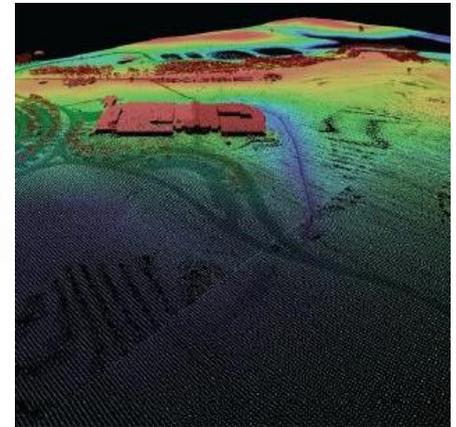
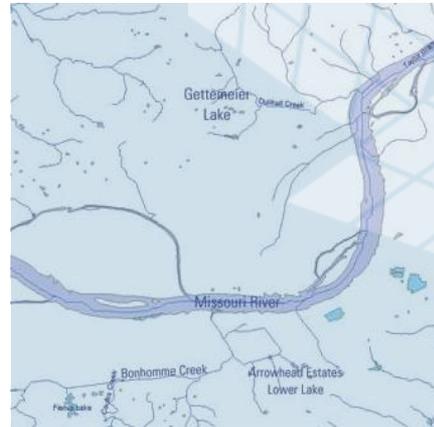
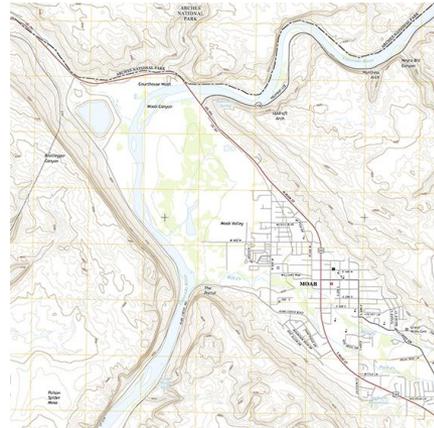




3D Elevation Program (3DEP)

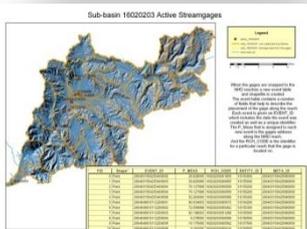
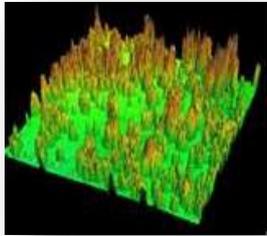


Vicki Lukas
Chief, NGP Topographic Data Services
June 9, 2015



+ The National Map

Geospatial products and services support key priorities



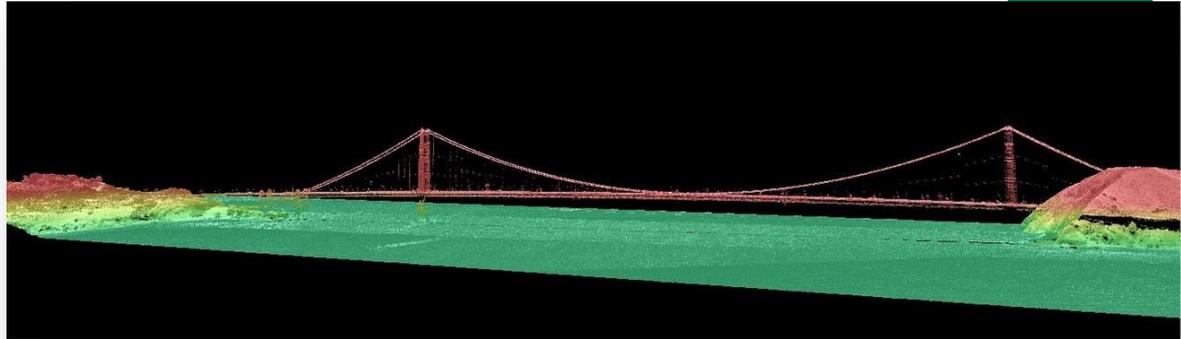
Area of National Leadership	Program Emphasis	DOI/Administration Priorities Supported
A-16 Lead for Terrestrial Elevation	3D Elevation Program (3DEP)	<ul style="list-style-type: none"> • Climate Action Plan • Building a Landscape-Level Understanding • Ensuring Healthy Watersheds and Sustainable, Secure Water Supplies • Powering Our Future and Responsible Use of Our Resources • Enhancing America's Great Outdoors • Open Water Data Initiative
A-16 Co-Lead for Inland Waters	National Hydrography Dataset and Open Water Data Initiative	
National Coverage of Topographic Maps	U.S. Topo and Alaska Mapping	

+ 3D Elevation Program (3DEP)

