

# GIS INVENTORY



Powered by the Ramona System  
Version 4.0



**FGDC CAP 3 Presentation – May 11, 2012**  
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National States Geographic Information Council (NSGIC)





# Relevant to today's discussion

- The Content Standard for Digital Geospatial Metadata (CSDGM) was introduced in 1994
- We currently don't have a national system to manage everyone's metadata – we're 'floundering'
- A very large number of GIS Users across the nation (possibly 75%) simply don't document their data to the CSDGM Standard (or any other standard)
- The GIS Inventory was designed to help capture those users





# Purpose of the GIS Inventory

- **Track the status of GIS in state and local government**
  - Provides the status of data development for planning purposes
  - Characterizes the User Community (many system & policy questions)
  - Can't manage what you don't understand
- **Locate data and users**
- Works in concert with federal programs for broad data discovery
- Provides a single national inventory tool
  - Reduces the need for the multiple inventories conducted by federal and state agencies



# It's not a Metadata tool

- Ramona is a management system
- Most metadata systems produce card catalogs (not dependable for finding all information)
- **We produce CSDGM compliant metadata because it is the standard for connecting to other systems**
- We will support the ISO standard this year
- We will also import existing metadata from the state clearinghouses





# Scope of the Metadata

- **GIS Inventory**
  - Sections 1 & 7 Complete
  - Partial information from Sections 2 through 6 is in the title and abstract
- **Full CSDGM Metadata**
  - All 7 Sections

Ramona GIS Inventory Starter Metadata	
<b>Title</b>	100-Year Floodplains. This dataset is a polygon feature class showing 100 year flood data for Baltimore County. Published in 2008, 1:2400 (1in=200ft) scale, Baltimore County Government.
<b>Origin(origin)</b>	Baltimore County Government
<b>Publication Date(pubdate)</b>	2008
<b>Publication Info(pubinfo)</b>	Towson, MD Baltimore County Government
<b>Other Citation(otherscit)</b>	
<b>Online Link(onlink)</b>	<a href="http://www.baltimorecountymd.gov/Agencies/myneighborhood/index.html">http://www.baltimorecountymd.gov/Agencies/myneighborhood/index.html</a>
<b>Online Link(onlink)</b>	<a href="http://www.baltimorecountymd.gov/">http://www.baltimorecountymd.gov/</a>
<b>Description</b>	
<b>Abstract(abstract)</b>	This 100-Year Floodplains dataset, published at 1:2400 (1in=200ft) scale, was produced all or in part from Other information as of 2008. It is described as 'This dataset is a polygon feature class showing 100 year flood data for Baltimore County.'. Data by this publisher are often provided in Array coordinate system, in a Array projection. The extent of these data is generally Baltimore County, MD,Chesapeake Bay - Maryland, MD. This starter metadata was auto-generated through the Ramona GIS Inventory System (www.gisinventory.net) and does not represent all information about this data set.
<b>Purpose(purpose)</b>	This is an inventory-level metadata record documented through the GIS Inventory system. Please refer to the data set contact or publisher for original intent and appropriate use information.
<b>Time Period</b>	
<b>Calendar Date(caldat)</b>	2008
<b>Currentness Reference(current)</b>	Publication Date
<b>Status</b>	
<b>Progress(progress)</b>	Complete
<b>Update(update)</b>	Do Not Know

## Title

100-Year Floodplains. This dataset is a polygon feature class showing 100 year flood data for Baltimore County. Published in 2008, 1:2400 (1in=200ft) scale, Baltimore County Government.

## Abstract(abstract)

This 100-Year Floodplains dataset, published at 1:2400 (1in=200ft) scale, was produced all or in part from Other information as of 2008. It is described as 'This dataset is a polygon feature class showing 100 year flood data for Baltimore County.'. Data by this publisher are often provided in Array coordinate system; in a Array projection; The extent of these data is generally Baltimore County, MD,Chesapeake Bay - Maryland, MD. This starter metadata was auto-generated through the Ramona GIS Inventory System (www.gisinventory.net) and does not represent all information about this data set.



