

- QUALITY CONTROL CERTIFICATION - DOWL

I hereby certify that an independent ground survey was performed by DOWL under my supervision to obtain data for and to check the reliability of the Lidar Based surface model created by Quantum Spatial Incorporated (QSI).

This Quality Control data was collected between July 22nd and July 28th, 2019 and analyzed April 30th, 2020.

To independently check the lidar surface created by QSI, we compared 309 points to the completed lidar surface. For the Quality Control (QC) check, QSI returned the surface elevation for each of the points provided. The computed elevation from the lidar surface was compared to the field collected elevation for representative performance of the lidar surface and processing. Of the 309 points, 33 are vegetated, and the remaining 176 are non-vegetated. Of those points, they were effectively spread throughout the project in clusters based on access. Most points were collected from boat with minimal hiking. Of the Non-vegetated points, 90% were within +/-0.2', with the remaining outliers contained within +/-0.32'. Of the Vegetated points, 90% were within +/-0.5', with the remaining outliers contained within +/-1.28'. 95% of the points are within 1' of the lidar surface. Many more QC points were collected; however not all the area was mapped this season. Of the collected points 40% of the points were collected on Bare Earth surfaces, 20% were forested, 14% were shrubs and low brush, 23% were grass and dense lower vegetation and 3% were urban. Very representative of the observed acquisition area.



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April 30th 2020

Date

