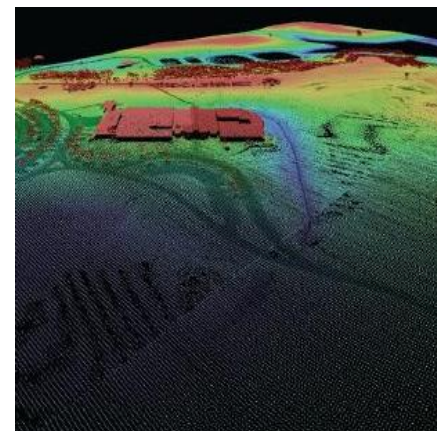
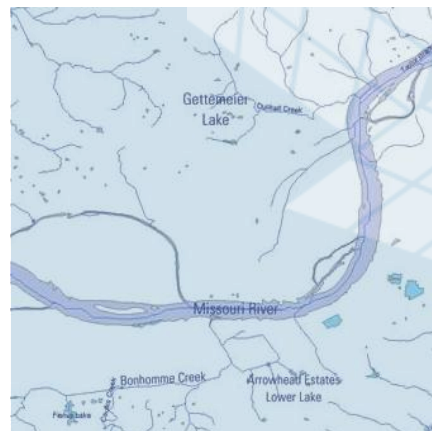
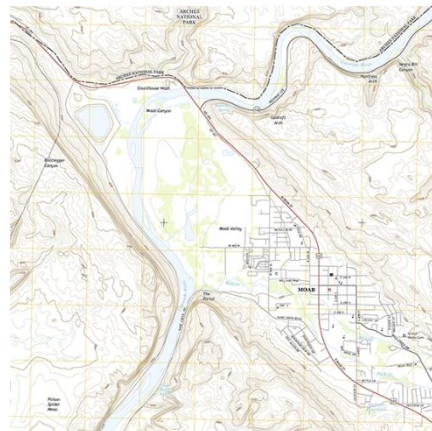




What's New With The USGS National Geospatial Program?



Claire DeVaughan
USGS National Geospatial Program
National Map Liaison for Oklahoma and Texas
September 22, 2015



+ What's new?

- 3D Elevation Program (3DEP)
- Hydrography Requirements and Benefits Study (HRBS)
- The National Map – new data download functions
- The National Map – services in ArcMap
- The National Map – mobile mapping
- US Topo
- Topoview & Historical Topographic Map Collection

3DEP is a Partnership Program

- National lidar coverage with ifsar in Alaska in 8 years
- Address the mission-critical requirements of 34 Federal agencies, 50 states, and other organizations documented in the National Enhanced Elevation Assessment
- Return on investment 5:1
- Leverage the capability and capacity of private industry mapping firms
- 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