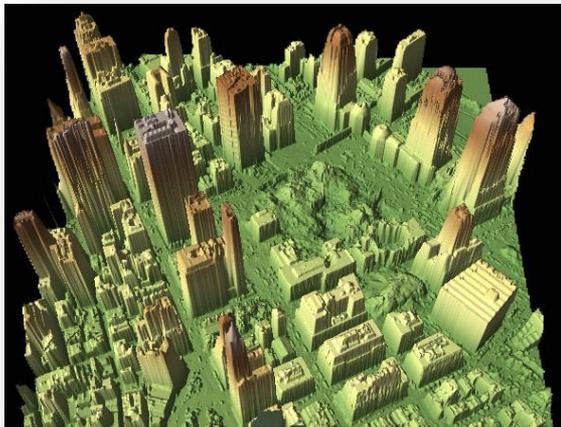
3

Applies ground-breaking lidar technology to acquire and distribute 3D data

Addresses a broad range of critical applications of national significance



- 3D data include surface elevations and natural and constructed features
- 3DEP increases the quality level of lidar being acquired to enable more accurate understanding, modeling, and prediction
- Goal to acquire national coverage in 8 years



+ What is the 3D Elevation Program?

3DEP is a call for community action to...

- Address the mission-critical requirements of 34 Federal agencies, 50 states, and a sampling of local governments, tribes, private and not-for profit organizations documented in the National Enhanced Elevation Assessment
- Increase the overall investment in 3D data from about \$45 M to \$146 M annually to return more than \$690 million annually in new benefits (ROI 5:1)
- Leverage collaboration among Federal, states, local and tribal partners to systematically complete national 3D data coverage in 8 years
- Leverage the capability of private industry mapping firms, create jobs
- Achieve a 25% cost efficiency gain by collecting data in larger projects
- Completely refresh national elevation data holdings with new lidar and ifsar elevation data products and services



