

# State Mapping Advisory Committee (SMAC) Meeting Notes

Tuesday, May 20, 2008  
The Orleans Hotel & Casino  
4500 West Tropicana Avenue  
Las Vegas, Nevada 89103

Meeting held in conjunction with the Nevada Geographic Information Society 2008 Annual State Conference.

For further Information contact Jon Price at [jprice@unr.edu](mailto:jprice@unr.edu) , or Ron Hess at (775)784-6692, [rhess@unr.edu](mailto:rhess@unr.edu) .

**1:30 PM:**        **OPENING REMARKS** and Welcome by Jon Price (NBMG), Committee Chairman

Announcement - A meeting of the Geologic Mapping Subcommittee of the State Mapping Advisory Committee will be held on Wednesday, August 20, 2008, from 1:30 to 3:30 p.m. in the conference room of the Nevada Bureau of Mines and Geology, University of Nevada, Reno.

## OLD and NEW BUSINESS

**Report on the status of the National Agricultural Imagery Program (NAIP) for Nevada – gaps in coverage, and planning for the 2011 NAIP mission,** by Tom Sturm (U.S. Geologic Survey).

Tom reported that the NAIP is going through some significant changes. The program is eliminating collection of annual 2-meter resolution data over agricultural lands and will begin a 3-year program cycle for 1-meter data in 2009. The next scheduled collection for Nevada is in 2011. The funding model for the revised program is still under discussion. The Farm Services Agency (FSA), which is the manager of NAIP, will be focusing their program contribution on ensuring coverage of their agricultural program lands, of which there is very little in Nevada. Overall program funding discussions include a range of possibilities from requiring 1/3 of the cost to be paid through state and local contributions, as we faced for the 2006 NV NAIP project, to having the base program mostly funded through Federal contributions. If the latter is approved and adopted, the state and local contribution would focus on program upgrades for things like using additional ground control for the project and/or acquiring a 4-band combined natural color and infrared data product along with a small contribution to the base program. At present NAIP uses existing orthophoto quads for ground control giving an accuracy of +/- 8 meters. With additional ground control the accuracy would improve to +/- 5 meters. This contribution could be something in the order of 10% of the agricultural land cost of the program. More will be known about the funding issues as we approach the 2009 Federal Fiscal Year. Tom suggested that we have a follow up SMAC meeting in the Fall of 2008 in order to report back on what is happening as we prepare for the next round of acquisition in Nevada.

Tom also reported on the status of a partnership between the Southern Nevada Water Authority, the BLM, and USGS to fill in coverage gaps in the 2006 Nevada NAIP project around Nellis Air Force Base and the Dept. of Energy Nevada Test Site. This project is moving forward with imagery acquisition planned for the 4th of July weekend with orthoimage processing to follow by the Water Authority's contractor, Digital Mapping Inc.

Online access to natural color and color infrared (CIR) NAIP imagery is available via the Keck Web Site at <http://keck.library.unr.edu/> .

### **Update on U.S. Geological Survey's National Hydrography Dataset (NHD) in Nevada**, by Tom Sturm.

Tom reported that the initial 1:24,000-scale version of NHD for Nevada was completed a year ago. The focus of the program is now on the establishment of local stewardship agreements to maintain the data. The USGS is using its staff and program funding to provide editing tools, training, and database management. There are no stewardship agreements currently in place for Nevada with the exception of the Forest Service's national commitment to maintain NHD over their lands as needed to support their information requirements. A discussion ensued about appropriate agency roles in Nevada but resolution of this issue will take time as we investigate the staffing and technical requirements needed for agencies to take on this role. Tom mentioned that the USGS generally prefers to have one primary point of contact within a state for stewardship but that the work can be parsed out to multiple agencies if that is appropriate and manageable by a principal steward. The Nevada Division of Water Resources, Nevada Department of Transportation, and the Bureau of Land Management all have an interest in maintaining and updating the NHD.

