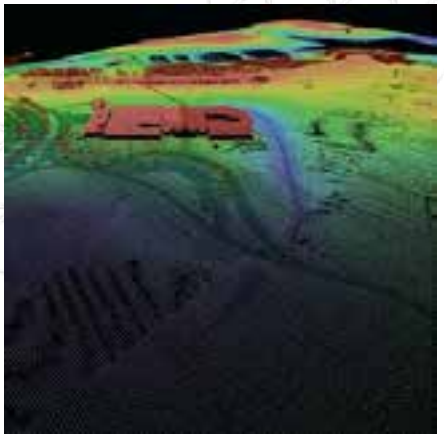
USGS National Geospatial Program – Understanding User Needs



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The National Map Your Source for Topographic Information

Dick Vraga
National Map Liaison for Federal Agencies
July 2015

Topics

- Background
- Communities of Use
- User Surveys
- National Map Liaisons
- Partnerships

USGS Mission

- Science organization – non regulatory
- Provide impartial, unbiased science information
- Mission Areas
  - Ecosystems
  - Environment Health
  - Natural Hazards
  - Energy and Minerals
  - Climate and Land-Use Change
  - Core Science systems

"How I view the purpose of the NGP"

Dr. Michael Tischler, Director, National Geospatial Program

Provides data to the public that is:

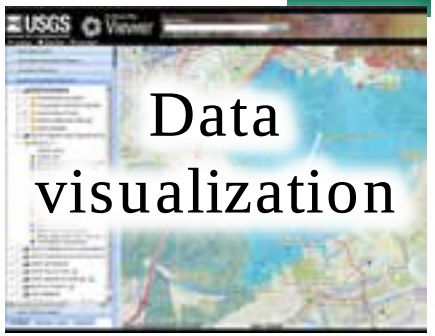
- ***Authoritative*** - data we can stand behind as the mandated federal agency
- ***Accurate*** - QA/QC, specs, and due-diligence to ensure the data is accurately representing the desired natural phenomena
- ***Accessible*** – Customers/clients are able to reach and properly leverage NGP data products
- ***Available*** - NGP produces the data our customers expect for their needs

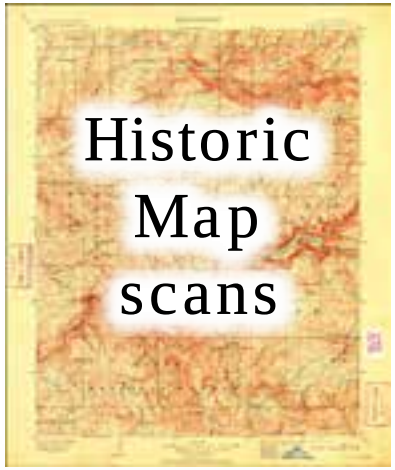
NGP data and services :

- Advance the scientific understanding of our natural world
- Inform critical decisions within private sector, Federal government agencies, State and Local government, and Tribes

National Geospatial Program Mission

- Organize, maintain, publish, and disseminate the geospatial baseline of the Nation's topography through the National Map





National Geospatial Program Strategic Direction

- Emphasis on meeting user needs
- Priority communities of use
  - Water - quality, quantity; flood risk management
  - Natural Resources Conservation – ecology, land management, wildfire
  - Geologic Mapping and Hazards – landslides, volcano, earthquakes

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User Engagement

- Cultivate and maintain long term relationships
- Relationships lead to partnerships
- Systematic outreach to users
- Improved products and services
- Improved value to users

Geologic Mapping and Hazards COU

Address the geospatial needs of geologic mapping professionals (2010)

- Users: National Cooperative Geologic Mapping Program, State Geological Surveys, federal, state & university partners
- Applications: Geologic mapping & tools
- Products: Symbolized layers; contours, lidar

Supports geologic hazards research and mitigation (2013)

- Users: Earthquakes, landslides, volcano, coastal scientists
- Applications: Fault zones, landslide processes and prediction, sea-level rise
- Products: Lidar, symbolized layers

