Geospatial One-Stop
Gateway for Discovery and Access

PAGIS Conference
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What is Geospatial One-Stop?

- **E-Government Initiative**
  - The geographic component of the President’s Management Agenda
  - OMB oversees the E-Government Initiatives

- Department of Interior serves as the Managing Partner for Geospatial One-Stop

- One of the ways the National Geospatial Programs Office (NGPO) brings increased visibility and implementation of the NSDI.
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.
Leading the Development of Partnerships to Build the NSDI

Geospatial One Stop
- Discovery and Access
- Common Infrastructure
- Harvesting

The National Map
- Integrated Content
- Seamless Base
- Map Products
- Framework Focus

FGDC
- Coordination
- Standards/Policy
- Training

Geospatial One Stop
- Discovery and Access
- Common Infrastructure
- Harvesting

The National Map
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- Seamless Base
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Toxic Releases
- Land Cover
- Transportation
- Surface Waters
- Satellite Imagery
- Surface wells
- Elevation
- Aerial Imagery

USGS

Cities
Counties
Tribes
Academia
Private
Federal
States
Geospatial One-Stop Governance

Intergovernmental Board of Directors

- National Association of State CIOs
- National States Geographic Information Council
- National Association of Counties
- National League of Cities
- International City/County Managers Association
- Intertribal GIS Council
- Western Governors Association
- Department of Homeland Security
- Department of Commerce: Census Bureau, NOAA
- Department of Transportation
- National Aeronautics and Space Administration
Geospatial One-Stop (GOS)

Integrated National Data Sets
- Examples
  - Transportation
  - Landmarks
  - Hydrography
  - Land Use

Federal Data Sets
- Examples
  - USGS Hydrography
  - NGS Geodetic Control
  - BLM PLSS
  - DoD Defense Installations (DISDI)

State/Regional Data Sets
- Examples
  - North Carolina
  - San Francisco Bay Area (BARGC)

National Metadata Catalog (GOS)

Scientific Knowledge
- Examples
  - Reports
  - Models
  - Applications

USGS
Geospatial One-Stop Version 2
www.geodata.gov

- **Usability**
  - Improve user experience
  - Support multiple audiences

- **Performance**
  - Sub-second responses

- **Interoperability**
  - Support evolving standards (Portals, OGC, etc.)
  - Support data download

- **Functionality**
  - “two clicks to content”
  - Collaboration tools
  - Marketplace community

- **New technologies**...
New Enabling Technologies

Portal Technology

JSR - 168

What’s New
Search Engine - Google
Spatial Toolkits
Communities
Marketplace

New interoperability standard
Portlet building blocks

What this Means…

GIS Centric → Web Standard
Specialized Search → Google-like
Uniform View → Personalized
IBM WebSphere Portal

- Single Sign-on and Personalization
- Publish
- Search
- Map Viewer
- Other JSR-168 Portlets

Metadata Catalog

Metadata Harvester

Catalog Service GIS Portal Toolkit

ESRI-Google Spatial Extender

Google Search Appliance

ArcIMS

Metadata Catalog

FGDC

ISO

CS-W
Z39.50
WAF / XML
OAI-PMH

Natural Language Search

Natual Language Search

COTS & Standards Based (Programmatic Connection)

WMS
WFS/GML
WCS
ArcIMS
WMC

Open LS Gazetteer

JSR-168

Other JSR-168 Portlets

Apps

CS-W
Z39.50
Google http
OAI

Open LS Gazetteer

OAI-PMH
GIS Portal Toolkit

Publish
Search
Map Viewer

USGS
GIS for the Gulf is a collaborative activity between the US Geological Survey, the Department of Homeland Security, and the National Geospatial-Intelligence Agency, in response to hurricanes Katrina and Rita. Find other useful information on the Hurricane Community Pages.