# Customers

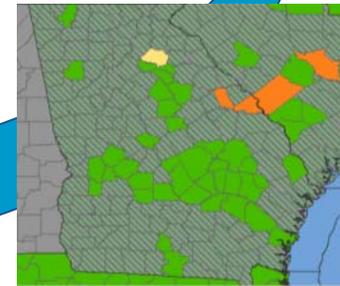
- State and local governments & their partners from all sectors, including private business
- Select Federal Agencies (NOAA, FEMA, DHS, Census, NDOP, NDEP)
- FGDC Cadastral Committee
- GOS Portal
- Proposed for inclusion in Geospatial Platform
- General Public





# What do we Inventory?

- Users
- Organizations
- Systems
- Policies
- Geography
- ~500 Distinct Data Layers





# Components

- Inventory
- Status Maps and Query Capability
- Directory of Users
- Reports
- Help Desk
- Newsletter Tool
- Administrative Tools
- Metadata Generation Tool
- Metadata Repositories (Web Folder and CSW)



# User Profile

- User completes information
- Categories
  - User
  - Organization
  - Systems
  - Policies
  - Geography
- 25 to 30 minutes to complete a profile

The screenshot shows the 'MY PROFILE' page in the GIS INVENTORY system. The page header includes the logo and tagline 'The Ramona GIS Inventory is a service of the National States Geographic Information Council (NSGIC)'. A navigation menu at the top contains links for Home, Status Map, Data Layers, My Profile (selected), Directory, Getting Started, About, and Support. A 'Log Out' button is located in the top right corner. On the left side, a sidebar menu lists various profile sections: Overview, My Profile (highlighted), Organizational Profile, Policies Profile, Systems Profile, My Geography, My Data Layers, Reports, and a 'Log Out' button. The main content area is titled 'MY PROFILE' and features a 'Save' button with a note '\* Denotes a required field'. The 'Name Information' section includes:

- 1. Preferred Salutation: Mr. (dropdown)
- 2. First Name \*: William (text input)
- 3. Middle Name: S. (text input)
- 4. Last Name \*: Burgess (text input)
- 5. Preferred Suffix: (dropdown)

The 'Professional Contact Information' section includes:

- 6. Name of your organization: BurGIS, LLC (text input)
- 7. Organization Web Site (format: http://www.example.com/): http://www.forget.this (text input)
- 8. Which of these titles most closely describes your position?: Director/Coordinator (dropdown)
- If 'Other' please specify: (text input)



# Data Documentation

- ~500 Layers – Only document what you produce
- 6 standard questions
- 6 layers have additional questions
- 2 to 3 minutes per layer to fully document
- Publish your information from this screen

GIS INVENTORY  
The National GIS Inventory is a service of the National States Geographic Information Council (NSGIC)

Digital Orthophotography/Orthoimagery

Save | Check Settings

Progress \* Source \* Production Date \* Approx. Scale \* What is this? Update Frequency \*

Important! Provide a concise description to properly document this layer (maximum 255 characters)

Geography  
default geography: Your Default Geography

Full metadata web address/URL (format: http://www.example.com) What is this?

Web Map Service URL (format: http://www.example.com) What is this?

Do you archive this layer for long-term preservation? What is this?  
No

Additional Questions for Digital Orthophotography/Orthoimagery Layer  
What is the approximate ground resolution of this product?

What is the horizontal accuracy?

What is the image type?

What are the leaf cover conditions of these data?