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Lidar: very beneficial in determining extent of landslides

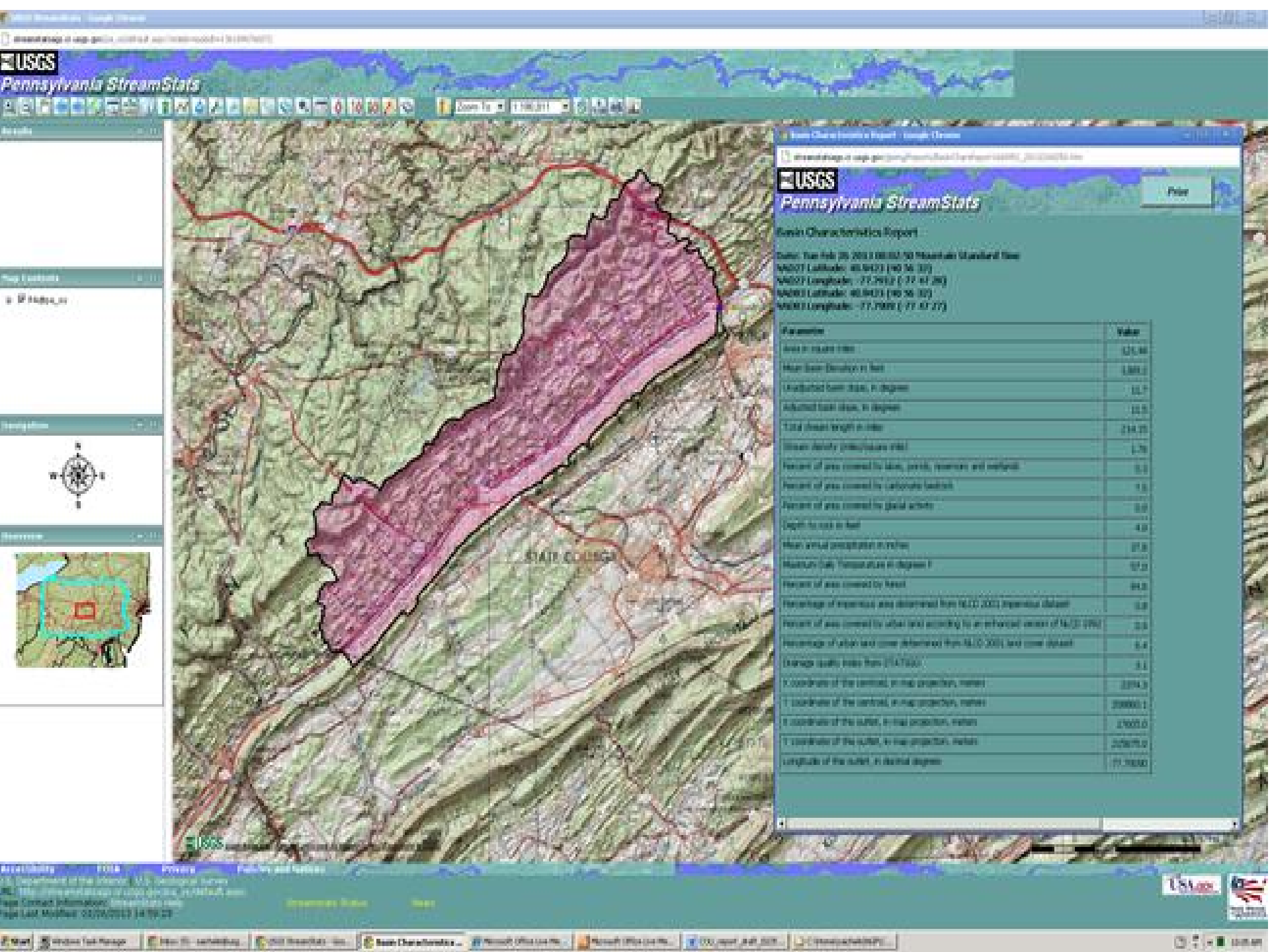
break out small landslides slides within larger landslides

limitations, but the best supporting tool out there

Greg McDonald / Rich Giraud: Utah Geological Survey

Water Resources COU

- Supports hydrologists and resource managers in the development of water resources data, methods, and analytic techniques (2013)
  - Users: Engineers, floodplain managers, modelers, field staff, natural resource managers
  - Applications: Hydrologic modeling, water resource modeling, flood inundation mapping
  - Products: Hydrography, lidar, cartographic products


