
- ☒ Roads Atlas-2M
- ☒ Streams-2M
- ☒ Waterbodies
- ☐ LANDSAT7
- ☐ National Land Cover Dataset
- ☒ National Land Cover Dataset (transparent)
- ☒ National Elevation

REFRESH MAP

LEGEND



Cadastral

Open category:

Cadastral

Primary Data

→ Other Resources

→ About this Category

→ Help

Search for more primary data like this:

→ Any level

→ Federal

→ State

→ County

→ Local

→ Tribal

→ Commercial

→ Organization

→ University

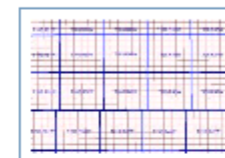
Introduction

The Cadastral category page provides a listing of the most relevant metadata records of information pertaining to interests in real property or used in planning and development efforts.

Primary Data & Maps

Land Survey Information System Map Service

Content Summary: The Land Survey Information spatial data layer is based on BLM's Geographic Coordinate Data Base (GCDB) coordinate data. The locations of Public Land Survey System (PLSS) corners, as represented in geographic coordinate pairs, were derived from a variety of source documents, which include U.S. General Land Office and BLM survey plats/notes, as well as survey data obtained from other U.S. Government agencies, private sector survey firms, and local governments.



Content Purpose: The Land Survey Information System (LSIS) data is a useful representation of the geometry and topology of parcels contained within the PLSS, but its application is intended for mapping purposes only. The GCDB data served from LSIS is not a substitute for a legal land survey.

Publisher: Bureau of Land Management

Rating: Unknown

Content Type: Live data & maps (ArcIMS Image Service)

VIEW MAP

VIEW DETAILS

GeoCommunicator

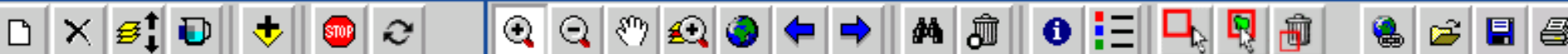
Content Summary: GeoCommunicator is a Geography Network channel focused on data and activities for users and data providers with a common interest in land management in the United States.

Content Purpose: GeoCommunicator uses the Internet to deliver maps, geographic activities, map services, planned surveys, and potential cost sharing partners to individual user browsers and desktops, allowing data providers, service providers and users throughout the United States to share land-based information.

Publisher: Bureau of Land Management

Rating: Primary

Content Type: Live data & maps (ArcIMS Feature Service)