**Check My Home**
(Interactive Map)

**New USGS Topo Maps**

GFG Responders
Login here
Sign Up

**Note:** To use these applications, make sure you enable popups for the *.geodata.gov site
Did you mean Invasive Species in the area of:

- Hawaii, State, United States
- Hawaii Beaches Estates, Hawaii, United States
- Hawaii Kai, Hawaii, United States
- Hawaiian Acres, Hawaii, United States
- Hawaiian Beaches, Hawaii, United States
- Hawaiian Gardens, California, United States
- Hawaiian Ocean View, Hawaii, United States
- Hawaiian Ocean View Estates, Hawaii, United States
- Hawaiian Paradise Park (Hawaii County), Hawaii, United States
- Hawaiian Paradise Park (Hawaii County), Hawaii, United States

- Use 'My Geography' as seen on the Map
- Do not use any Location

Show Results  New Search

OR

Where (e.g. Harrison, NY)
Hawaii  Search again

Done
Your Search Criteria

What: Invasive Species
Where: Hawaii, State, United States
Time Frame: Anytime
Content Types: Live Data & Maps
Data Categories: All Categories
Sorted by: Relevance

Metadata Results

Content Title: NBII Catalog of Web Map Services (NBII-GIF-CWMS)

Abstract: The NBII Catalog of Web Map Services is the core component in the stage one implementation of the NBII Geospatial Interoperability Framework. The catalog contains WMS services containing biological data registered by the NBII Nodes and partners. These services provide CCG WMS, WFS, and/or WCS access for public consumption.

Content Type: Live data & maps

View Summary Full Metadata Add to Map Go to website

Page 1
Take Away Messages

- GOS facilitates discovery of the Nation’s geospatial resources
- Portal organizes metadata and speeds up searching
- Builds on the NSDI Clearinghouse – harvesting hundreds of “nodes”
- GOS currently has ~100,000 publications
Features of the Map Viewer

- View and share maps using geodata.gov and other resources
- Find places or street addresses and show them on the map
- Print or Save your map for future use
- Display multiple map services on a single map
- Identify objects or features

Start the Map Viewer

You can start the Map Viewer by clicking on the image of one of the following popular maps:

- APHIN PDC Active Hazards
- BLM and Forest Service Districts
- EPA EnvironMapper for Water
- FEMA Flood Insurance Data Map
- GFW Frontier Forests Map
- HRSA Geospatial Data Warehouse
- HUD E-MAPS
- ISU Carro Gordo County Soil Map
- Louisiana Base Map
- Minneapolis - St. Paul MetroGIS
The National Map WMS
- Transportation
- Orthoimagery
- Hydrography
- Geographic Names
- Elevation
- Boundaries
Find = New Orleans, LA
<table>
<thead>
<tr>
<th>Content Title</th>
<th>Abstract</th>
<th>Content Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOI Buildings</td>
<td>This map service is to provide a set of DOI Buildings in Mississippi, Louisiana and adjacent states to help visualize what buildings could have been affected by hurricane Katrina.</td>
<td>Live data &amp; maps (Map Service)</td>
</tr>
<tr>
<td>National Wetlands Inventory</td>
<td>The development of the Wetlands Mapper results from a need by the U.S. Fish and Wildlife Service's to expand and improve the availability of digital wetlands data, in order to disseminate wetlands data and information to FWS resource managers and the public. The present goal of the FWS is to provide the citizens of the United States and its Trust Territories with current geospatially referenced information on the status, extent, characteristics and functions of wetlands, riparian, deepwater and related aquatic habitats in priority areas to promote the understanding and conservation of these resources.</td>
<td>Live data &amp; maps (Map Service)</td>
</tr>
<tr>
<td>GIS for the Gulf Hydrography Themes</td>
<td>Hydrographic data includes information about naturally occurring and constructed bodies of water, paths through which water flows, and related entities.</td>
<td>Live data &amp; maps (Map Service)</td>
</tr>
</tbody>
</table>
geo.data.gov Map Viewer (Projection: GCS_WGS_1984) - Microsoft Internet Explorer