USGS
Pennsylvania StreamStats
Print
Basin Characteristics Report
STATE COLLEGE

Natural Resources Conservation COU

- Supports natural resources conservation scientists and professionals(2014)
  - Users: USGS and DOI Scientists, Federal and State Resource Management agencies, non-profit organizations
  - Applications: Ecologic modeling, Landscape analysis, Wildfire Modeling, Habitat mapping
  - Products: Hydrography, lidar, cartographic products

COU Requirements

- Improvements made based on COU Input
  - Download framework for large datasets
  - Labeling of hydrographic features
  - Contour Representation
  - Service Reliability (uptime >99%)
- In Progress
  - Integration of Elevation and Hydrography Layers
  - Development of high resolution NHDPlus
  - NHD Web Feature Services
  - Z values for NHD features
  - Inclusion of US Topo data and symbology in ARC

COU Requirements

- FY 16 needs - Sample
  - Improvements in US Topo metadata particularly in the area of elevation source data and accuracy
  - Clip and Ship TNM products – alleviates problem with area of interest in the center of four tiles
  - Research into vegetation data derived from lidar – interested in full vegetation classification beyond just trees
  - Develop successor to current perennial/intermittent stream classification
  - Study feasibility and costs for developing, maintaining and distributing a hydrologically-enforced elevation product

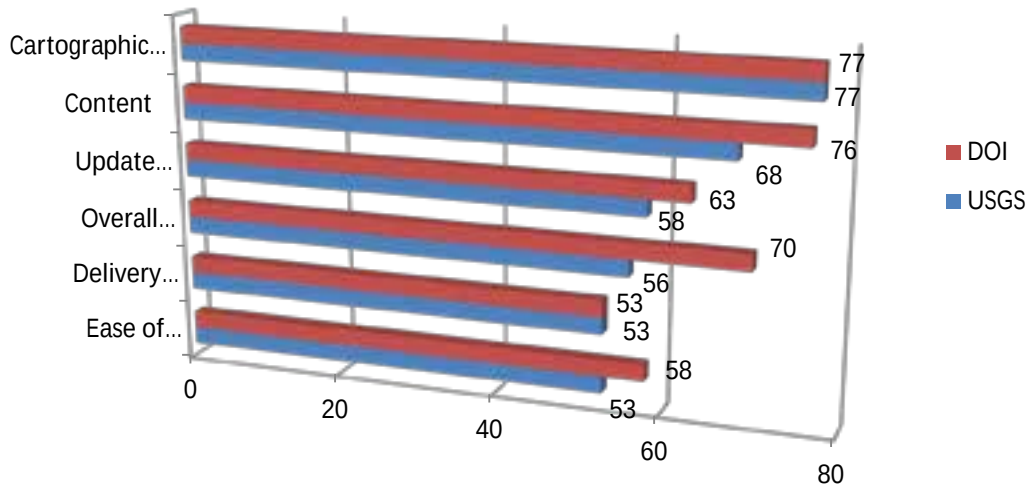
User Surveys

- Conducting systematic surveys of TNM use
  - Objectives
    - Document awareness and use of TNM Products and Services
    - Characterize how products and services are being used
    - Obtain feedback on product and services plans
    - Learn the similarities and differences between the COUs
    - Establish an initial measure of satisfaction