Natural Resource
Conservation



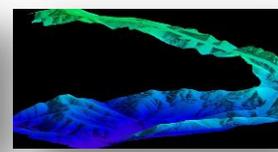
Infrastructure
Management



Flood Risk Mitigation



Precision Farming



Land Navigation
and Safety

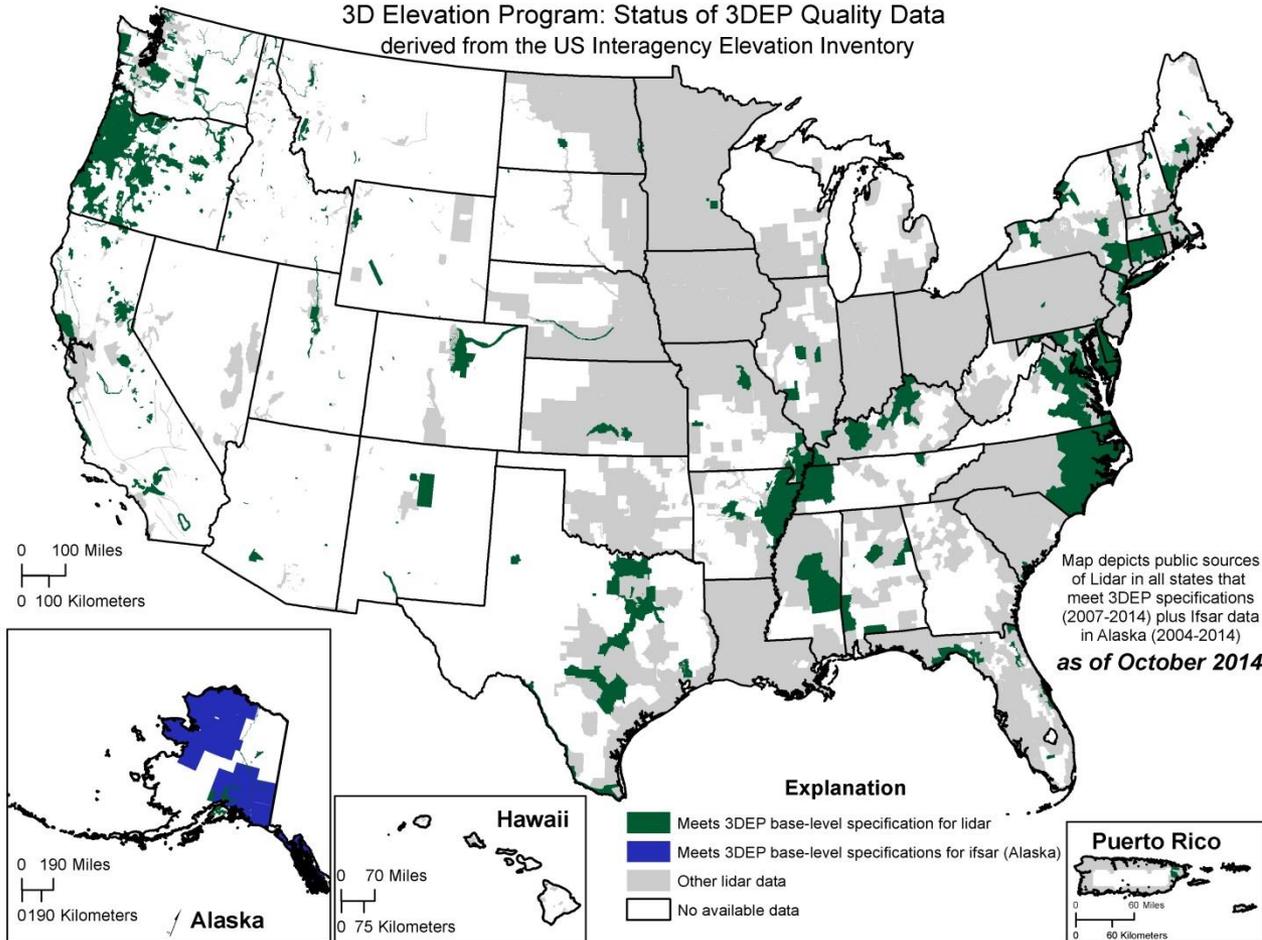


Geologic Resources and
Hazards Mitigation

+ U.S. Interagency Elevation Inventory

2014 Status Map of Publicly Available Lidar and Ifsar

3D Elevation Program: Status of 3DEP Quality Data
derived from the US Interagency Elevation Inventory



- Only 6.8% of the lower 49 states meets the 3DEP quality goal (QL2 or better) lidar coverage
- About half the State of Alaska needs ifsar data to complete the 3DEP goal for coverage



