

USGS 3D Elevation Program

- Tennessee Department of Finance and Administration
- Office for Information Resources – GIS Services
 - Dennis Pedersen, Director
- *West TNGIC October 8, 2014*



3DEP Program Summary

- Acquire nationwide high res. LiDAR elevation data
- Backed by a comprehensive business plan (2011)
- Estimated annual benefits of \$1.2 billion nationwide
- Goal to start data production in January 2015
- Looking to establish partnerships/collaboration on funding the program now (Broad Area Announcement)
- USGS is proposing contributions up to 50%
- Seeking proposals from 3DEP supporters at Fed, State, and local gov. levels



Benefits for Top Business Uses

Rank		Annual Benefits	
		Conservative	Potential
1	Flood Risk Management	\$295M	\$502M
2	Infrastructure and Construction Management	\$206M	\$942M
3	Natural Resources Conservation	\$159M	\$335M
4	Agriculture and Precision Farming	\$122M	\$2,011M
5	Water Supply and Quality	\$85M	\$156M
6	Wildfire Management, Planning and Response	\$76M	\$159M
7	Geologic Resource Assessment and Hazard Mitigation	\$52M	\$1,067M
8	Forest Resources Management	\$44M	\$62M
9	River and Stream Resource Management	\$38M	\$87M
10	Aviation Navigation and Safety	\$35M	\$56M
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20	Land Navigation and Safety	\$0.2M	\$7,125M
Total for all Business Uses (1 – 27)		\$1.2B	\$13B

Return on Investment (5 Year Benefit)

- **Prorated State of TN ROI based on Federal survey**

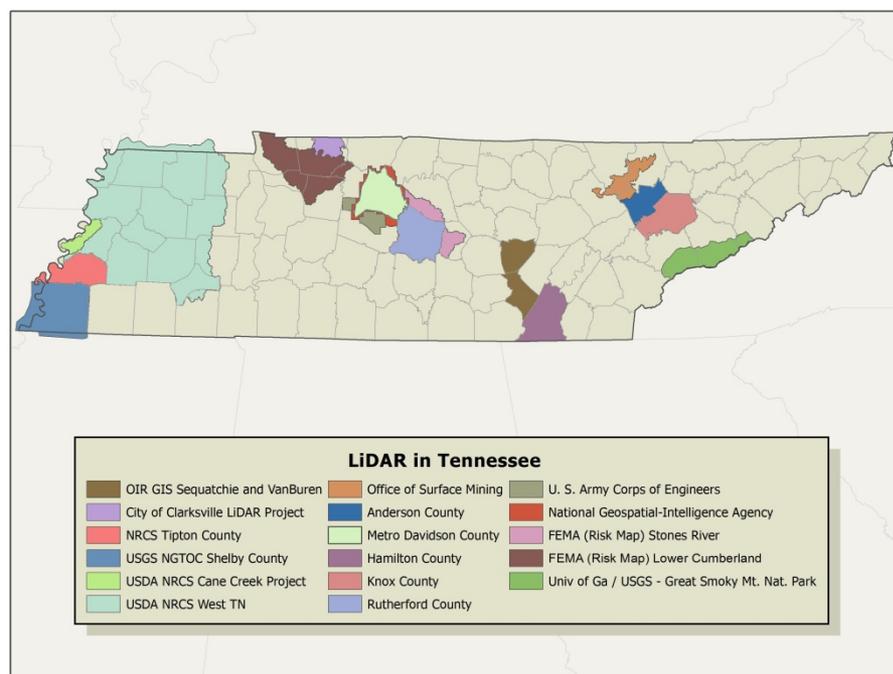
SEE THE PROJECT PROPOSAL DOCUMENT FOR DETAILS	
Flood Risk Management	\$13,924,859
Infrastructure Management	\$ 9,743,517
Natural Resources Conserv.	\$ 7,523,383
Agriculture	\$ 5,780,093
Water Quality	\$ 4,029,858
Hazard Mitigation	\$ 2,445,188
Forest Resources Management	\$ 2,076,592
Stream Resources Managemt.	\$ 1,815,440
Aviaition Navigation & Safety	\$ 1,653,750