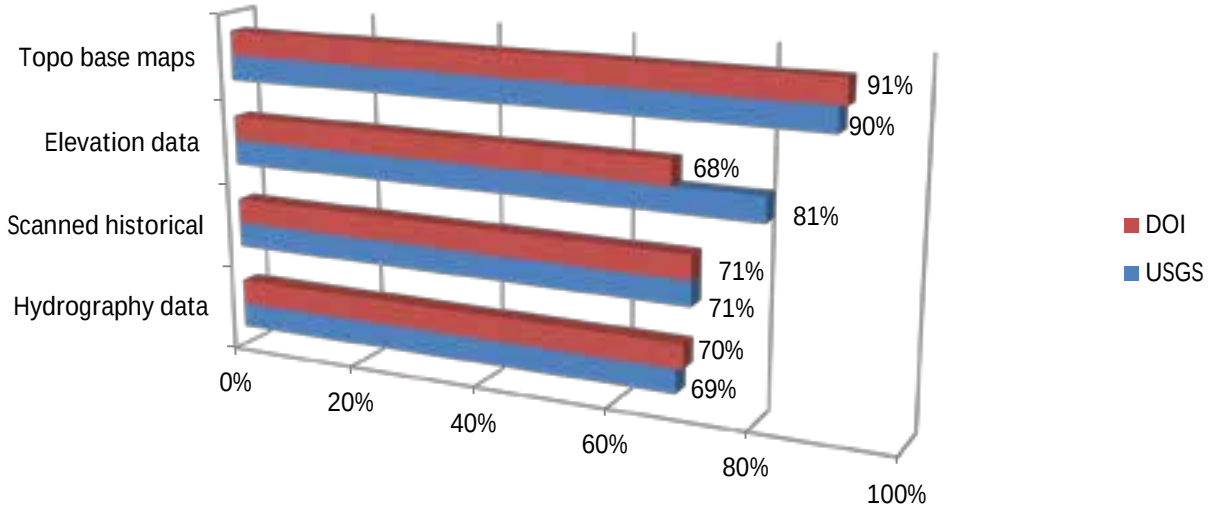
User Surveys

- Conducting systematic surveys of TNM use
  - Major Findings
    - TNM cartographic products are widely
    - Users view our data as important
    - Users generally satisfied with content, less satisfied with access/delivery
    - Users support future directions
    - DOI results generally aligned with USGS results
    - For DOI Bureaus the most frequently used source for all data types queried was a local server or drive

Satisfaction with US Topo Maps



TNM Product Use



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Interagency Coordination – Hydrography Requirements and Benefits Study (HRBS)

- Requirements assessment to understand business needs and benefits for improved water data
- 532 Responses
  - Federal – 222 (22 agencies)
  - States – 202 (50 states)
  - Regional / local government - 53
  - Tribal – 10
  - Not for profit – 26
  - Commercial - 19
- 595 Mission critical activities
  - Water quality
  - River and stream flow management
  - Flood risk management
  - Infrastructure and construction management
  - Oil and gas resources

National Map Liaisons

- Liaison role is evolving - What's the same?
  - Developing/maintaining relationships & partnerships
    - Focus on 3DEP and Hydrography
  - Each State will have an NGP P.O.C
    - Each liaison will cover more states
  - Will provide insight into NGP activities and directions

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The National Map Liaisons and Associate Liaisons

