## MSGIC Elevation Work Group Meeting April 22<sup>nd</sup> at 11am Virtual Meeting only

## <u>Agenda</u>

- Introductions
- Current de facto topo lidar standard
- 3DEP standards
- Discussion
- Recommendation vote

\_\_\_\_\_

## Meeting Notes

The meeting was well attended with 27 participants. While the intention was to discuss and vote on a state standard for the quality level of topographic lidar, the conversation evolved to included many more factors that should be included in a state standard for Lidar including tide coordination, classification, and metadata. These points and more are summarized below.

- The group reviewed the current lidar standards as presented on the USGS Lidar Base Specifications: <u>https://www.usgs.gov/core-science-systems/ngp/ss/lidar-base-specification-collection-requirements#quality-level</u>
- QL3 is no longer used or shown in federal datasets. Standard for most states including Maryland is QL2 though more and more QL1 being collected and even some examples of QL0
- Many agreed that Maryland should strive for a minimum of QL2 with goal of QL1 starting with counties with coastlines
- MD should strive for a long-range plan
- Montgomery and Prince George's collected QL1 data in January 2021 and expects to receive those deliverables in May 2021.
- Cost difference between QL levels 1 and 2 and ROI for the increased cost. Suggested that QL1 is ~3x the cost as compared to QL2 and includes 4x the points.
- Stormwater is driving much of the demand for QL1
- Other use cases discussed for the QL1 and specifically for Montgomery/Prince George's collection is the desire for realistic 3D multi-patch buildings for entire county for ArcGIS urban deployment. Update cycle of this layer is 3 year. Watershed analysis and better contours also a driver.
- Increased density of points enhances all output data
  - o Dips and irregularities in road surfaces can help identify standing water
  - Deriving roof lines
  - Many other examples
- Montgomery/Prince George's process single family rooflines processed every 3 years. QL2 data provided fairly realistic view however in many instance eaves are not pointing the right way.
- Adjust update frequency of collecting data is desired however funding is the barrier.
- 3DEP will be evaluating areas for change when considering funding and choosing locations that are experiencing more change.
- SLR and stormwater a factor in consideration

- More communication is needed about new and upcoming collections. This way other agencies can better plan coordinated analysis such as the MDE flood plain models. Work Group will continue to facilitate this type of communication.
- Montgomery/Prince George's will be made available via their data download portal (DEMs and contours) and will work with DoIT to incorporate into MD iMAP. They welcome assistance with making the LAS available.
- Minimum DEM cell size based on QL. What's the relationship and peoples understanding between point densities and DEM resolution?
- QL2+ discussion
  - Increase in point density from 2pts/sqm (QL2) vs 4pts/sqm (QL2+) without the cost of an 8pts/sqm product (QL1)
  - supports 50cm cell size as oppose to a 70cm QL2 product
  - No foreseen issue in partnering with USGS/NRCS on QL2+ collections
  - Also these QL2+ collections can include an increase in classifications particularly vegetative, building, and culvert classes which helps with floodplain and drainage analysis.
  - Budgetary numbers will be shared with the group.
- A vote was not taken on a state standard. The group would like more information on the QL2+ product before taking a vote.
- The group gave general agreement that tide-coordinated topographic lidar acquisition as defined in the USGS Lidar Base Standards is a beneficial acquisition requirement for coastal counties. Financial considerations for tide coordinated acquisitions was discussed and it was suggested that these collections are 10-15% more expensive as compared to non-tide coordinated. Roger to obtain a cost margin needed to fund tide-coordination over not having tide-coordinated topographic lidar.
- Review of the NOAA on coastline revision in the West River (AA County) estuary.
- MSGIC training focusing on DATUMs on Monday, April 26, 2021
  - o <u>https://msgic.org/event-calendar/#id=10265&cid=1428&wid=701&type=Cal</u>
- NOAA National Geodetic Survey Geospatial Summit May 4<sup>th</sup> and 5<sup>th</sup>
  - o <u>https://geodesy.noaa.gov/</u>

## **Action Items:**

- Gather info on ql2+
- Develop a metadata template to work towards a state standard
- Gather information on the cost margin needed to fund tide-coordination over not having tide-coordinated topographic lidar.

Next Elevation Work Group Meeting – June 2<sup>nd</sup> 10:30am