☒ **BLM_L SIS**

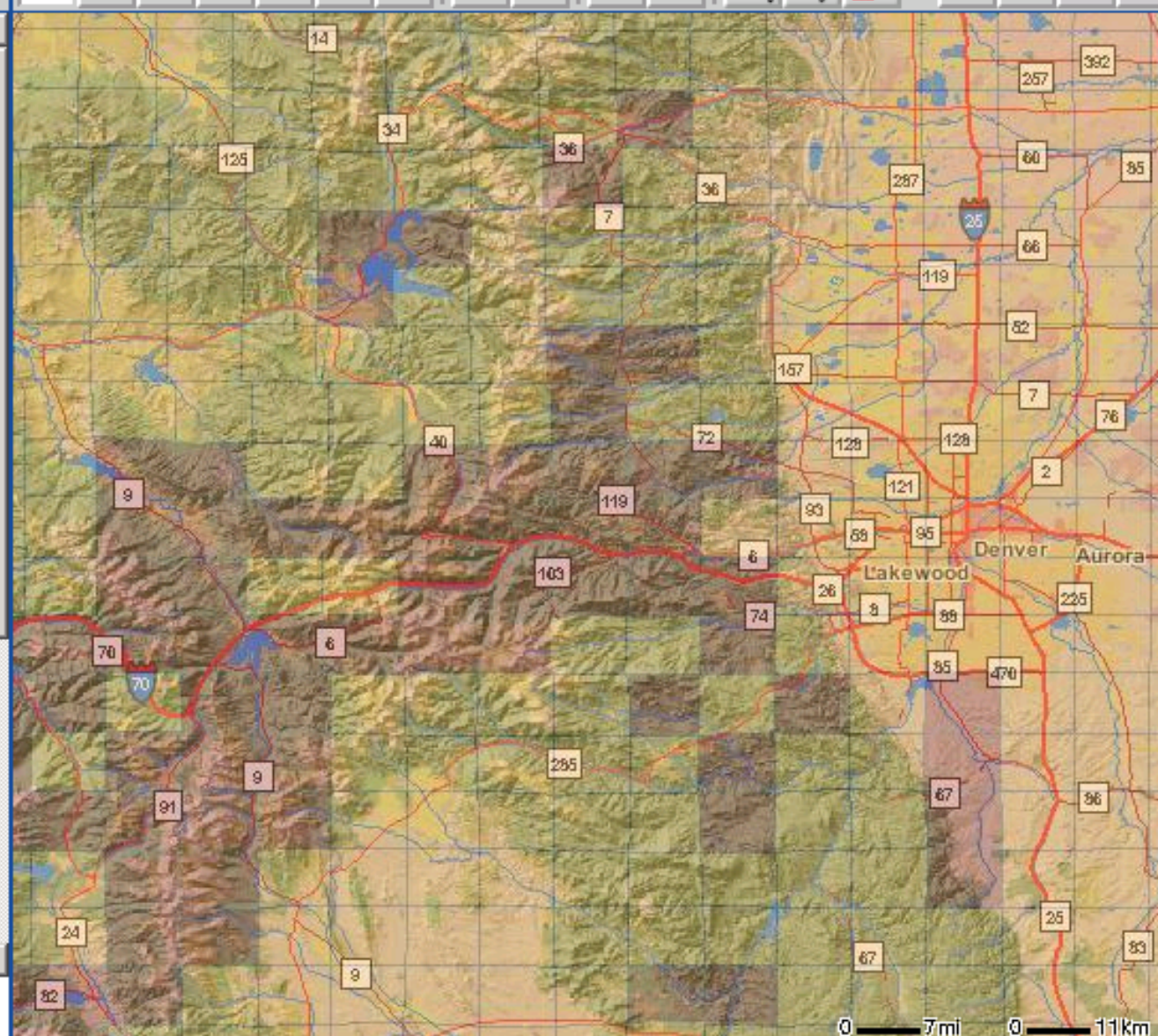
- ☒ Township Boundaries (overview)
- ☒ BLM Availability

☒ **The_National_Map**

- ☐ Geographic Names (point)
- ☒ Geographic Names 100K
- ☒ Hi-Res Ortho Index
- ☐ County Labels
- ☐ Counties 2M
- ☐ State Labels
- ☒ States 2M
- ☒ Road Labels Atlas-2M
- ☒ Interstate Labels
- ☒ Roads Atlas-2M
- ☒ Streams-2M
- ☒ Waterbodies
- ☐ LANDSAT7
- ☐ National Land Cover

REFRESH MAP

LEGEND



Search for Data

Three search criteria
are available for input:

1. Where?

2. What?

3. When?

Search Results →

The screenshot displays the geodata.gov search interface. The top navigation bar includes links for Home, Search, About This Site, The geodata.gov Marketplace, Information Center, and Map Viewer. The main search area is divided into three sections, each highlighted with a red circle: 'Where?' (location), 'What?' (keywords), and 'When?' (time period). The 'Where?' section includes a map of the United States and a search box. The 'What?' section includes a search box with the text 'delaware' and radio buttons for 'Exact phrase', 'Any word', and 'All words'. The 'When?' section includes radio buttons for 'Data for time period' and 'Data updated recently'. Below the search criteria, there are buttons for 'LAUNCH MAP VIEWER TO DRAW BOX' and 'GET BOX ALREADY DRAWN ON VIEWER'. The search results section shows 'Records Found: 19' and a list of results with details such as 'Content Title', 'Publisher', 'Rating', 'Provider Level', 'Coverage Area', 'Content Type', and 'Latest Status'. A red arrow points from the 'Search Results' text to the results section.

geodata.gov Home | Search | About This Site | The geodata.gov Marketplace | Information Center | Map Viewer

Search

Where? What? When?

Anywhere Or FIND A PLACE...

Or, locate your area here

delaware

Match:

☐ Exact phrase

☐ Any word

☐ All words

Data Category: Any

Rating: Any

Provider Level: State

Scale/Coverage:

☐ Data must fall completely inside area

LAUNCH MAP VIEWER TO DRAW BOX

GET BOX ALREADY DRAWN ON VIEWER

Sort results

RESET LOAD A SAVED SEARCH...