Geospatial Products and Services Contract

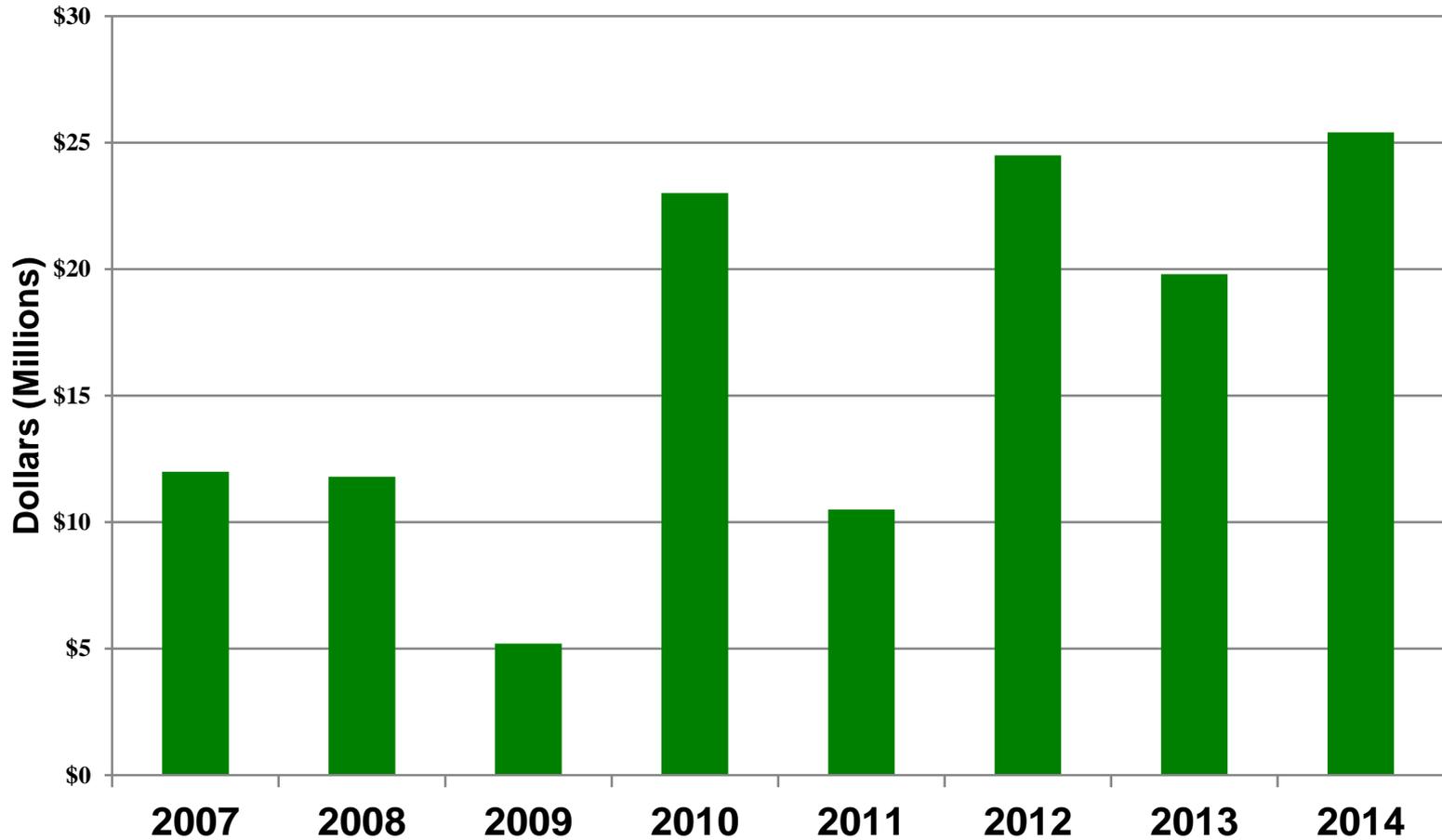
Background

- A suite of Indefinite Delivery Indefinite Quantity (IDIQ) contracts that provide a mechanism to obtain geospatial data services throughout the United States
- The contracts support *The National Map*, but may be used by other Federal, State, and local agencies
- Broad scope: photogrammetric mapping and aerotriangulation; orthophotography; thematic mapping; digital imagery applications; ifsar and lidar acquisition; GIS development; surveying and control acquisition, including ground-based and airborne GPS; and much more
- To ensure data quality and efficient development of standard products and services, the USGS prefers that partners use the GPSC when possible and practical for 3DEP data acquisition