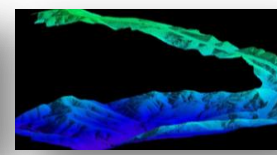
Infrastructure
Management



Flood Risk Mitigation



Precision Farming



Land Navigation
and Safety

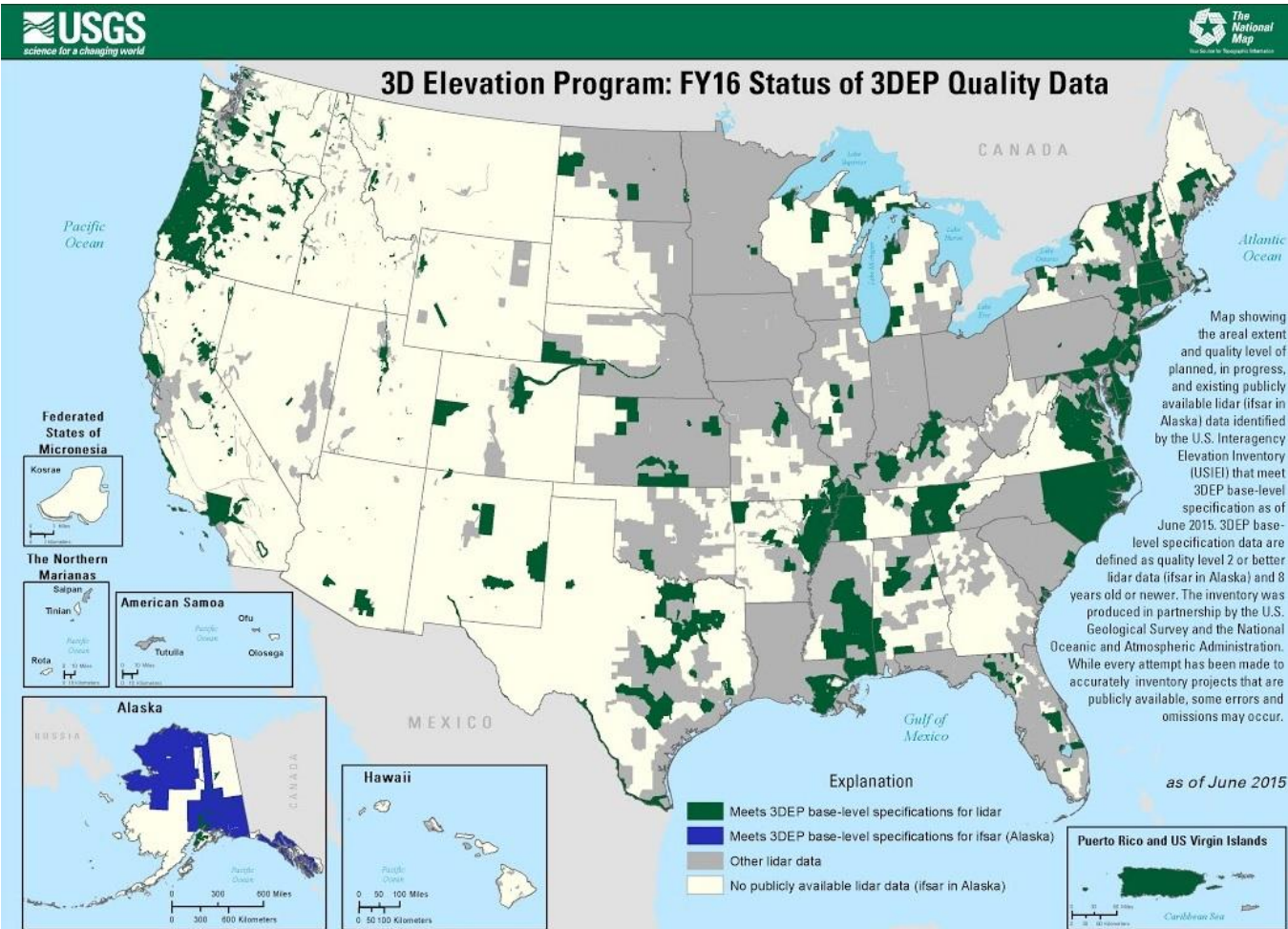


Geologic Resources and
Hazards Mitigation

+ U.S. Interagency Elevation Inventory

4

Status Map of Publicly Available Lidar and Ifsar (June 2015)



- ➔ Only 10% of the lower 49 states meets the 3DEP quality goal (QL2 or better) lidar coverage
- ➔ A little less than half the State of Alaska needs ifsar data to complete the 3DEP goal for coverage

Quality Level

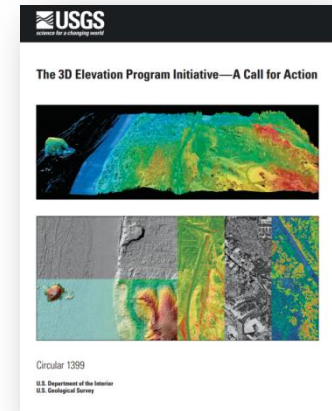
Quality Level	Source	Vertical Accuracy (RMSEz)	Nominal Pulse Spacing (NPS)	Nominal Pulse Density (NPD)	DEM Post Spacing
QL1	Lidar	10 cm	0.35 m	8 points/sq meter	0.5 meter
QL2	Lidar	10 cm	0.7 m	2 points/sq meter	1 meter
QL3	Lidar	20 cm	1.4 m	0.5 points/sq meter	2 meter
QL4	Imagery	139 cm	N/A	N/A	5 meters
QL5	Ilsar	185 cm	N/A	N/A	5 meters

+

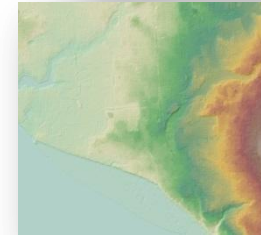
3DEP

READY for a national, 8-year program

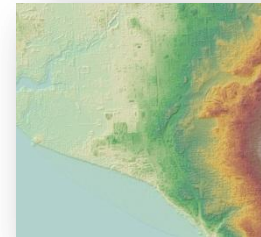
- Published plan for action based on extensive stakeholder input
- Issued two rounds of the Broad Agency Announcement (BAA) to solicit data acquisition partnerships
- Published base lidar specification v1.2
- New products and services being made available in 2015 from *The National Map*