**My Digital Orthophotography/Orthoimagery Data Layer:**  
Created: Thursday Nov 11 2010 12:48 pm | Last Updated: Thursday Nov 11 2010 12:48 pm

View in Map | Update this Layer | Delete this Layer

Progress	Source	Production Date	Scale	Update Frequency
Complete	LIDAR	2010	1:2400 (1in=200ft)	Daily

Geography: default geography

Published to GOS? Yes

Metadata: gis-inventory-metadata-29-14939.xml

Layer Description: Test Layer

Persistent URL: http://www.nsgic.org/300

Web Map Service URL: http://www.nsgic.org/400

Archival Layer: Yes

Archival Frequency:

Archival Format: ECW

Archival Facility:

Archival Location URL: http://www.nsgic.org/500

What is the approximate ground resolution of this product? 3 inches

What is the horizontal accuracy? 8 feet

What is the image type? Natural Color

What are the leaf cover conditions of these data? Leaf-on



# Name Game

## Digital Orthophotography/Orthoimagery

- Digital Imagery
- Digital Photography
- Imagery
- Photography
- Aerial Photography
- Aerial Photos
- Aerial Imagery
- Satellite Imagery
- Orthoimagery
- Orthophotography
- Digital Orthoimagery
- Digital Orthophotography
- Quarter Quads
- DOQQs
- Digital Quads
- NAIP Imagery
- 133 Cities Imagery





# Software Specifications

Function	Software
Operating System	CentOS 5 64-bit Enterprise (Linux)
Application Script	PHP/Apache
Database	MYSQL
Map Service	Mapserver
Catalog Web Service	OpenGIS® Specification/Tomcat
Web Host Manager	CPanel
	Provider
System Administrator	Run Skip LLC
Helpdesk Support	BurGIS, LLC/Run Skip LLC

## Open Source



# Hardware Specifications

Feature	Description
Firewall	Cisco ASA 5505
Processors	AMD Quad x 8 CORES 2.0Ghz Opteron 6128 - Total of 32 CORES
RAM	16 GB DDR3 SDRAM
Drives	4 x 300GB SAS (15,000 rpm)
RAID	Yes – Level 10
Remote Backup	Yes – Continuous Offsite
Helpdesk Support	24/7/365
Service Monitoring	24/7/365
Uptime Guarantee	100%
Hardware Replacement	30 minutes SLA
Bandwidth	400 GB
	<b>Provider</b>
ISP and Hardware Provider	Liquid Web Inc.

## Reliable

GIS INVENTORY





# User Statistics

## Increased Use Over the Past Year

Feature	Mar. 2011	Jan. 2012	Percentage Increase
Registered Users	3,780	4,483	19%
Data Layers	19,153	19,246	.5%
Published to GOS Portal	12,066	12,375	2.5%

**Significant Decrease**

Weekly GOS Harvesting Summary	
Documents Harvested	705
Documents Validated	705
Documents Published	705
Documents Added	394
Documents Updated	311
This Harvest Was On	10/30/2010 4:43
Last Harvest Was On	10/25/2010 4:43

## GOS Harvesting Report

The screenshot shows a web browser window displaying the metadata for a GIS Inventory XML Record. The page title is "Ramona GIS Inventory Starter Metadata". The metadata includes the following information:

- Title:** Parcel/Cadastral/Land Ownership, Raster parcel tax maps, Published in 2009, 1:7200 (1in=600ft) scale, Maryland Department of Planning.
- Origin(origin):** Maryland Department of Planning
- Publication Date(pubdate):** 2009
- Publication Info(pubinfo):** Baltimore, MD Maryland Department of Planning
- Other Citation(othercit):** This starter file is <http://gisinventory.net/metadata/gis-inventory-metadata-5549-19608.xml> Additional metadata available at <http://www.mdp.state.md.us/OurProducts/PropertyMapProducts/PaperTaxMaps.shtml>
- Online Link(online):** <http://www.mdp.state.md.us/OurProducts/PropertyMapProducts/PaperTaxMaps.shtml>
- Online Link(online):** <http://www.mdp.state.md.us/pfa/pfa.htm>
- Online Link(online):** <http://www.mdp.state.md.us/OurProducts/PropertyMapProducts/PaperTaxMaps.shtml>
- Online Link(online):** <http://www.planning.maryland.gov/>