- **Past Delegated Procurement Authority was \$250M over 5 years – GPSC3 will increase it to \$750M to accommodate increased production for 3DEP**



Geospatial Products and Services Contract

Funding History



+ Geospatial Products and Services Contract

DRAFT Schedule for Establishing GPSC3

Process Step	Planned Date
Contracting Officer to notify firms not selected	June 29
RFPs sent out to selected firms	July 8
RFP evaluation and negotiations	July 8-28
Request for proposal revisions	July 28 – Sept. 7
Legal review	Sept. 7 - 21
Begin awarding contracts	Sept. 21

Note that there are still GPSC2 contracts that remain active well into 2016



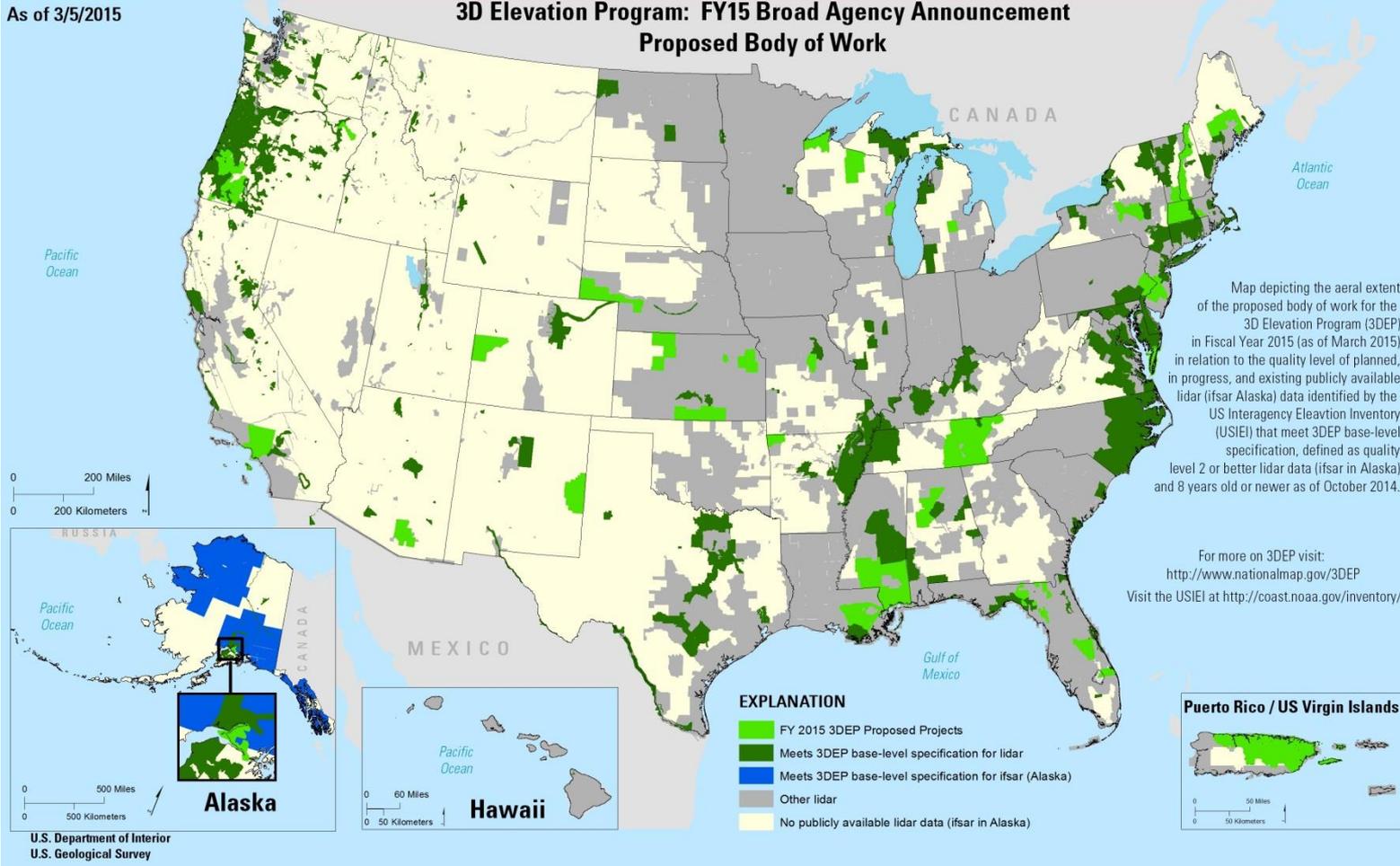
Broad Agency Announcement (BAA)