Home | Search | About This Site

This is a U.S. Government Computer System. Please

geodata.gov Home | Search | About This Site | GeoData Market Place | Information Center | Map Viewer

Search Results

Records Found: 19 REFINER SEARCH CRITERIA

Where: Anywhere

What: Match exact phrase = Kentucky

When: Anytime

Currently displaying records 1 - 10 of 19

Pages 1 2 next

Live data & maps

Content Title: Kentucky Water Management Planning

Publisher: WRIIS

Rating: Unknown

Provider Level: Unknown

Coverage Area: Kentucky

Content Type: Live data & maps (ArcIMS Image Service)

Latest Status: Service is running

VIEW MAP VIEW DETAILS

Content Title: Kentucky's Incorporated City Boundaries

Publisher: Kentucky Water Resource Information System

Rating: Unknown

Provider Level: Unknown

Coverage Area: Kentucky

Content Type: Live data & maps (ArcIMS Image Service)

Latest Status: Service is running

VIEW MAP VIEW DETAILS

Content Title: Kentucky's Base Map

Publisher: Kentucky's GIS Community

Rating: Unknown

Provider Level: Unknown

Coverage Area: Kentucky

Content Type: Live data & maps (ArcIMS Image Service)

Latest Status: Service is running

VIEW MAP VIEW DETAILS GO TO WEBSITE

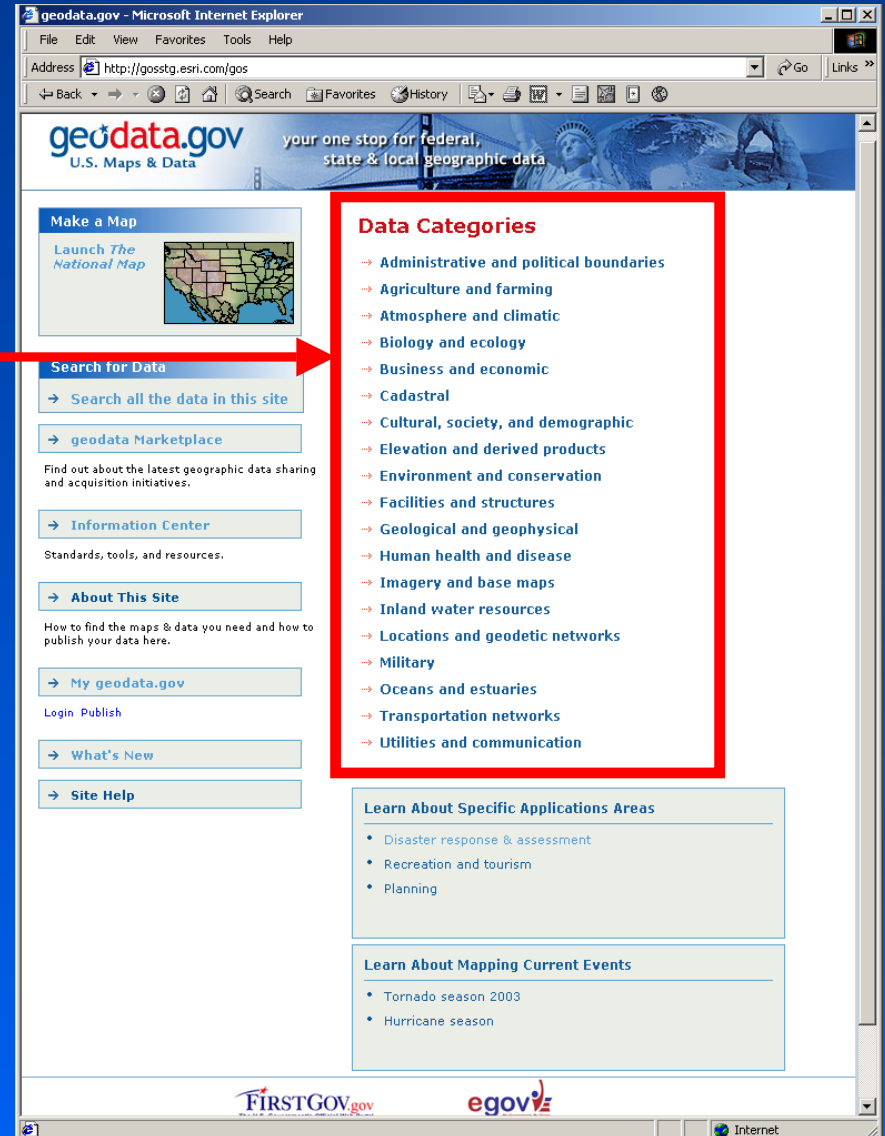
Content Title: USGS ArcIMS Map Service for the Illinois Basin Province, 1995 National Oil and Gas Assessment