State Points of Contact

as of May 22, 2015

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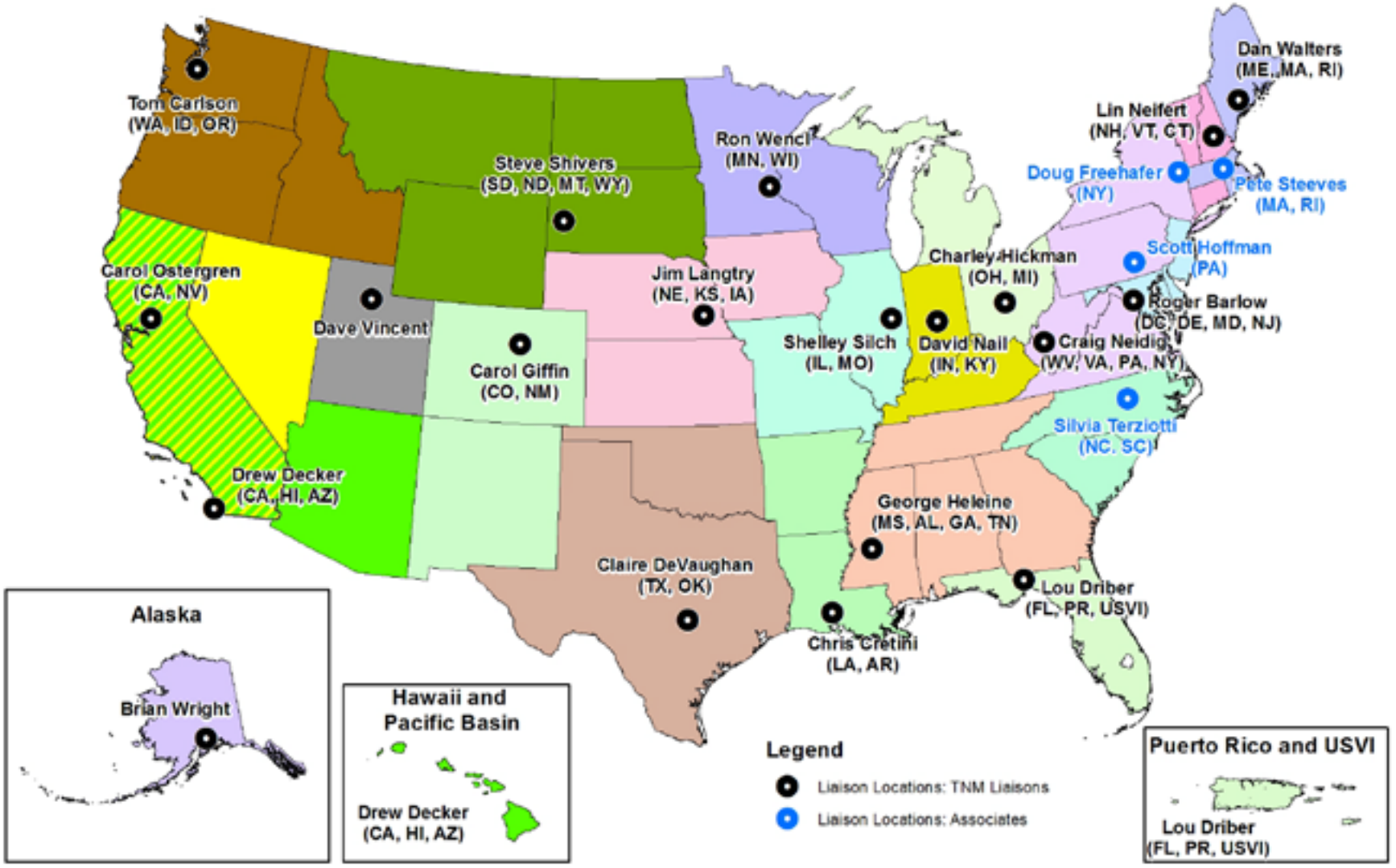


National Map Liaisons

- Liaisons role is evolving - What's the new?
  - Engaged with COUs
  - Promote TNM product use in applications
  - Guidance on product use
  - Bring user feedback to program
  - New partnerships activities and processes
  - Increased use of Associate Liaisons – bring science and applications knowledge to User Engagement