Background

- As follow-up to the President's announcement, the USGS issued a BAA via FedBizOps that provides information on how to partner with the USGS and other Federal agencies to acquire 3D elevation data
- Designed to provide increased visibility and opportunity to the broadest stakeholder community possible - Federal agencies, state and local governments, tribes, academic institutions and the private sector are eligible to submit proposals
- Establish a standard, fair and equitable competitive process that can easily be expanded to account for future growth in the 3D Elevation Program
- To ensure data quality and efficient development of standard products and services, the USGS prefers that partners use the GPSC when possible and practical; proposals may use GPSC or partner contracts; in both cases 3DEP makes use of the commercial sector to do the acquisition
- A means to recognize, aggregate and inspire collaborative funding partnerships in support of multi-agency lidar data acquisition requirements

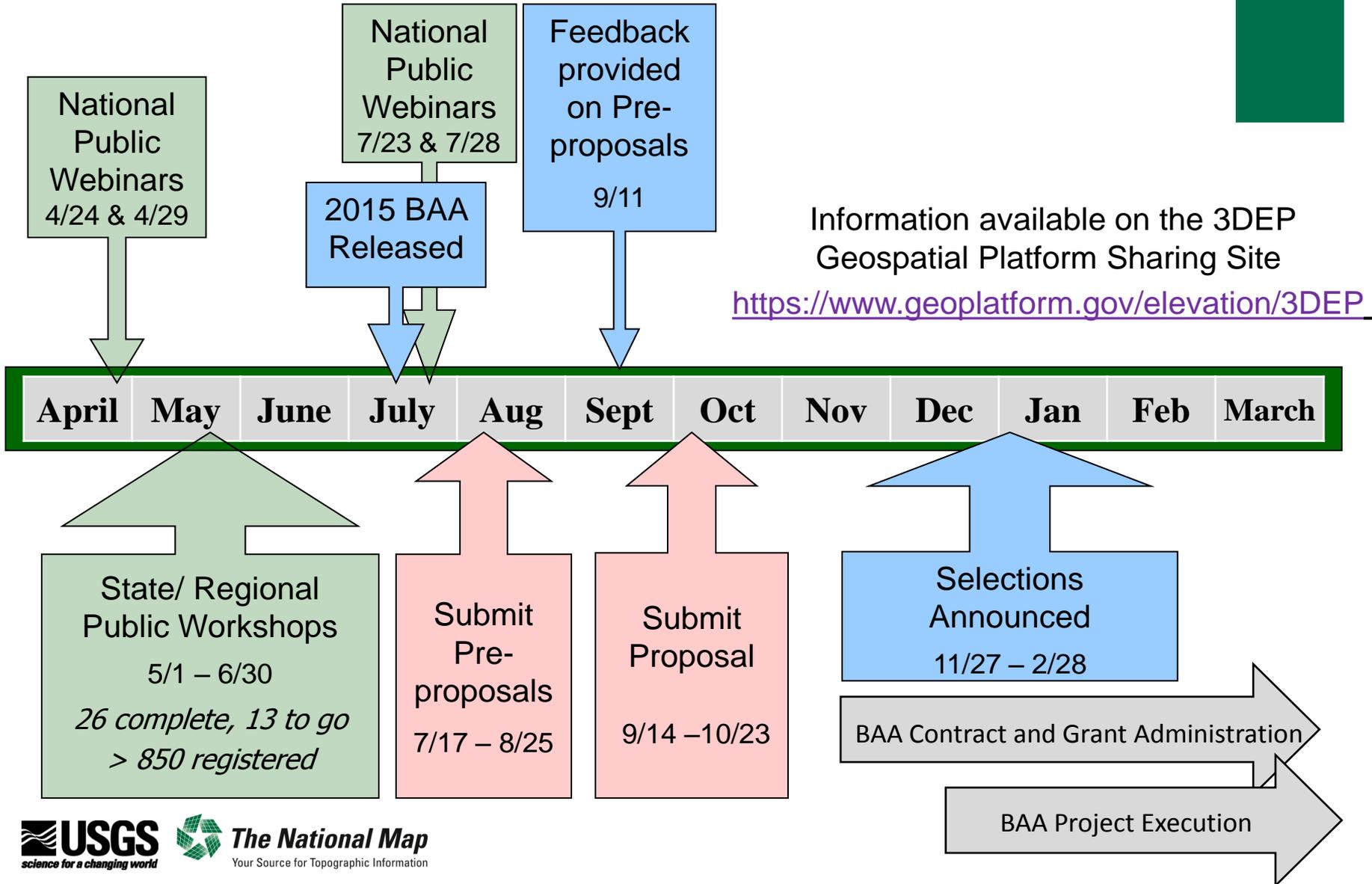
As of 3/5/2015

3D Elevation Program: FY15 Broad Agency Announcement Proposed Body of Work

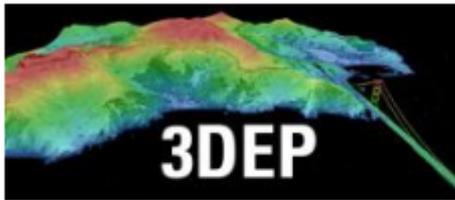


- 72 pre-proposals submitted, requested funds over \$50M, 29 were funded
- Total estimated committed = \$9.8M, with a total estimated value of \$26.5M (estimates will be refined)
- The \$9.8M is comprised of USGS, FEMA and NRCS funds
- Total square miles is estimated at 94,114, with average project size of 3,245 sq mi
- Additional selections may follow with remaining funding as project estimates are refined and FY15 funding is clarified

+ 3DEP BAA Timeline



NGDA Elevation Theme Community



3D Elevation Program (3DEP) FY15/16 Broad Agency Announcement (BAA) Information Sharing Site

What is 3DEP?

The U.S. Geological Survey (USGS) National Geospatial Program is developing the [3D Elevation Program](#) (3DEP) to respond to growing needs for high-quality topographic data and for a wide range of other three-dimensional (3D) representations of the Nation's natural and constructed features. The primary goal of 3DEP is to systematically collect 3D elevation data in the form of light detection and ranging (lidar) data over the conterminous United States, Hawaii, and the U.S. territories, with data acquired over an 8-year period. Interferometric synthetic aperture radar (ifsar) data will be acquired for Alaska, where cloud cover and remote locations preclude the use of lidar in much of the State. The 3DEP initiative is based on the results of the [National Enhanced Elevation Assessment](#) that documented more than 600 business uses across 34 Federal agencies, all 50 States, selected local government and Tribal offices, and private and nonprofit organizations. A fully funded and implemented 3DEP would provide more than \$690 million annually in new benefits to government entities, the private sector, and citizens.

Today, about \$50 million is invested annually in lidar and ifsar data by all public agencies, and the [U.S. Interagency Elevation Inventory](#) shows that only six percent of the lower 49 States and territories has lidar data that meet the quality levels needed. An additional \$96 million is needed annually to implement 3DEP. This would result in a nearly 5:1 return on investment, save lives, and improve our environment through informed decisions.

3DEP is a "[Call for Action](#)" because no one entity can accomplish it independently. 3DEP presents a unique opportunity for collaboration between all levels of government, to leverage the services and expertise of private sector mapping firms that acquire the data, and to create jobs now and in the future. When partners work together, they can achieve efficiencies and lower costs so that 3DEP can become a reality. When 3D elevation data are available to everyone, new innovations will occur in forest resource management, alternative energy, agriculture, and other industries for years to come.