Tom also brought up the potential for having a general NHD workshop in the Reno/Carson City area, similar to the one held at the Southern Nevada Water Authority last year, sometime in the Fall of 2008 and requested that participants on the meeting get in touch with him if they are interested. Additional information about the NHD can be obtained on the Web at <http://nhd.usgs.gov/> or to download data, go to <http://nhd.usgs.gov/data.html> .

### **Status of the U.S. Geological Survey's National Map Program**, by Tom Sturm.

Tom described the evolution of The National Map. Tom noted that there were some significant accomplishments during the initial implementation of The National Map, including completion of NHD and 30-meter elevation coverage nationally, building partnerships for NAIP and high resolution imagery over the nation's urban areas (including Reno, Carson City, and Las Vegas), improving geographic names information, developing Open GIS Consortium data catalogs and web services, and developing national geodatabases for transportation, structures (hospitals, schools, police and fire stations), and boundaries. The initial version of The National Map resulted in many partnerships with Federal, state and local agencies. Many of the data holdings from the partnerships have been displayed in The National Map viewer through a distributed services model where partner data was displayed over their coverage area from a partner hosted map service. The USGS is now moving toward version 2 of The National Map to focus on providing nationally consistent, trusted, and integrated data, something that has not been attainable through the initial effort. This is leading the USGS to adopt a model for The National Map where partner data is integrated into centralized databases. Distributed data holdings will be registered in the Geospatial One-Stop and phased out of The National Map viewer. Version 2 will also devote significant effort to revitalizing the USGS' topographic maps and print on demand capabilities, as well as unifying the components of the USGS program. Implementation of version 2 will be guided by a two year tactical plan which will be released in June, 2008. Tom provided a product and services breakout of these activities, which is included in his PowerPoint presentation that is attached to these notes. The current version of the online National Map can be accessed on the Web at <http://nmviewogc.cr.usgs.gov/viewer.htm> .

All 7.5-minute topographic maps are being re-scanned at 500 dpi to Geo-pdf file format and will be made available for free download over the Web. The USGS is moving to a print on demand program for low-volume, out-of-stock, 7.5-minute topographic maps.

The USGS does not have enough people or resources to partner for data acquisitions on a county-by-county basis. Their current and long-standing plan is to partner with the primary GIS coordinating group within each State to leverage the available dollars and resources, both Federal and local, to obtain the needed mapping products.

**Review of State Agency Activities**, by Holly Smith (Nevada Division of State Lands)

Holly reported on State GIS User Group activities and the status of hiring a state GIS coordinator. The Nevada Department of Conservation and Natural Resources attempted to obtain a department level GIS coordinator position in the last legislative session. This effort was well received but unsuccessful. Holly is not sure about the prospects for success in the next legislative session due to declining state revenues.

The State agency GIS users group has been meeting, but not as frequently as most would like. Future meetings will be scheduled more often.

The Division of State Lands has brought its database of State-owned lands into a GIS and will be able to share it with the State Public Works Board and other agencies. The Division is still moving forward with a project to obtain a State-wide digital parcel map coverage.

**Report on ongoing projects at the Nevada Department of Transportation (NDOT)**, by Eric Warmath (NDOT).

Eric reported that NDOT created compressed 30-minute mosaics of the 2006 NAIP imagery and delivered them to the UNR Keck repository ( <http://keck.library.unr.edu/> ) for public distribution. He also reported on the status of NDOT's town map program, 30' quad map program, State highway map, and the availability of these maps from NDOT's website at <http://www.nevadadot.com/traveler/maps/> . Eric mentioned that NDOT has updated their airport, active railroads, rest areas, streams, and mile post datasets. He expects NDOT's state-maintained road database to be completed by the end of June. Eric also mentioned that the public can access NDOT control data through the NDOT website at [http://www.nevadadot.com/reports\\_pubs/LoIS/](http://www.nevadadot.com/reports_pubs/LoIS/) .