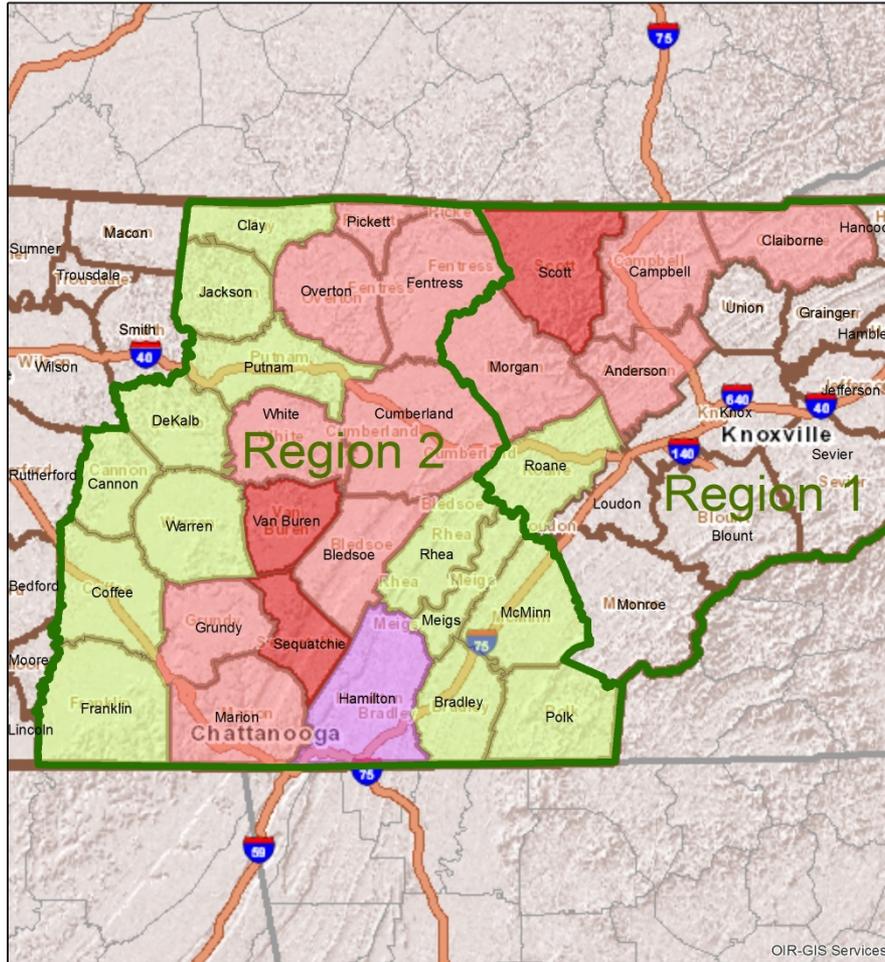
Existing LiDAR in TN

- **Approximately 20% coverage in the state**
- **Estimated cost of remaining 80% is: \$6 million**

Map of existing LiDAR coverage



Proposed Tennessee 3DEP Counties



	TDOT Region Boundaries
LiDAR	
	Existing QL2 Data
	TVA/Hamilton Co. Area of Interest
	DOI-OSM Area of Interest
	TDOT Area of Interest



Proposed TN 3DEP Partnership Funding Model

- TN Dept. of Transportation – 25%
- US Dept. of Interior – Office of Surface Mining – 25%
- Other government sources – 25%
 - USDA/NRCS
 - TVA
 - Hamilton Co./City of Chattanooga
 - DOE – Oak Ridge Office
 - TN Dept of F&A – OIR-GIS Services
- **Proposed USGS 3DEP Funding – 25% (\$670,000)**
- Estimated 27 county total cost - \$2.7 million



Conclusion:

- Submitted Pre-Proposal (Due date: 10/10/14)
- Full Proposal due 11/21/14
- Winter/Spring 2015 begin acquisition
- Start thinking about funding for East TN next year
- Existing LiDAR data available on TN Spatial Data Server: <http://tngis.org/lidar.htm>



Other State GIS Efforts:

