Data Collection & Product Report for 2018 Seed Project: Source Attribution of Eroded Sediments from Post-fire Runoff Events Using Nested Scales of Sequential Change Detection

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Data Collection Summary:

Collection Dates, Flights:	September 25, 2019 (DOY 268) comprising one (1) flight
Aircraft, Equipment:	Piper PA-31 Navajo Chieftain (N640WA) with Optech Titan Lidar (14SEN340)
Flight Plan Parameters:	Flying Height: 700 m AGL, Speed: 160 kt, Overlap: 50%
Equipment Parameters:	PRF: 75 kHz, Scan Angle: ± 30°, Scan Frequency: 26 Hz
Imagery Flight Plan Parameters:	N/A
Collected Area:	60.7 km²

GNSS Reference Station Summary:

Station Name	Operating Agency	Control Coordinates (NAD83(2011) epoch 2010.00/Ellipsoid)
CBHS	UNAVCO	34°08'18.80850" N, 118°37'47.25140" W, 285.281 m
CIRX	UNAVCO	34°06'34.38118" N, 118°56'14.21662" W, 488.885 m
CNPP	UNAVCO	33°51'27.46296" N, 117°36'32.06178" W, 301.003 m
GSE4	NCALM	34°05'26.51447" N, 117°47'10.57513" W, 265.736 m
LFRS	UNAVCO	34°05'42.24052" N, 118°24'46.12364" W, 147.589 m
MAT2	UNAVCO	33°51'24.32454" N, 117°26'12.06649" W, 399.018 m
P471	UNAVCO	33°33'43.63647" N, 117°32'27.06691" W, 175.501 m

Data Processing Summary:

Scan Angle Cutoff:	± 1°
Intensity Normalization:	700 m
Data Adjustments:	Line-by-line/channel-by-channel roll orientation and elevation correction, project elevation shift of -17.0 cm
Ground Classification:	Two iterations of moderate ground determination, manual classification of misclassified ground
Elevation Model Generation:	First-return calculated from average Z TIN model, bare-earth calculated from Kriging

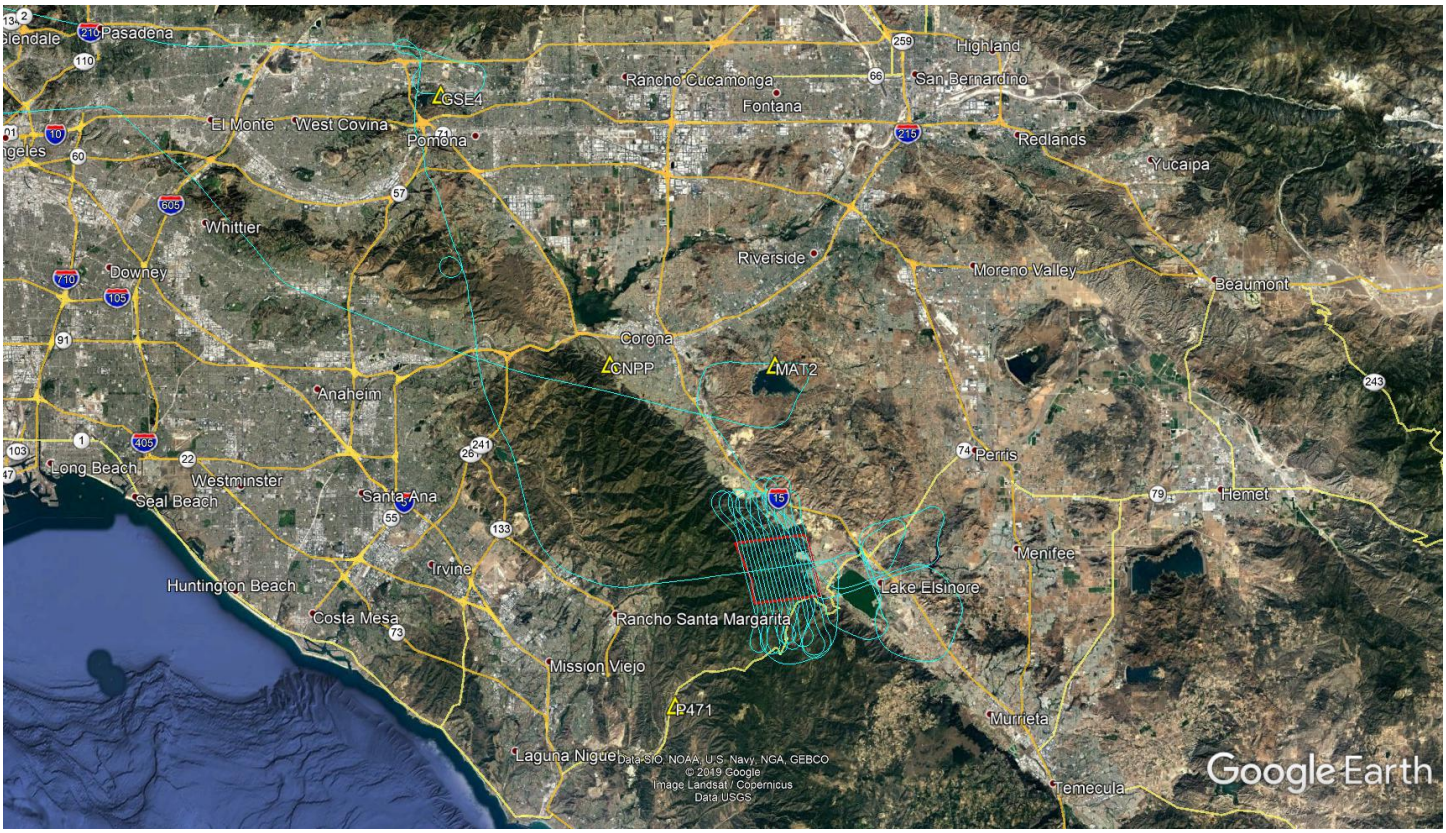
Data Accuracy Summary

Strip-to-Strip Average	0.088 m
GCP Residual RMS	N/A

Data Product Summary:

Horizontal / Vertical Datum:	NAD83(2011) epoch 2010.00 / NAVD88 (GEOID12B)
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 @ 1-m resolution from classified ground points
First-Surface Elevation Model:	GeoTIFF @ 1-m resolution with canopy and buildings included

Area of Interest:



Location of survey polygon, aircraft trajectory, and GNSS reference stations.

The requested survey area consisted of one polygon located in the Santa Ana Mountains, south of Riverside, CA. The polygon enclosed approximately 38.5 km^2 (14.9 mi^2).

Notes:

No visible imagery was collected over the site due to an instrument malfunction.