NDOT is considering copyrighting their road data so that it is not reproduced and resold without their permission.

**Open discussion and comments.**

Jon Price reported on the NBMG Geodesy project that is mapping crustal extension in the Great Basin with global positioning system (GPS) technology. Additional information about the NBMG Geodesy program can be obtained on the Web at <http://geodesy.unr.edu/> .

Tom Sturm asked about the prospect of adding web mapping or feature services to the Keck Web site and if the SMAC could take on a role in PLSS/cadastral data development of the State.

In regards to a question about the availability of Landsat data, Tom Sturm indicated that there is no reason why new Landsat data could not go to the Keck Web site.

SMAC should meet in late fall for an update on the NAIP program and address questions about program options and costs for additional ground control, 4-band imagery, and local, State, Federal, and FSA cost-share estimates.

**3:00 PM: ADJOURN**

State Mapping Advisory Committee Web Page  
<http://www.nbmng.unr.edu/smac/smac.htm>

Virtual Clearinghouse of Nevada Geographic Information Web Page  
<http://www.nbmng.unr.edu/geoinfo/geoinfo.htm>

**STATE MAPPING ADVISORY COMMITTEE**

**MEETING ATTENDEES**

Jon Price	NV Bureau of Mines and Geology	<a href="mailto:jprice@unr.edu">jprice@unr.edu</a>
Eric Warmath	NV Department of Transportation	<a href="mailto:ewarmath@dot.state.nv.us">ewarmath@dot.state.nv.us</a>
Mark O'Brien	U.S. Bureau of Land Management	<a href="mailto:mobrien@blm.gov">mobrien@blm.gov</a>
Tom Sturm	U.S. Geologic Survey Mapping Liaison	<a href="mailto:tsturm@usgs.gov">tsturm@usgs.gov</a>
Holly Smith	NV Division of State Lands	<a href="mailto:hsmith@lands.nv.gov">hsmith@lands.nv.gov</a>
Michael Shakir	City of Henderson, Parks	<a href="mailto:michael.shakir@cityofhenderson.com">michael.shakir@cityofhenderson.com</a>
Marco Arellano	Mining Engineer	<a href="mailto:marcoare2@yahoo.com">marcoare2@yahoo.com</a>
D. Ryan Aglietti	NV Division of Environmental Protection	<a href="mailto:raglietti@ndep.nv.gov">raglietti@ndep.nv.gov</a>
Shadreh Gilliam	Southwest Gas	<a href="mailto:Shadreh.gilliam@swgas.com">Shadreh.gilliam@swgas.com</a>
Paul Mcneff	Southwest Gas	<a href="mailto:Paul.mcneff@swgas.com">Paul.mcneff@swgas.com</a>
Jim Dielschneider	LizardTech	<a href="mailto:Jim@lizardtech.com">Jim@lizardtech.com</a>
Mike Wucinich	City of North Las Vegas	<a href="mailto:Wucinichm@cityofnorthlasvegas.com">Wucinichm@cityofnorthlasvegas.com</a>
Rasmus Hansen	City of North Las Vegas	<a href="mailto:Hansenr@cityofnorthlasvegas.com">Hansenr@cityofnorthlasvegas.com</a>
Elizabeth Ashby	NV Div. of Emergency Management	<a href="mailto:eashby@dps.state.nv.us">eashby@dps.state.nv.us</a>
Phoebe Bender	NV Division of State Lands	<a href="mailto:pbender@lands.nv.us">pbender@lands.nv.us</a>
Art Ehrenberg	Southern Nevada Water Authority	<a href="mailto:art.ehrenberg@snwa.com">art.ehrenberg@snwa.com</a>
Craig Hale	Southern Nevada Water Authority	<a href="mailto:Craig.hale@snwa.com">Craig.hale@snwa.com</a>