- katrinabldgs
  - DOI_Buildings
- The National Map WMS
  - TRANSPORTATION
  - ORTHOIMAGERY
  - HYDROGRAPHY
  - GEOGRAPHIC NAMES
  - ELEVATION
  - BOUNDARIES
Take Away Messages

- The National Map (TNM) is a critical asset – U.S. needs a seamless base of topographic data
- Interoperability standards allow TNM to be leveraged by GOS
- FGDC promotes community use of metadata and other standards, facilitates collaboration and partnerships
- TNM and GOS rely on partnerships
Login to Participate
Communities on geo.data.gov provide a way for users of the portal to share information with each other about specific topics, such as fire, cadastral, local government, etc.

The list of communities on the left gives you quick access to a specific community to find information, such as:

- **Key Resources** - quick access to relevant Live Data and Maps, Web sites, downloadable data, or other resources
- **Discussion** - post and respond to questions and discussion topics
- **Calendar** - view meetings and events of special interest to the community.
- **Library** - browse and download community documents
- **What's New** - a listing of all the changes made in the community over the last day or past week.
Interactive Maps

Hurricane Katrina Disaster Viewer

The viewer shows a variety of data and imagery for the affected areas and the southeastern U.S.

Base map of the State of Louisiana

Find map services on Geospatial One-Stop and add them to this base map.

Hurricane Katrina: Area Information

Major areas impacted by Hurricane Katrina, viewable as predefined areas through The National Map viewer.

Maps and Images

Map of flooding in New Orleans, August 31 estimate. Click to enlarge.

Map of rough estimate of flood waters at sea level in New Orleans. View the full map.

NASA simulation of potential effects of storm surge flooding on Lake Pontchartrain and the New Orleans area.
Hurricane Katrina Resources

GIS Resource Collections  Emergency Operations  Structures and Critical Infrastructure  Government Units  Utilities  Addresses and Names  Transportation  Cadastral  Hydrography  Environmental  Land and Cover  Base Map  Elevation  Imagery  Geodetic Control  Biology  About this Category

Introduction
This area supports subject matter experts with selected GIS data resources. Select a data theme at view links to live data, maps, and resources. Data may be specific to Hurricane Katrina or generic and used as reference data for making maps. Click the Imagery section for a list of all of the Katrina images.

Downloadable GIS Data
Hurricane Katrina

Content Summary: USGS EROS is supporting first responders and emergency services working in the aftermath of Hurricane Katrina. Within hours of Katrina’s disastrous landfall on the Gulf Coast pluschannelling vital imagery to state and local governments, FEMA and other federal agencies plus the clearinghouse for all aerial, satellite and ground information on areas struck by Katrina. Pre- and hurricane imagery have been sent to EROS from numerous commercial, international, and federal data sources. All of these imagery files of the Gulf Coast area are immediately loaded to an FTP data server release to relief organizations and agencies, as well as government disaster management teams.

Send comments and suggestions to the community steward
Hurricane Katrina Library

Hurricane Katrina Resources

Map Gallery Public Interest GIS Data Library Discussion Members What's New

New Page

Library

Title

U.S. Census Bureau Map - Total Housing Units by Census Tract: 2000
09/12/2005

U.S. Census Bureau - Total Housing Units by Census Tract: 2000 Hurricane Katrina Disaster Areas Louisiana, Mississippi, and Alabama Region This document is in PDF (Portable Document Format). You need Adobe Reader to view this document. You can download the Adobe...

DigitalGlobe Images of the Aftermath of Hurricane Katrina
09/12/2005

A portable map document (PDF) containing DigitalGlobe QuickBird Satellite images of New Orleans, LA on September 3rd, 2005. Various features are highlighted in the images for reference. This document is in PDF (Portable Document Format). You need Adobe Reader...

