DIGITAL MAPPING TECHNIQUES 2020

The following was presented at DMT’20
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The contents of this document are provisional

See Presentations and Proceedings from the DMT Meetings (1997-2020)

http://ngmdb.usgs.gov/info/dmt/
Lidar Data Distribution at the Washington Geological Survey

Abby Gleason - Lidar Manager
(360) 902-1560
Abigail.Gleason@dnr.wa.gov
Lidar is an incredibly useful dataset – for geology and far beyond. The value is exponentially increased when lidar and derivative products are effectively distributed to users.
Lidar in Washington

- Lidar collections extend back to 1996
- Over 270 lidar collections, average intake of 26 projects per year
- Mandated by Washington law to distribute publically
- Many solutions out there – WGS went with cloud storage and server configuration
Current Cloud Distribution

- WGS uses Amazon Web Services (AWS)
- Less expensive than originally anticipated, despite egress costs
- Reasonably secure
- Bandwidth to serve customers
- Flexible – could be expanded to include more derivative types
- Does take time to manage
Public Distribution, the Lidar Portal

- Focus on public download
- Point clouds (laz), DEMs, hillshades available
- Area of interest or project wide download options
- AWS cloud environment, 4 linux servers:
  - Web application server
  - Postgres database
  - Two instances of Arc Server
  - Load balancer

Visit [http://lidarportal.dnr.wa.gov](http://lidarportal.dnr.wa.gov)
Evolution of the Washington Lidar Portal

- Moving to Javascript API
- Will add a few tool and options
- Moving download data to s3 storage to reduce costs further
Users ask for expanded capabilities. In order to facilitate use and increase value, consider:

- Distributing expanded set of deliverables (slope, canopy height, etc.)
- State mosaics
- Better download for large areas
- On-the-fly projection change
Cloud storage and services can provide:

- Data archive
- Temporary processing capability or servers
- Distribution of large datasets to specific users (Drop Box, AWS, Google Drive)
- Collaboration on emergency response
Summary

- Value of lidar data increases in the hands of users
- WGS working on finding effective and efficient methods to distribute a diverse lidar dataset
- Distribution of lidar derivatives becoming more important to reach more users
- Cloud storage and services can offer flexibility, creativity for collaboration and distribution
Thank You!

Lidar resources and images at: http://www.dnr.wa.gov/lidar