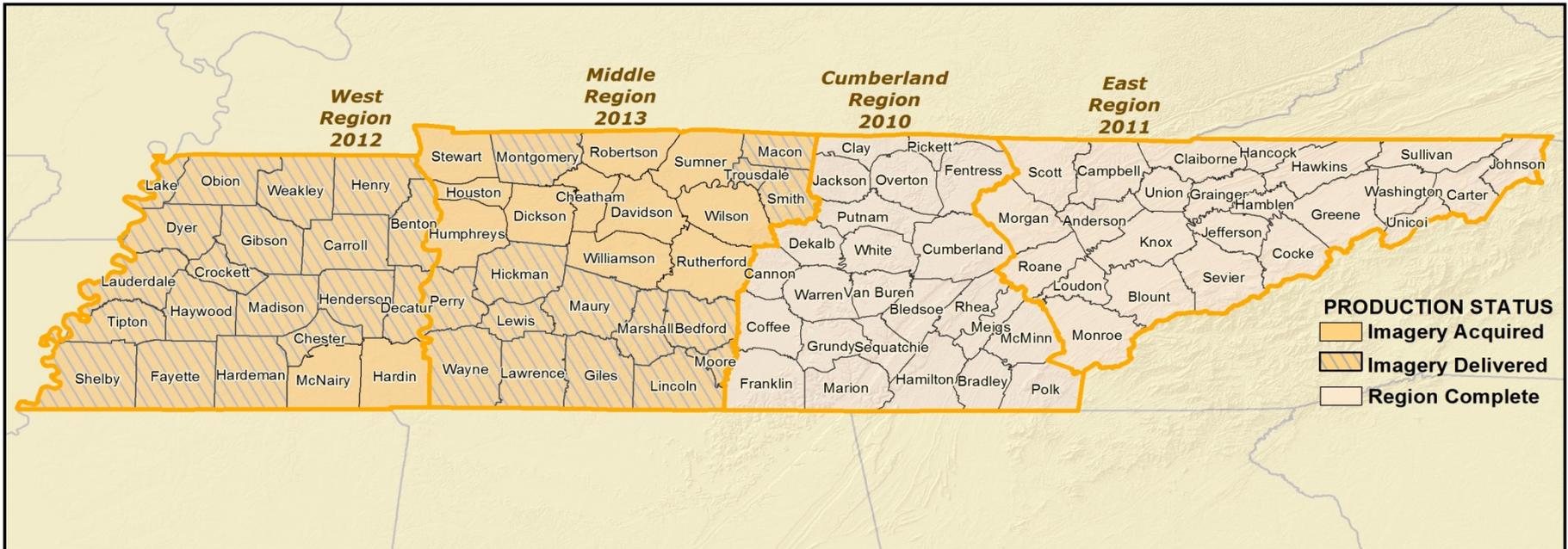
- Next Generation 911 Status
 - GIS data used to support call routing and location validation
 - TIPS data QC scripts installed in 911 districts
 - Create GIS address point based MSAG
 - January 2015 goal for West TN
- USDA NAIP Imagery
 - Beginning to download what is available from 2014
 - Create image cache for TNMap enterprise GIS users
- TDOT Ortho Imagery
 - 15 counties received for middle TN (TDOT Region 3)
 - OIR - GIS delivering to local gov.
 - Creating image cache for TNMap enterprise GIS users





Tennessee Base Mapping Program

Production Status as of October 2014



Tennessee Counties

Complete, In Progress, and Projected Production

2012 TDOT Imagery Counties Delivered & Published

Benton	Hardin	Shelby
Carroll	Haywood	Tipton
Chester	Henderson	Weakley
Crockett	Henry	
Decatur	Lake	
Dyer	Lauderdale	
Fayette	Madison	
Gibson	McNairy	
Hardeman	Obion	

2013 TDOT Imagery County Imagery Delivered

Bedford	Lewis	Stewart
Cheatham	Lincoln	Sumner
Davidson	Macon	Trousdale
Dickson	Marshall	Wayne
Giles	Maury	Williamson
Hickman	Moore	Wilson
Houston	Montgomery	
Humphreys	Robertson	
Lawrence	Smith	

2010 TDOT Imagery Counties Delivered & Published

Bledsoe	Grundy	Putnam
Bradley	Hamilton	Rhea
Cannon	Jackson	Sequatchie
Clay	Marion	VanBuren
Coffee	McMinn	Warren
Cumberland	Meigs	White
Dekalb	Overton	
Fentress	Pickett	
Franklin	Polk	

2011 TDOT Imagery Counties Delivered & Published

Anderson	Hancock	Scott
Blount	Hawkins	Sevier
Campbell	Jefferson	Sullivan
Carter	Johnson	Unicoi
Cocke	Knox	Union
Claiborne	Loudon	Washington
Grainger	Monroe	
Greene	Morgan	
Hamblen	Roane	