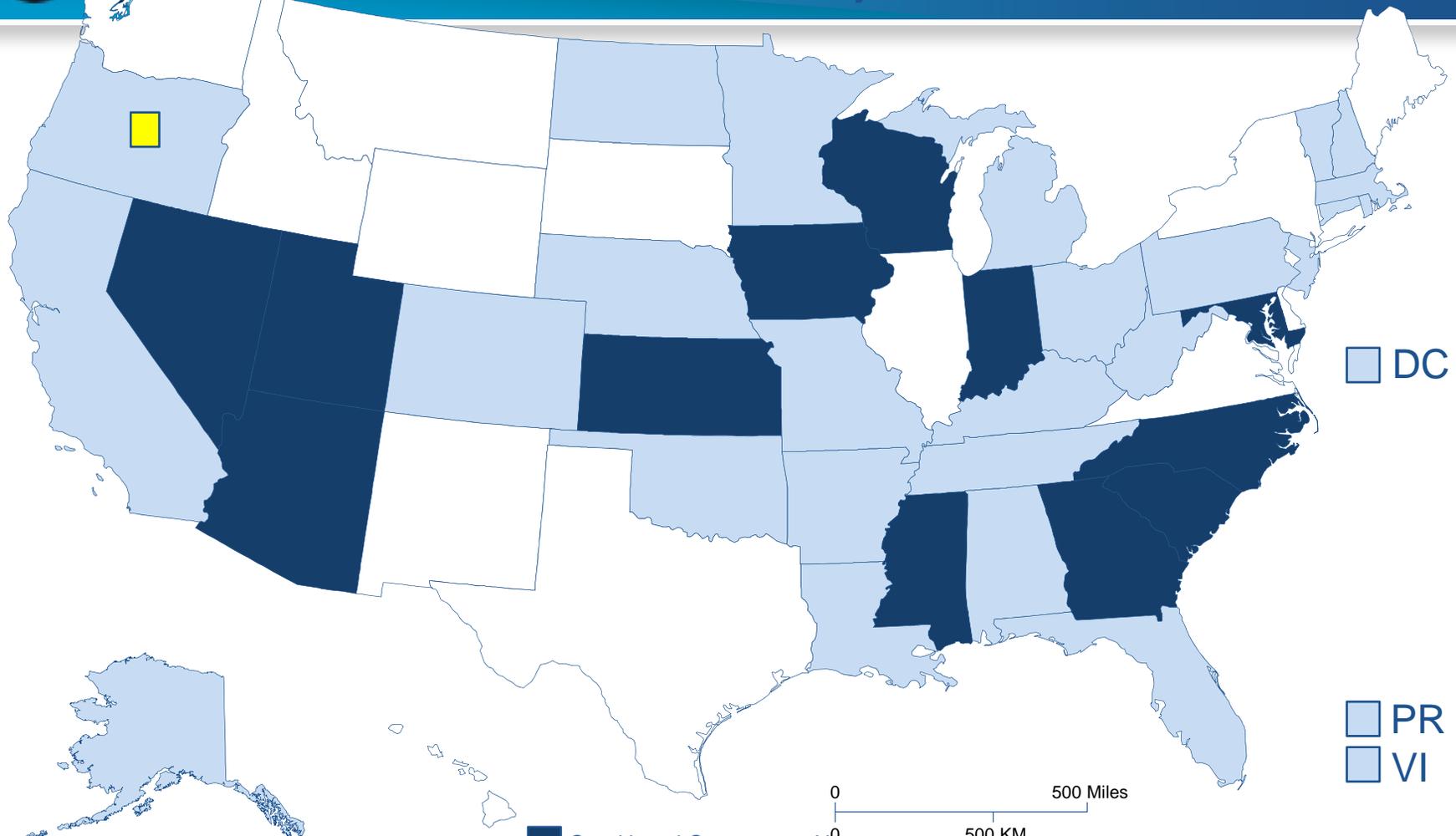
**Description:**

- Abstract(abstract):** This Parcel/Cadastral/Land Ownership dataset, published at 1:7200 (1in=600ft) scale, was produced all or in part from Hardcopy Maps information as of 2009. It is described as 'Raster parcel tax maps'. This data set includes internal links to Assessment/CAMA data. Data by this publisher are often provided in Array coordinate system; in a Array projection; The extent of these data is generally Statewide Coverage in Maryland. This starter metadata was auto-generated through the Ramona GIS Inventory System ([www.gisinventory.net](http://www.gisinventory.net)) and does not represent all information about this data set.
- Purpose(purpose):** The "Purpose" is a summary of the intentions with which the data set was developed. This is an incomplete metadata record and purpose is not documented through the Ramona GIS Inventory system.