Linda Wimberly	Lyon County	<a href="mailto:Lwimberly@lyon-county.com">Lwimberly@lyon-county.com</a>
Mike Derby	TRC Engineers	<a href="mailto:Mderby@trcsolutions.com">Mderby@trcsolutions.com</a>
Gary Johnson	NV Bureau of Mines and Geology	<a href="mailto:gjl@unr.edu">gjl@unr.edu</a>
Jeff Schmitz	NV Department of Transportation	<a href="mailto:jschmitz@dot.state.nv.us">jschmitz@dot.state.nv.us</a>
Ian Wosiski	Intermap Technologies	<a href="mailto:lwosiski@intermap.com">lwosiski@intermap.com</a>
Steve Ingersoll	NV Department of Information Technology	<a href="mailto:singersoll@doit.nv.gov">singersoll@doit.nv.gov</a>
Nellie Grossell	Nye County Assessor's Office	<a href="mailto:ngrossell@co.nye.nv.us">ngrossell@co.nye.nv.us</a>
Sandra Musselman	Nye County Assessor's Office	<a href="mailto:Sandy.musselman@co.nye.nv.us">Sandy.musselman@co.nye.nv.us</a>
Sam Musselman	Nye County Public Works	<a href="mailto:sammusselman@co.nye.nv.us">sammusselman@co.nye.nv.us</a>
Steve McCarthy	PSOMAS	<a href="mailto:Smccarthy@psomas.com">Smccarthy@psomas.com</a>
Marguerite McKee	U.S. Bureau of Land Management	<a href="mailto:mmckee@nv.blm.gov">mmckee@nv.blm.gov</a>
Dennis Bechtel		<a href="mailto:Dmbechtel@worldnet.att.net">Dmbechtel@worldnet.att.net</a>
Dawn Patterson	Douglas County	<a href="mailto:Dpatterson@co.douglas.nv.us">Dpatterson@co.douglas.nv.us</a>
Jesse Hickman	Fort Mojave Tribe	<a href="mailto:Cowboys@ftmojave.com">Cowboys@ftmojave.com</a>
Matt Hamilton	Clark County	<a href="mailto:Mhamilton@co.clark.nv.us">Mhamilton@co.clark.nv.us</a>
Lee Bice	Clark County DCP	<a href="mailto:Bice@co.clark.nv.us">Bice@co.clark.nv.us</a>
Don Harper	U.S. Fish and Wildlife Service	<a href="mailto:Don_harper@fws.gov">Don_harper@fws.gov</a>
L. Black	NV Department of Transportation	<a href="mailto:lblack@dot.state.nv.us">lblack@dot.state.nv.us</a>
Sandra Atkinson	Gnomon, Inc.	<a href="mailto:Satkinson@gnomon.com">Satkinson@gnomon.com</a>
J. LaRue Smith	U.S. Geologic Survey	<a href="mailto:Jlsmith@usgs.gov">Jlsmith@usgs.gov</a>
Jay L. Johnson	Michael Baker Corp.	<a href="mailto:Jljohnson@mbakercorp.com">Jljohnson@mbakercorp.com</a>
Brandy Martinelli	NV Division of Water Resources	<a href="mailto:bmartinelli@water.nv.gov">bmartinelli@water.nv.gov</a>
Richard Wells	City of Las Vegas	<a href="mailto:Rwells@lasvegasnevada.gov">Rwells@lasvegasnevada.gov</a>
Vincent Lincoln	U.S. Bureau of Land Management	<a href="mailto:stephen_lincoln@nv.blm.gov">stephen_lincoln@nv.blm.gov</a>
Jo Moore	City of Fernley	<a href="mailto:Gis@cityoffernley.org">Gis@cityoffernley.org</a>
Eric Ingbar	Gnomon, Inc.	<a href="mailto:Eingbar@gnomon.com">Eingbar@gnomon.com</a>
Jesse Gonzalez	ESRI	<a href="mailto:Jesse_gonzalez@esri.com">Jesse_gonzalez@esri.com</a>
Judy Brandt	Southern Nevada Water Authority	<a href="mailto:Judy.brandt@snwa.com">Judy.brandt@snwa.com</a>
Jan Gould	City of Reno	<a href="mailto:Gould@ci.reno.nv.us">Gould@ci.reno.nv.us</a>

PowerPoint presentation by Tom Sturm is attached.