Publisher: U.S. Geological Survey, Central Energy Team

Rating: Unknown

Data Categories

Quick access to Content
(2 clicks)



What can Users Find?

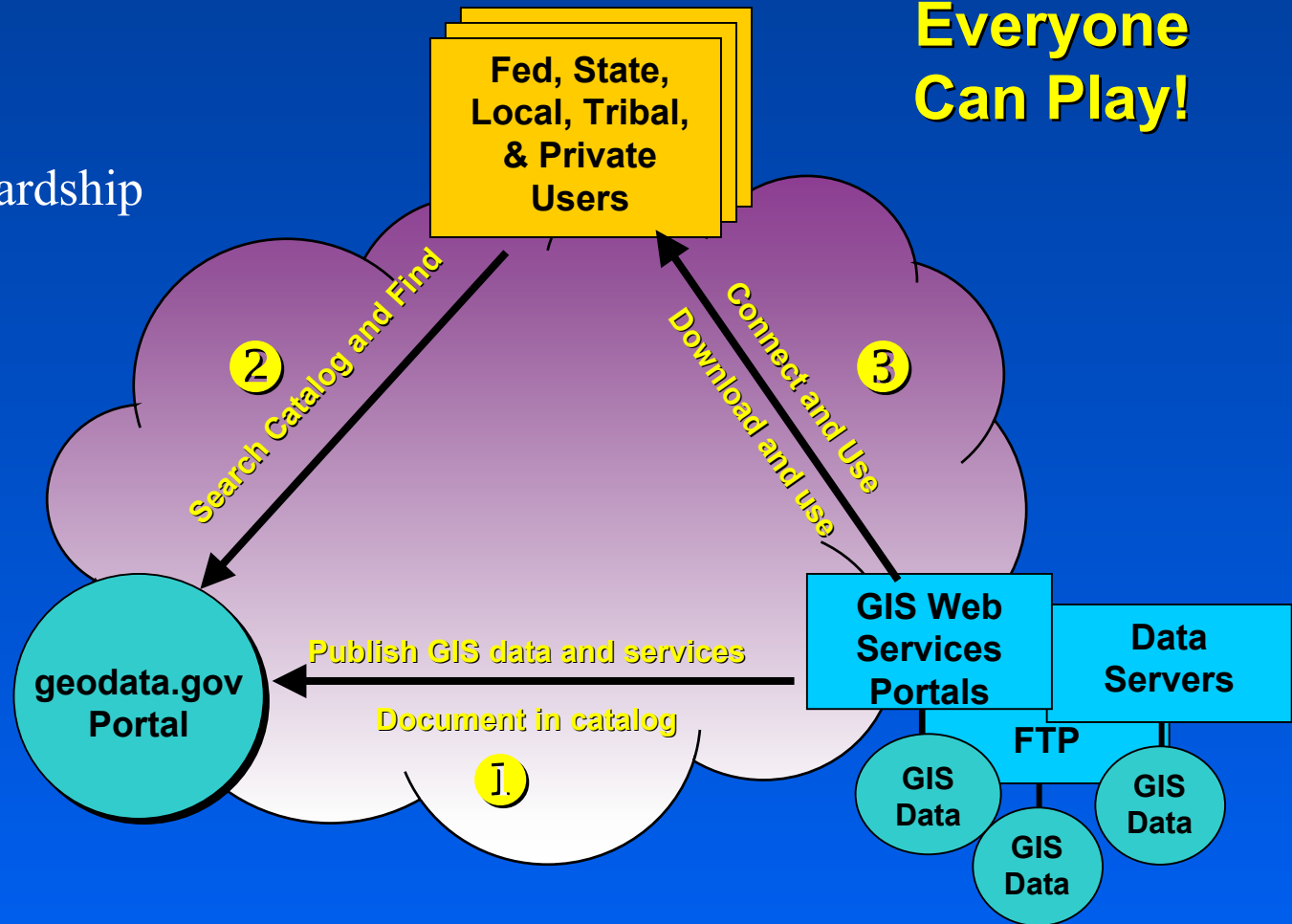
- Data for use in GIS software
- GIS Services - Mapping, Geoprocessing
- Geospatial Applications
- Planned Data Acquisitions
- Events, Activities and Information