ESRI ArcGIS Engine Template
09/12/2005

The ArcGIS Engine file is a template for developers to review how a custom ArcGIS Engine application could be deployed to the field. The template was designed to run on a Tablet PC with Windows XP. Included in the download is the source code.

Free Access to ESRI Business Analyst Online
09/12/2005

ESRI, Inc. has provided access to its Business Analyst Online product for use by any economic development, urban and regional planning agency, trade association or interested party who wishes to examine the demographics or consumer expenditure patterns for the Hurricane Katrina...

GIS Analysis of Hurricane Katrina Demonstrates No Long-Term Disruption on U.S. Oil and Gas Production
09/12/2005

A new EIS based report developed by Earth Sciences Associates (ESA) sheds light on the potential impact of Hurricane Katrina on total U.S. Oil and Gas production. The results show overall productivity for the Gulf of Mexico should not be significantly impaired by the...

Interim Immobilization Recommendations for Emergency Responders: Hurricane Katrina
09/12/2005

This document, from the U.S. Department of Health and Human Services - Centers for Disease Control and Prevention, provides guidance on interim immobilization recommendations for emergency responders working in areas affected by Hurricane Katrina. This document is in...

Map showing Locations of Hurricane Katrina Support Centers Dated August 31, 2005
09/12/2005

This map shows the locations of hurricane support centers listed in some of the status briefs. This document is in Adobe PDF (Portable Document Format). You need Adobe Reader to view this document. You can download the Adobe Reader for free from http://www.adobe.com/products/acrobat/...

Quick Data Resource Guide - Free/Public & Commercial/Free-based
09/12/2005

Hurricane Katrina - Quick Data Resource Guide - Free/Public & Commercial/Free-based This guide provides information about key geospatial data sources for areas affected by Hurricane Katrina. Information includes:

- Vendor-based imagery...

State of Louisiana Emergency Operations Plan
09/12/2005

Supplement 1C The Louisiana Shelter Operations Plan (Hurricane Emergencies) is intended to provide a framework within which the partners can coordinate their actions with the...
Take Away Messages

- Portal can now be personalized
- GOS facilitates cross-government knowledge sharing
- Publishing is easy
- Communities must be organized before events
- Need stewards for communities
- Help populate a Community with your authoritative resources
Partnership Marketplace

About the Marketplace

Find data sharing partners for your area through:

Data Requests - to find out who is interested in getting particular geospatial data.

Planned Data Acquisitions - to discover who is currently planning to acquire new geospatial data.

Use the Marketplace Map to zoom to your area of interest and see footprints of planned and requested data acquisitions.

Sign-up and log in to geodata.gov to create your own requests or acquisitions, get email notifications, and contact potential partners.

New data

- New Data Request
- New Planned Acquisition

Planned Acquisitions

- Cover any part of the Marketplace Map extent
- Fall completely inside the Marketplace Map extent

Results 1-100 of 1083

   2006-03-01 09:01:25.0
   View Summary Full Metadata Contact Owner Highlight
   Zoom to

2. LIDAR Elevation Data (2007)
   2006-03-01 09:01:23.0
   View Summary Full Metadata Contact Owner Highlight
   Zoom to

3. Hydrographic Surveys for Selected Locations Within the
Remote sensing efforts being conducted in response to Hurricane Katrina

**Content Citation**
Content Title: Remote sensing efforts being conducted in response to Hurricane Katrina  
Content Type: Geographic activities

**Content Description**
Content Summary: The USGS Earth Resources Observation and Science Center (EROS) is seeking to obtain information on all in order to provide a centralized reference to these efforts. It would be helpful if anyone conducting remote sensing data collection from any source could pass information on their efforts to Brenda Jones 605-594-8503.

Content Purpose: The USGS Earth Resources Observation and Science Center (EROS) is seeking to obtain information on all in order to provide a centralized reference to these efforts.