# Current Picture

Subjective Measures

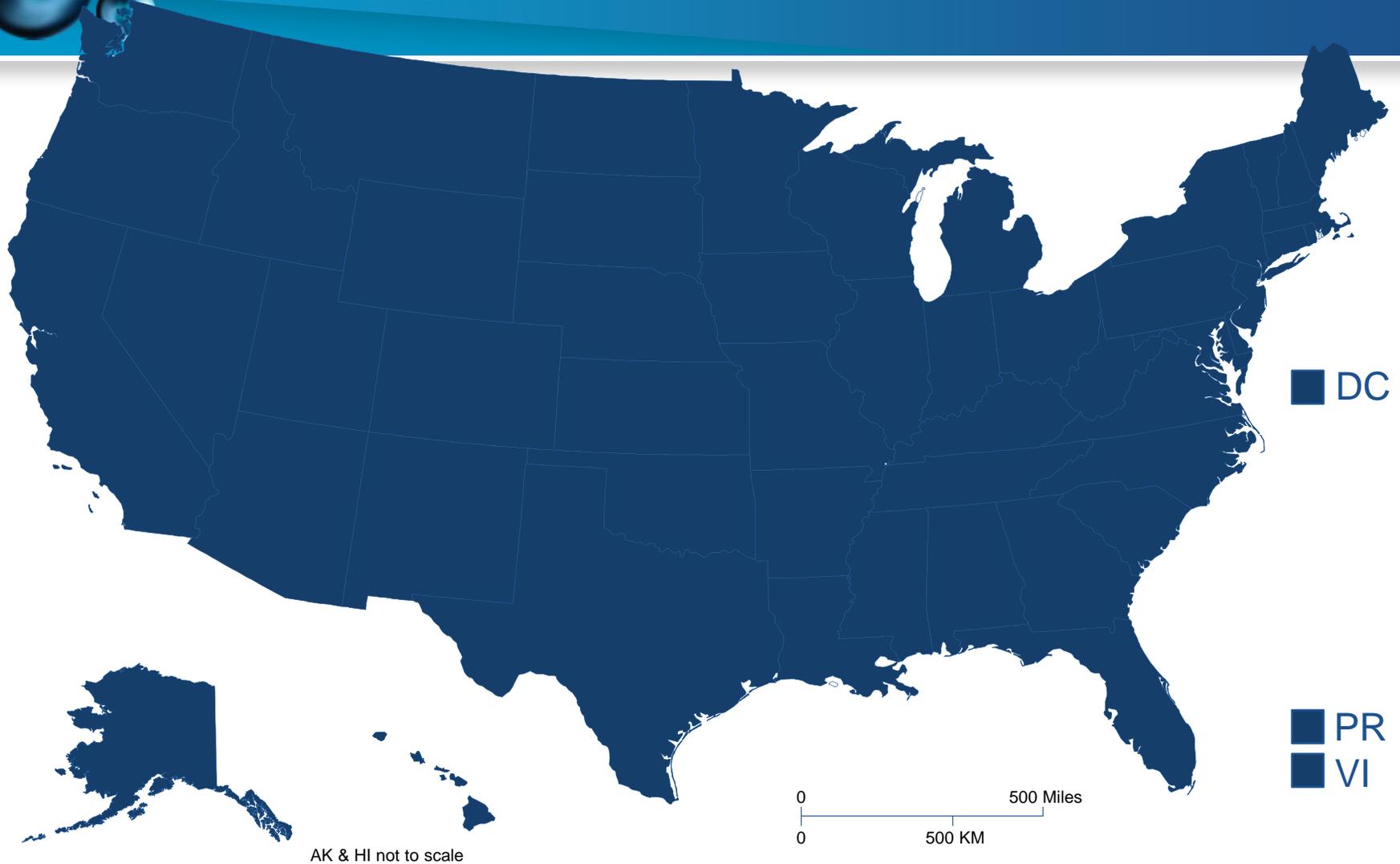


AK & HI not to scale

- Good Local Government Use
- Various Levels of State Information Available
- Under Consideration



