Data Collection & Product Report for 2020 Seed Project: Morphodynamics of an Unvegetated Meandering River in the McLeod Springs Wash, Nevada

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Data Collection Summary:

Collection Dates, Flights:	1 flight on July 15, 2021 (DOY 196)
Aircraft, Equipment:	Aero Commander 500 (N161BL), RIEGL VQ-580 II (H2225798)
Flight Plan Parameters:	Flying Height: 600 m AGL, Speed: 140 kt, Overlap: 50%
Equipment Parameters:	PRR: 1200 kHz, LPS: 249/s, Scan Angle: ± 37.5°
Collected Area:	52.6 km²

GNSS Reference Station Summary:

Station Name	Operating Agency	Control Coordinates (NAD83(2011) / Ellipsoid)
BRAN	NCALM	38°50'40.96932" N, 117°11'24.03330" W, 1709.528 m
GSE3	NCALM	38°50'40.42043" N, 117°11'24.66924" W, 1709.661 m
TONO	UNAVCO	38°05'49.88270" N, 117°11'02.49626" W, 2066.801 m

Data Processing Summary:

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Data Adjustments:	Line-by-line roll/elevation correction
Ground Classification:	Two iterations of gentle ground determination, manual classification of misclassified ground
Elevation Model Generation:	Elevation values calculated from Kriging

Data Accuracy Summary

Strip-to-Strip Average	0.013 m
GCP Residual RMS	N/A

Data Product Summary:

Horizontal / Vertical Datum:	NAD83(2011) epoch 2010.00 / ellipsoid
Projection / Units:	UTM Zone 11N / meters
Point Cloud Tiles:	1000-m × 1000-m tiles in LAS format (Version 1.4) with non-ground (1), ground (2), low point (7), and high point (18) returns
Bare-Earth Elevation Model:	GeoTIFF @ 0.5-m resolution from classified ground
First-Surface Elevation Model:	GeoTIFF @ 0.5-m resolution with vegetation included

Area of Interest:
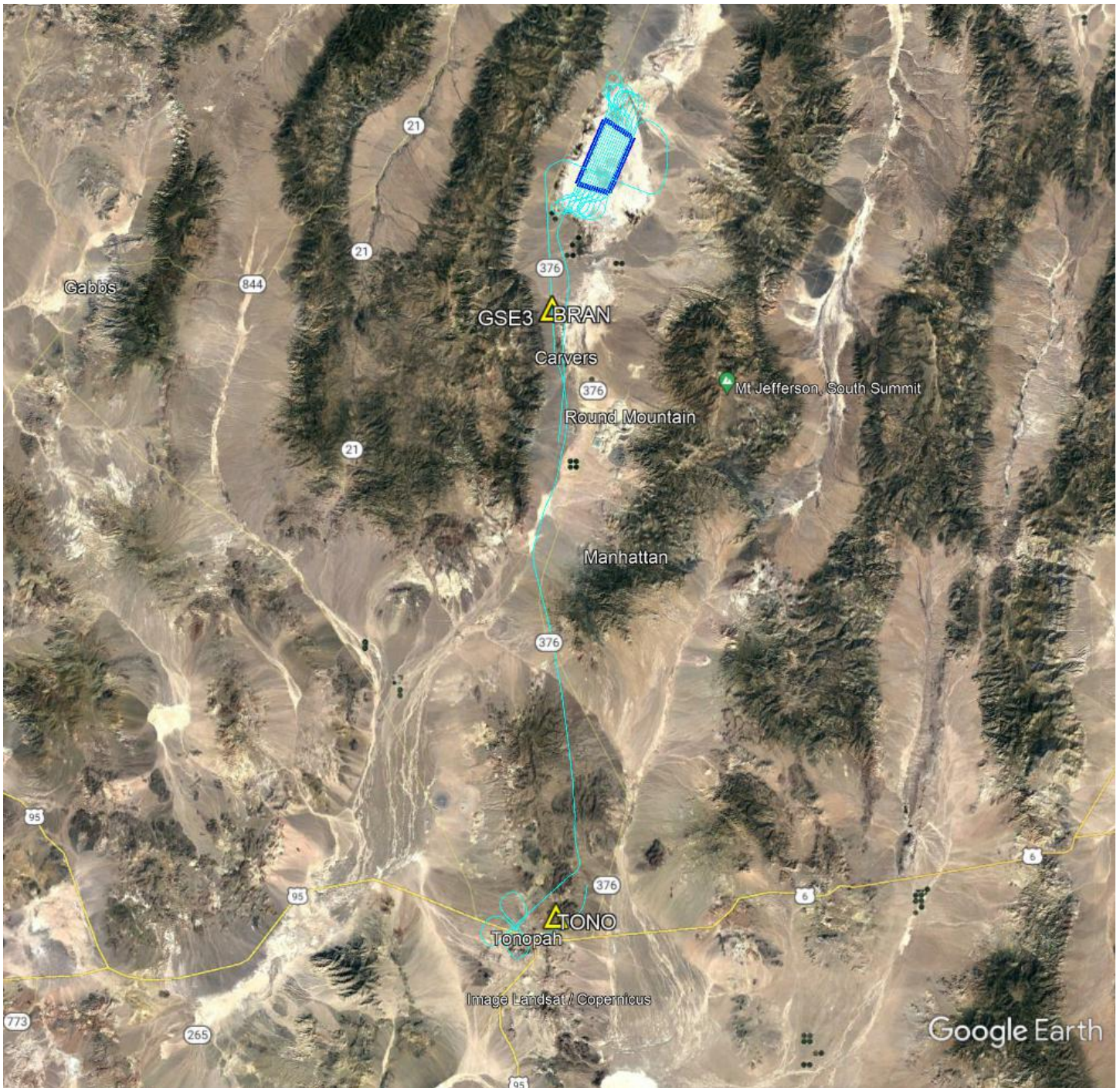
Location of survey polygon, aircraft trajectory, and GNSS reference stations

The requested survey area consisted of one polygon located north of Tonopah, NV. The polygon enclosed approximately 40.0 km² (15.5 mi²).