To download 3DEP data visit: <http://nationalmap.gov/viewer.html>

3DEP Partnership Opportunities

[Attend a Public Meeting](#) - Learn more about how to apply for partnership funds or attend a workshop discussing proposed projects in your geographic area of

+ 3DEP Areas of Interest

The screenshot shows a web browser window displaying the SeaSketch application. The address bar shows the URL: <http://www.seasketch.org/#projecthomepage/52i>. The page header includes the NOAA logo and text: "U.S. Federal Mapping Coordination A Demonstration Site for Federal Mapping Data Acquisition Coordination". The SeaSketch logo is also present. The main map area shows a map of the United States with various colored overlays representing different mapping projects and priorities. The right-hand side of the interface features a "Data Layers" panel with the following sections:

- Data Layers** (selected)
- My Plans**
- Participate**

Below these are buttons for "Data Layers", "Basemap", and "Legend & Ordering". The "Data Layers" panel contains the following items:

- Mapping Priorities: Needs, Requirements**
 - Areas of Interest (specifying of data types is optional)
- Proposed Mapping Projects**
 - 3DEP 3D Elevation Program Areas of Interest
 - Acoustic/Sonar (Hydro, Bathy, Water Column, etc) Proposed
 - Other
- Planned and Ongoing Mapping Projects**
 - Topographic Lidar
 - Topobathymetric Lidar
 - Acoustic/Sonar (Hydro, Bathy, Water Column, etc)
 - Digital Imagery
 - Other
- Alaska/Arctic Priorities, Proposed, Planned, Ongoing**
 - Alaska/Arctic
- Existing Data**
 - Existing Data (not complete; more due diligence necessary)
- UAS Pilot NERRS Grand Bay**

At the bottom of the map area, there is a status bar that reads: "Map bookmark shown, with errors [undo changes](#) [view details](#)". The bottom of the browser window shows the Windows taskbar with the time 3:54 PM.

+ 3DEP Executive Forum

Governance and Executive Outreach

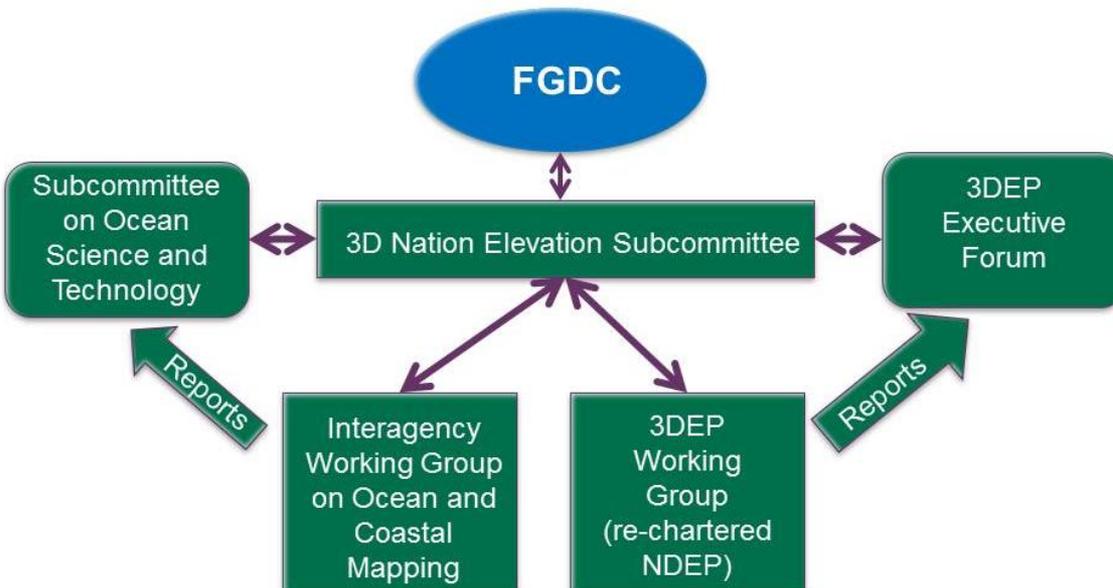
- **Purpose** - to facilitate executive dialog and collaboration on strategies to implement and sustain 3DEP for the benefit of all its stakeholders
- **Leadership** – USGS Associate Director for Core Science Systems, Chair
- **Objectives**
 - Monitor status, plans and coordination actions for 3DEP implementation
 - Strategize on significant developments regarding elevation or related geospatial activities, for example, legislation, GAO studies, supplemental funding, etc.
 - Share insights and develop strategies to communicate with industry and other stakeholder groups that could play a role in 3DEP funding
 - Provide executive direction and input to NDEP as the operational coordinating body
- **Membership**
 - FEMA
 - NASA
 - NGA
 - NOAA
 - NPS
 - NRCS
 - USACE
 - USFWS
 - USFS
 - BLM
 - DHS
 - DISDI
 - EPA
 - Others

+ 3DEP Executive Forum

Topics for the next meeting – TBD late summer

- Approve charters for the 3D National Elevation Subcommittee, the Executive Forum and 3DEP Working Group
- OMB Budget cross cut results and next steps

+ Proposed Governance Structure



H. R. 4348—512

TITLE II—FLOOD INSURANCE

Subtitle A—Flood Insurance Reform and Modernization

SEC. 100201. SHORT TITLE.