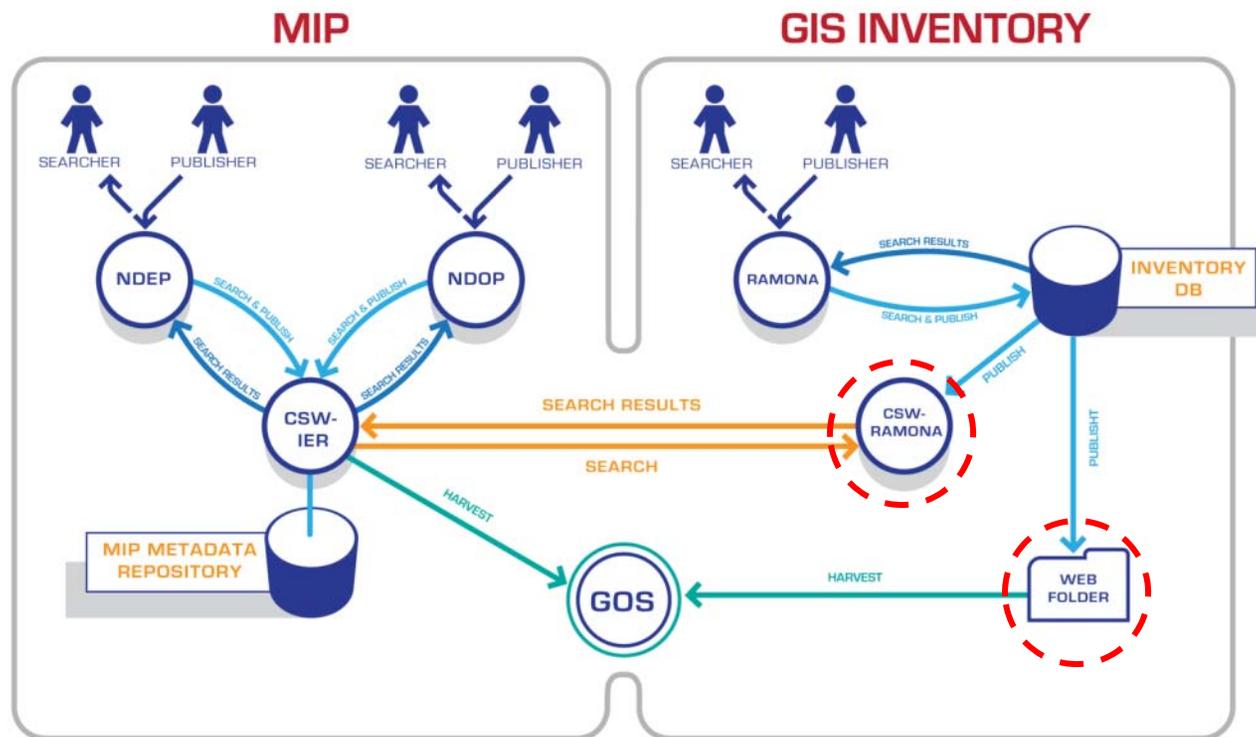
# The Goal



GIS INVENTORY

 **NSGIC**  
National States Geographic Information Council

# Interoperable



**NDEP** - National Digital Elevation Program Committee  
**NDOP** - National Digital Orthophoto Programs Committee  
**MIP** - FEMA's Mapping Information Platform  
**GOS** - Geospatial One Stop Portal  
**CSW** - Catalog Services - OGC Catalog Service 2.0.1.