R. Hess 6/25/08

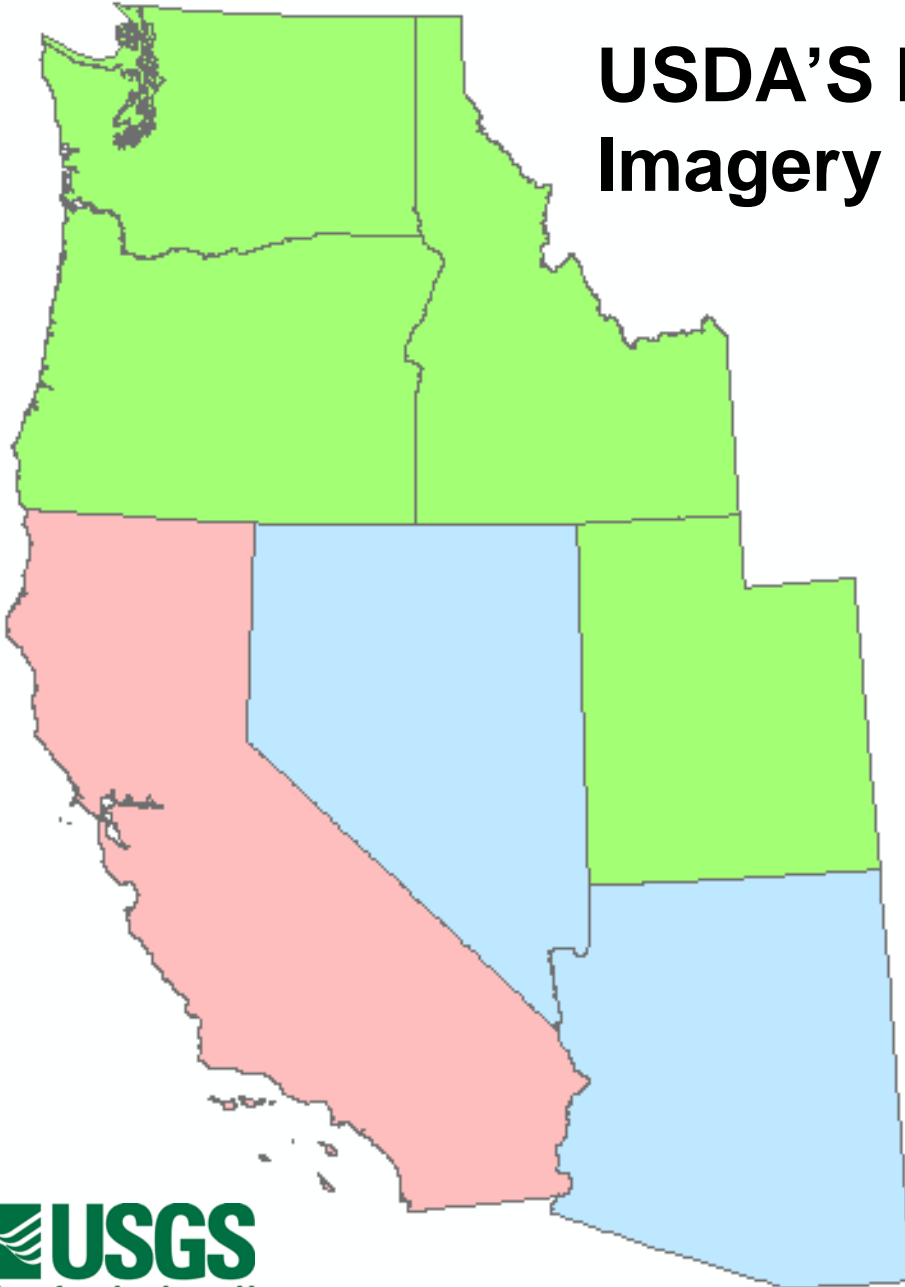
# Changes to USDA'S National Agricultural Imagery Program