6

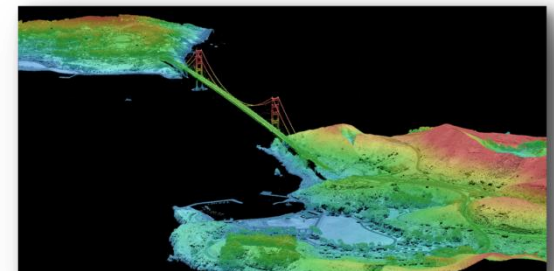


5 meter Alaska DEMs Alaska Ifsar ORIs



Alaska Ifsar DSMs

1 meter DEMs



Lidar Point Cloud

3DEP is a Partnership Program

Maximize Project Benefits and Minimize Project Risks

- Reduced unit costs through pooled funding with other partners, and economy of scale that 3DEP provides
- Access to qualified and experienced firms under contract that acquire and process aerial lidar data
- USGS programmatic infrastructure that issues and manages data acquisition contracts, and inspects, accepts, and distributes point cloud and derived data products
- The opportunity to “buy up” higher-quality data for demanding applications that are not satisfied by standard 3DEP data
- The opportunity to receive funding and acquire data on behalf of 3DEP



How to get involved in 3DEP

We invite and encourage your active participation

- Learn more, support, and communicate about 3DEP
- Join in building national lidar coverage by partnering with 3DEP
- Broad Agency Announcement (BAA)
 - www.grants.gov, funding opportunity # G15AS00123
- <http://nationalmap.gov/3dep>
- <http://www.geoplatform.gov/elevation/3DEP>

+ Hydrography Requirements and Benefits Study (HRBS)

Hydrography version of the elevation study conducted in 2011 that has resulted in the 3DEP Program

- Tracy Scopel at OWRB was the State POC, spearheaded the efforts to get a thorough representation of NHD users in OK
- Questionnaire completed by each respondent, with followup interviews
- 11 Mission-Critical activities grouped into 6 business uses
 - Current annual benefits approximately →\$1.1 million
 - Estimated new benefits from improved hydro data →\$3.3 million
- Study results will be finalized and published later this year

+ Projected benefits of improved hydrography data include

- Improved decision-making regarding water resource quality and availability
- More accurate base map data for modeling and mapping purposes
- Increased efficiencies in staff productivity
- Improved interactions with the public for activities such as permitting, education, and safety

+ The National Map (TNM)

New data download functions

- <http://viewer.nationalmap.gov/launch/>
 - Download Client
 - Download Manager



Tutorial videos will be available via YouTube!

+ The National Map (TNM)

Web Services to use directly in ArcMap

■ <http://viewer.nationalmap.gov/launch/>

- List of web services
- TNM Access API
- Point Query Service (PQS)
- How To Use Map Services

**Ask me about adding TNM
services to ArcMap!**

**YouTube Tutorial available
soon. Training document
is available now.**





The National Map (TNM)

Mobile Mapping: Topo Data on the Go

- www.usgs.gov/newsroom/article.asp?ID=3580
- Android or iOS
- YouTube video available soon
- Further documents available now, just ask!



-
- The National Map
US Topo
- OKLAHOMA CITY QUADRANGLE
OKLAHOMA
7.5-MINUTE SERIES
- 2 110 000 FEET (OK N)
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- OKLAHOMA CITY ZOO
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+ Topoview & Historical Map Archive

Entire Historical Topographic Map Collection is now available in GeoTIFF format !!!

- Historical topos have been available in GeoPDF format through TNM viewer & USGS Store
- National Geologic Map Data Base (NGMDB) has added additional file formats of the historical topos: GeoTIFF, JPEG, & KMZ
 - GeoTIFF files are a compressed, 300 dpi TIFF image format, with embedded georeferencing information so that the map can be used directly in GIS
- <http://ngmdb.usgs.gov/maps/TopoView/>
- Demo on YouTube:
<https://www.youtube.com/watch?v=kOpe3WXsZrQ>



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+ Thank you!

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