**The Geospatial One-Stop Portal
contains metadata for all of these.**

Geodata.gov Concept

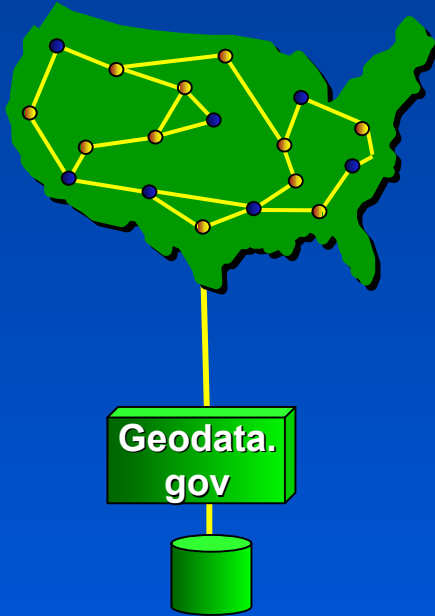
- Federated Model
- Distributed Stewardship

**Everyone
Can Play!**



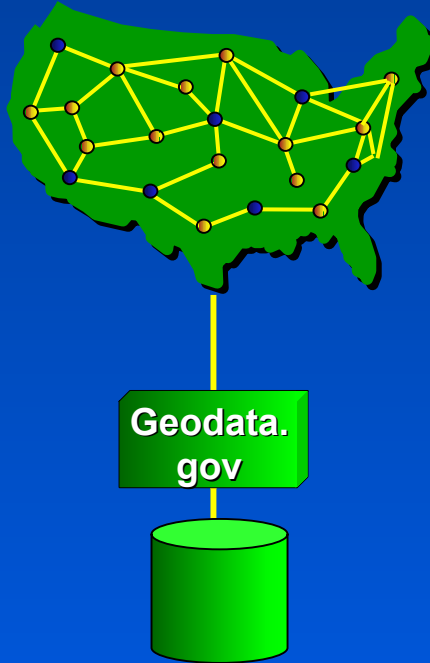
Development Vision

Step 1



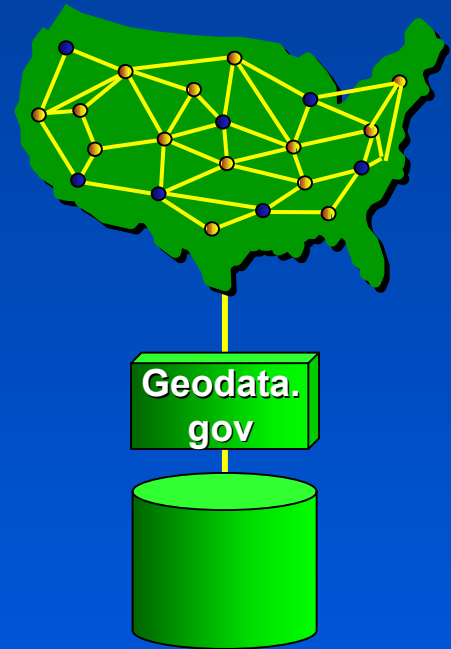
Operational Portal
2 Months

Step 2



- Harvest NSDI Clearinghouse
 - Enhance Portal
 - Grow Content
- 3 - 6 Months +/-

Step 3



- Expand Partner Network
 - Enhance Portal
 - Grow Content
- 3 - 6 Months

U.S. Experience

Strengths

- Over 10 years
- Broad Community Involvement
- Metadata Education
- Stakes are now high

Areas for Improvement

- Slow progress
- Lack of a national strategy
- Federal agencies stewardship
- Coordination is largely voluntary

Geospatial One Stop

- Visit us at:
www.geo-one-stop.gov
www.geodata.gov

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Are there opportunities
for U.S./ Chile geospatial
partnerships?