- Discontinuing 2 Meter collection
- Moving toward a 3-year acquisition cycle for 1-meter data
- FSA to focus their funding on Agricultural Program Lands
- Funding model not resolved.
- Upgrades based on partnership participation:
  - Accuracy, 4-band collection, extending coverage
- Absolute horizontal accuracy (use of ground control)
  - Pilots were conducted in 2006 (UT) and 2007 (AZ)
  - Future states will be phased in
    - Once converted, state will not revert
    - 7 new states are planned for 2008
- 4-band imagery
  - Successful pilot was conducted in 2007 (Arizona)

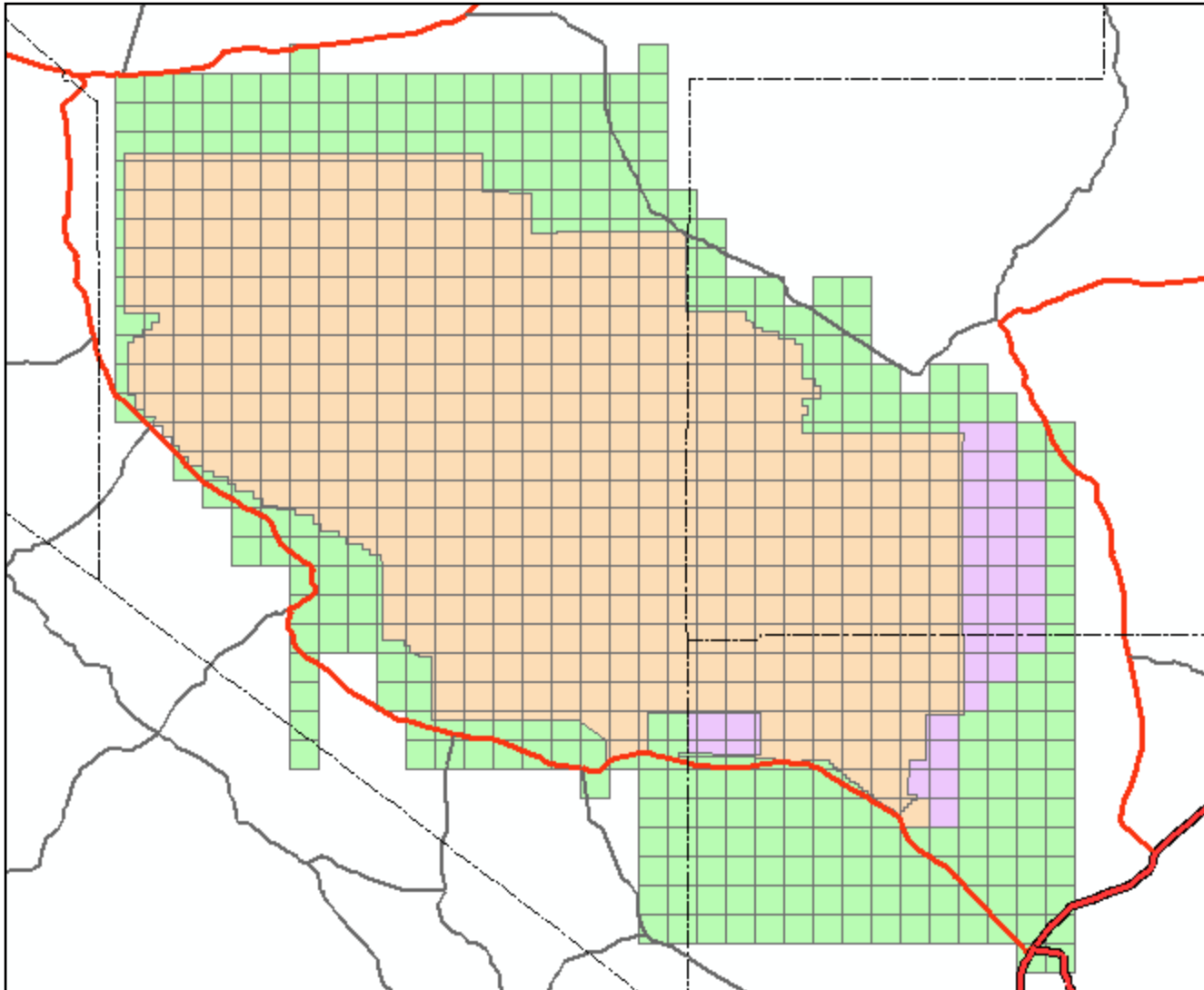
# USDA'S National Agricultural Imagery Program (NAIP)