This subtitle may be cited as the “Biggert-Waters Flood Insurance Reform Act of 2012”.

SEC. 100220. COORDINATION.

(a) INTERAGENCY BUDGET CROSSCUT AND COORDINATION REPORT.—

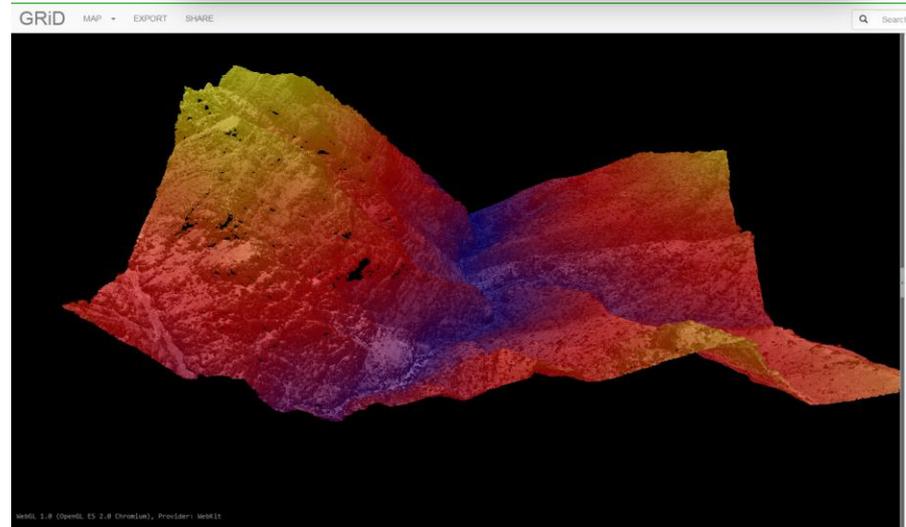
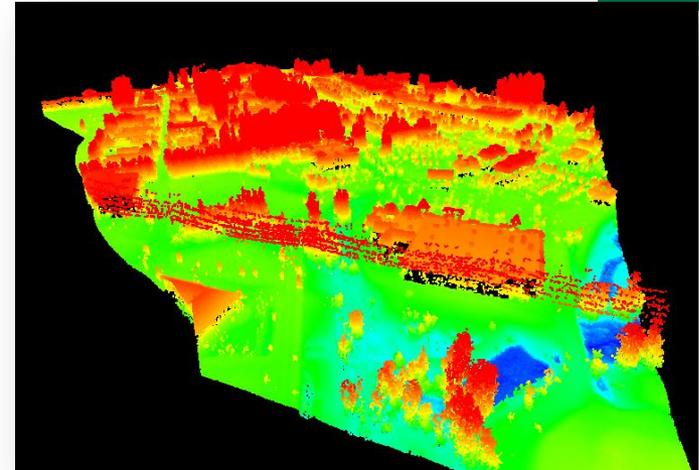
(1) IN GENERAL.—The Secretary of Homeland Security, the Administrator, the Director of the Office of Management and Budget, and the heads of each Federal department or agency carrying out activities under sections 100215 and 100216 shall work together to ensure that flood risk determination data and geospatial data are shared among Federal agencies in



Emerging 3D Technologies Working Group

E3D-WG under the 3DEP Working Group (Formerly NDEP)

- Members from USGS, NOAA, NGA, FWS, USACE, USFS, NRCS
- Coordination with Lidar Interoperability Work Group (LIWG) led by NGA
- Better understand emerging instruments: potential strengths and limitations
- Come to Federal consensus on whether these instruments can meet 3DEP requirements
- Test data against existing QL1 & 2 data and well understood survey ground control
- Current focus on high altitude and topobathy lidar systems



+ 3DEP Stakeholder Meeting

April 15, 1-5 at *The National Surveying, Mapping and Geospatial Conference*

- Purpose - to provide a status report to our primary Stakeholders and discuss strategies, challenges and opportunities to fully implement 3DEP in collaboration
- Stakeholders
 - 3DEP Executive Forum
 - American Society for Photogrammetry and Remote Sensing (ASPRS)
 - Association of American State Geologists (AASG)
 - Association of State Floodplain Managers (ASFPM)
 - Coalition of Geospatial Organizations (COGO)
 - Management Association for Private Photogrammetric Surveyors (MAPPS)
 - National Geospatial Advisory Committee (NGAC)
 - National Society of Professional Surveyors (NSPS)
 - National States Geographic Information Council (NSGIC)

+ Thank you!