**Content Status**
Progress: Request

**Spatial Domain**
West Coordinate: -91.72353  
East Coordinate: 86.790153  
North Coordinate: 31.131832  
South Coordinate: 28.671433  
Coverage Area: Louisiana

**Content Keywords**
Theme Keywords: Imagery, BaseMaps, EarthCover, Katrina, Imagery, Air Photography, Orthophotography  
Place Keywords: Louisiana, LA, Mississippi, MS, Alabama, AL, New Orleans, Mobile
Take Away Messages

- Marketplace is key to leveraging investments and partnerships
- It is easy to publish to the Marketplace
- Populate the Marketplace with your planned investments
Storm Response Preparedness

- Geospatial One-Stop, On-line Portal for Geospatial Data Information Sharing - geodata.gov
  - Hurricane ‘Community’ - organizing data and applications for response and recovery
  - Data Partnership Marketplace for coordinating acquisition plans and requirements

- GIS for the Gulf - Project Homeland Integrated Database (DHS, USGS, NGA)

- The National Map – Data delivery, download, and updated USGS maps and products
GIS for the Gulf

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Check My Home
(Interactive Map)

New USGS Topo Maps

GFG Responders
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Featured Map

City of Bozeman

Other Cool Maps
GIS for the Gulf

GIS for the Gulf is a collaborative activity between the US Geological Survey, the Department of Homeland Security, and the National Geospatial-Intelligence Agency, in response to hurricanes Katrina and Rita. Find other useful information on the Hurricane Community Pages.

Download Data (Interactive Map)
Launch GFG Viewer (Interactive Map)
New USGS Topo Maps

Note: To use these applications, make sure you enable popups for the *geodata.gov* site.

Featured Map

National Atlas Transportation

Other Cool Maps
Katrina Area Topographic Maps

Miscellaneous Maps, Photos, and Images
- Pumping Stations and Levee Breaches (map and photo) pdf (4.5 mb)
- hurricane Katrina Path (opens map viewer in new window). Additional images, new storm tracks, and weather warnings are also available in the viewer (see Natural Disasters/Weather layer). USGS

Hurricane Katrina: Area Information in The National Map

USGS Topographic Maps of the affected area are being automatically generated using available USGS, Department of Census, and Federal Emergency Management Agency data. The maps and images will be added as they become available for public domain use. The map documents are in PDF format. USGS data include topography (contours), hydrography, Geographic Names Information System (GNIS). Census data include transportation. FEMA data is the HAZUS data including airports, heliports, police stations, emergency facilities, etc.

Direct Links to PDFs of Topographic Maps—Hover your mouse pointer over the green rectangles on the map to see the quad names. Click inside the green rectangle to open the PDF covering that 7.5-minute quadrangle.

Direct Links to Specific Cities—Clicking on a yellow circle will open The National Map Viewer for that city.
Take Away Messages

- GOS Portal can operate in a restricted access environment
- Integrated databases (local, regional, national) are key
- GIS for the Gulf is an example of integrating data into a single data model
- Tapestry of Content
- Delivering GIS via the Web is here – data, tools, applications
Deployment Options

New architecture enables some interesting deployment options ...

**Hosting**

- JSP
- Portal Framework

**Sharing**

- http Connect to Catalog Service

- Deploy JSR168 portlets (IBM, SAP, BEA, Plumtree)

**USGS**
Future Plans

- Building-out the ‘Communities’
- Increasing State and local participation
  - USGS NSDI Liaisons
  - State Inventory Tool - Ramona
- Enhance Search
- Improve QA – harvesting guidance documentation
- Delivery of Framework Data - National Map/Project Homeland Integration
- Pilot various deployment options
Moving Toward A Geographic Information “System of Systems”

- A GIS for the Nation
- Federated network of stewards
- Modern, multi-purpose technology
- Based on national standards
- Manages the tapestry of content
- Provides tools for access, discovery and use
- Supported through incentive-based partnerships and sustained Federal funding
Geospatial One-Stop

Access to Geospatial Data and Data Acquisition Plans