## Unofficial Schedule



-  2009
-  2010
-  2011



# Southern Nevada Imagery Project



## Legend

-  Primary project area
-  FWS Lands add-on
-  No-Fly Zone

# National Hydrography Dataset

## Status

The initial High (24K) resolution version of NHD is complete.

Data is available for download from <http://nhd.usgs.gov/data.html>

The NHD program is moving towards developing stewardship relationships for maintenance.

Training in the use of NHD edit tools is available from the USGS.





National Geospatial Program Office

# Evolution of *The National Map*: 2008 and Beyond

April 18, 2008



U.S. Department of the Interior  
U.S. Geological Survey



Intelligent knowledge base

Ontology-driven

Feature-based, Quality aware

User-centered web interface

**3.0**

Consistent, integrated data

Trusted data source

Digital topographic maps

Print maps on demand

**2.0**

**The National Map**

**1.0**

National coverage 8 data layers

Seamless elevation, imagery, land cover, hydrography



# *The National Map 1.0 Accomplishments*

- Completed 1:100,000 and 1:24,000-scale **National Hydrography Dataset**
- Completed 30-meter seamless **National Elevation Dataset**; substantial progress toward 10-meter or better national elevation coverage
- Developed and implemented a program to leverage Federal, state, and local funds to acquire high-resolution **orthoimagery** over the nation's urban areas
- Developed and implemented “best practices” national geodatabases for **transportation, structures, and governmental units**
- Improved **Geographic Names** Information for the nation
- Developed and implemented an Open GIS Consortium Compliant **Catalog Database and Web Catalog Service** and registered more than 12,000 USGS and Partner GIS data layers in the initial *The National Map* Catalog implementation



# Taking Stock of *The National Map*

- The value of the data and partnerships of *The National Map* 1.0 is significant, but **the goal of nationally consistent, trusted, and integrated data and maps has not been fully met**
- The nation's need for a common base map across jurisdictional boundaries was dramatically demonstrated during the 2005 hurricane season
- The recognition of the need for greater **consistency, integration** and **direct access** to data has lead NGP to move toward a **centralized approach** for the next phases of development in *The National Map* 2.0

# *The National Map 1.0*

- *The National Map 1.0* has included both centralized and distributed data approaches
  - For some data themes, **partner data are ingested into and distributed from centralized databases** such as the National Hydrography Dataset (NHD) and the National Elevation Dataset (NED)
  - For others, rather than physically holding partner data, the database referred to as *The National Map* data catalog stores links to multiple, **distributed partner web map services**
- Centralized and distributed data are displayed online together via a viewer which is one service of *The National Map*

# ***The National Map 2.0***

- Integration into consistent, quality-assured, seamless databases
- Revitalization of the topographic map and print on demand capability
- Online services from consistent national data
- Improved data delivery to users
- Unify *The National Map* components (National Hydrography Dataset, Seamless Server, National Elevation Dataset, Geographic Names Information System, and others)