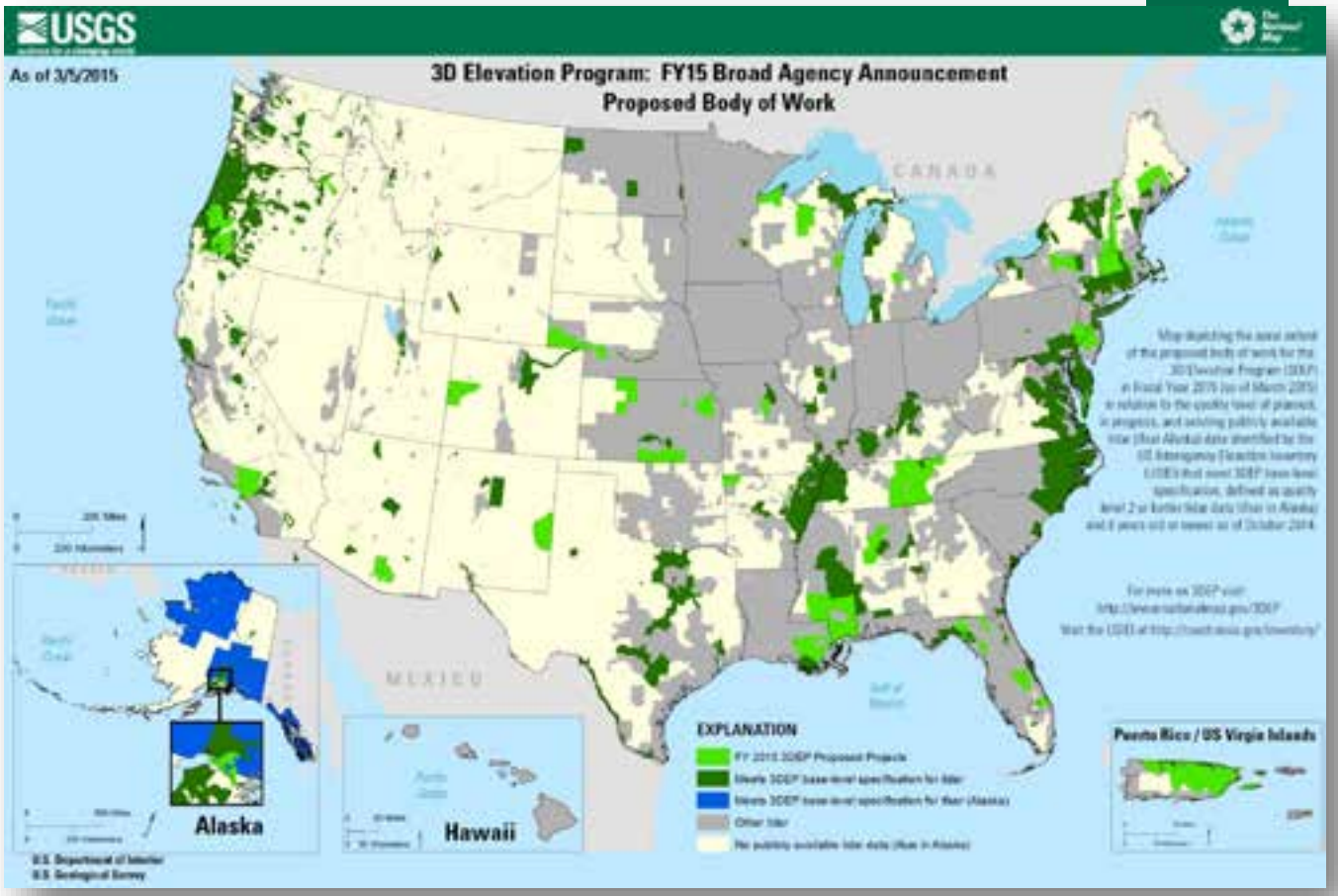
NGP Partnerships

- Partnerships continue to be a core value
  - Focus on Elevation and Hydrography
  - NHD/WBD Stewardship
  - Broad Agency Announcement for 3DEP
  - National Interagency Elevation Inventory
  - 3DEP Executive Committee
  - Alaska Mapping Executive Committee
  - National Map data from national sources
  - Census Bureau - Roads and Boundaries
  - U.S. Forest Service - Roads

Summary of Fiscal Year 2014 BAA Results

Awards Made in Fiscal Year 2015

- 72 pre-proposals submitted requesting funds over $50M
- 29 projects were funded
- USGS, FEMA, and NRCS committed $9.8M, with a total estimated value from partners of $26.5M



Results available at http://nationalmap.gov/3dep

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Questions & Discussion