**GIS INVENTORY**  
 is NOT dependant on any other system.

Function	Who Performs	Frequency
Harvesting GIS Inventory Web Folder for GOS Portal	GOS Portal	Weekly – Friday early am hours
Harvesting for MIP, NDEP, NDOP	MIP Catalog Web Service	On Demand



# Key Attributes

- Simple and intuitive interface
- Inexpensive to modify and maintain
  - Funded by NOAA, FEMA and DHS (Principal Funding Source)
- No cost to users (or organizations) except their time
- Training available on demand
- Help states meet their business needs
- National compatibility & capability
- Avoids duplication of effort





# Example from Wisconsin report based on the GIS Inventory

## Orthoimagery

**Foundational Element:** Geographic Reference Frameworks

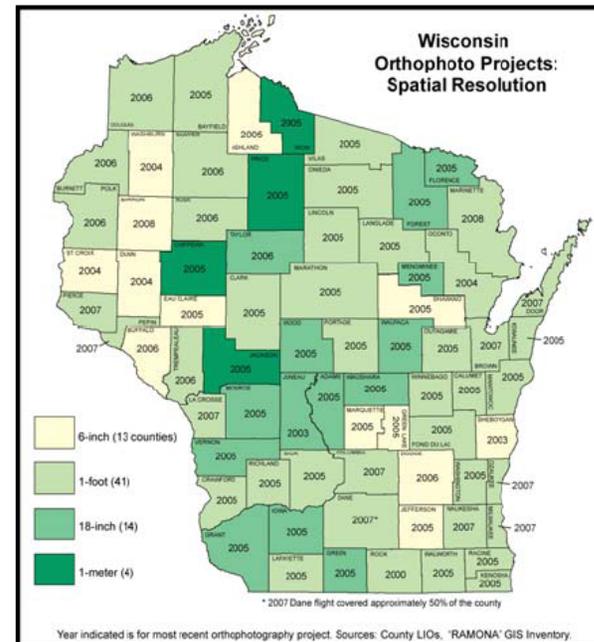
**Framework Data Category:** Orthoimagery

### Statistics:

- 100% county-based coverage
- 4-5 year iterative planning cycle for many counties
- > 15 counties indicated “planned” imagery in 2010 – the actual number is suspected to be 2-4 times that number.
- Oblique imagery is rising in popularity, as well as in current and future investment.

### Related Information:

With little ambiguity, it is clear that 100% of Wisconsin counties have invested in locally-funded orthoimagery sometime over the last 15 years – in some cases, in 4 or 5-year iterations. This aerial imagery rectified to ground control for integration in GIS systems has great value in collection, registration, and quality assurance of other foundational GIS layers.



**Figure 16 – Orthophoto Spatial Resolution**



# Recap

- GIS Inventory is seeing reduced interest
- GOS has disappeared
- Geo.data.gov is Fed only
- Don't yet know what the GeoPlatform will do
- Virtual USA is competing but different
- Clearinghouses are a 'mixed bag'
- Arc Catalog
- **We plan to provide additional tools this year to make the GIS Inventory the right choice for more users**



# New Public Safety Interface

- Under contract to DHS to develop a new interface for the Public Safety Community
- Essentially the same with a different 'look and feel'
  - Include linkages to other inventory sites
  - Possibly include inventory of pre-plans
  - Links to relevant sites (HSIN, HIFLD, etc.)
- Considering an inventory of E911 PSAPs and their status to implement NG 911



# State Clearinghouse Nodes

- Information from May 2011 provided by GOS Portal Team at USGS
  - 60 Registered State Clearinghouse Nodes
    - 67 Harvested Sites
  - 59,385 Metadata Records
  - 18 have less than 25 metadata records
  - Idaho had 17,753 metadata records (30%)
  - Last harvest dates for nodes ranged from October 2005 to May 2011





# Current Federal Efforts

## Integrating with and enhancing:

- U.S. Census Bureau
  - Census Staff have Administrative Privileges
  - Tiger Enhancement Database (TED)
  - Sent memo to 44,000 local government staff asking them to participate – will follow-up with additional messaging
- Federal Geographic Data Committee
  - Geospatial Platform
- DHS Virtual USA, GII
- NDEP Committee Pilot Underway - NDOP??





# Questions before going live?

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