# *The National Map 2.0*

- Guided by a two year tactical plan
- Reduce data and systems stovepipes
- Focus on **products and services**
- Ensure data content quality
- Collect customer-driven requirements
- Produce reliable data inventory and status information
- Prioritize where to collect data within and among themes
- Align workforce and funding with priorities
- Develop data integration capability (horizontal and vertical)

# Planned TNM 2.0: Products and Services

- **Elevation**
  - 10-meter, gridded elevation data over 100% of the priority areas, finer than 10-meter where available
  - A plan, service, and specifications for elevation and automated contour generation that will:
    - Generate contours nation-wide from 30 meter and finer sources for 1:24,000 graphics
    - Generate new contours over 100% of the priority areas from 10 meter or finer sources
- **Geographic Names**
  - Collect administrative features along the east coast
  - Maintain data for Louisiana, Montana, Missouri, Idaho, and New Mexico through partnership agreements
  - Agreements for Google Earth to use and credit USGS Geographic Names
- **Hydrography**
  - National 1:24,000-scale coverage available and 100% of the Nation upgraded to base design standard
  - 50% of the Nation covered by stewardship agreements
  - 25% of the Nation upgraded to 1:24,000 scale or better by maintenance



# Planned TNM 2.0 Products and Services (continued)

- **Land Cover (Geography)**
  - NLCD 2001 land cover, impervious product, and canopy product completed
  - NLCD 1992–2001 change product completed
- **Orthoimagery**
  - 10% of the Nation (8,262 quads) acquired/updated per year
- **Boundaries (Governmental Units)**
  - Apply Census 2007 and 2008 MTAIP updates
  - Update major Federal boundaries
- **Structures**
  - National coverage of essential facilities, including hospitals, schools, police stations, and fire stations available
- **Transportation**
  - 20% of nation under active stewardship for roads data
  - Work with providers of other transportation data, including airports, pipelines, trails and railroads, to develop nationally maintained and integrated geospatial data inventories

# Planned TNM 2.0 Products and Services (continued)

- **Scanned 7.5 Minute Topographic Maps**
  - 3,000 7.5' quadrangles covering the east and gulf coast areas available as hi-res
  - Approximately 250 additional 7.5' hi-res for low selling, out-of-stock quadrangles
- **7.5 Minute Digital Topographic Maps**
  - Customer input on prototype products
  - Develop streamlined production process
  - Produce topographic maps based on quality and currentness of available data
- **Image Maps**
  - Image maps 2 counties deep (50 miles) along the Atlantic (Florida to Delaware) and Gulf (Florida to Texas) coasts
  - Automated image map production for emergency response needs
- **Data Download**
  - Data download prototypes

# Planned TNM 2.0 Products and Services (continued)

- **Web Services**
  - Web Mapping Services (WMS), Web Feature Services (WFS), Web Coverage Services (WCS)
- **Open Geospatial Consortium (OGC) Catalog**
  - New Version released with updated GOS catalog
  - TNM Catalog cleaned up
- **Marketplace**
  - New data type filter released
  - New download to spreadsheet released
- **Data Theme Status Graphics**
  - Template and process developed
  - Standardized status graphic
  - Status graphic website released

# Planned TNM 2.0 Products and Services Enabling Activities

## ■ Partnerships

- Liaisons develop a business plan focused on data discovery and acquisition for each State
- Data acquisition efforts, footprint, specifications, and work priorities aligned with a joint schedule and plans for *The National Map*
- Products and services feedback collected from partners and customers

## ■ Systems

- Agreements Management System
- Performance Management and Status System
- Portal and User Interface Improvements to GOS and *The National Map*
- Services, Dissemination, and Product Generation

## ■ Integration of data themes

- Horizontal integration
- Vertical integration