



Data Collection & Product Report for 2021 Seed Project: Using Lidar to Investigate Forest-Snow Interactions in a High Elevation Critical Zone

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Data Collection Summary:

Collection Dates, Flights:	1 flight on March 21, 2022 (DOY 080)
Aircraft, Equipment:	Robinson R66 (N7063M), RIEGL VQ-580 II (H2225798)
Flight Plan Parameters:	Flying Height: 500 m AGL, Speed: 60 kt, Overlap: 50%
Equipment Parameters:	PRR: 600 kHz, LPS: 200/s, Scan Angle: $\pm 37.5^\circ$
Collected Area:	50.1 km ²

GNSS Reference Station Summary:

Station Name	Operating Agency	Control Coordinates (NAD83(2011) / Ellipsoid)
TRK1	NCALM	39°19'09.36192" N, 120°08'51.36641" W, 1776.999 m

Data Processing Summary:

Data Adjustments:	Line-by-line roll/elevation correction
Ground Classification:	Two iterations of moderate ground determination
Elevation Model Generation:	Elevations values calculated from Kriging

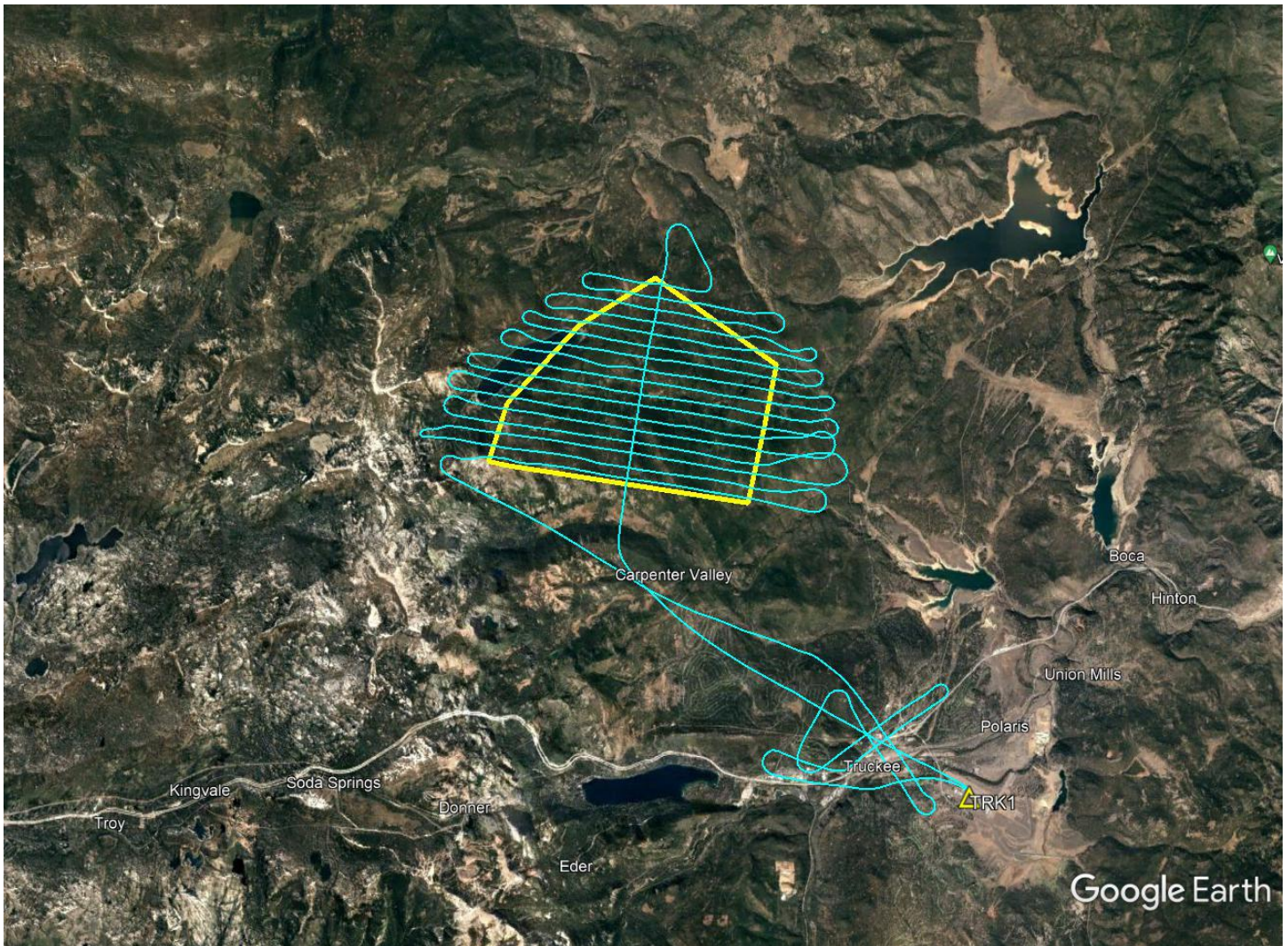
Data Accuracy Summary

Strip-to-Strip Average	0.036 m
GCP Residual RMS	0.053 m (calibration area)

Data Product Summary:

Horizontal / Vertical Datum:	NAD83(2011) / ellipsoid
Projection / Units:	UTM Zone 10N / meters
Point Cloud Tiles:	1000-m \times 1000-m tiles in LAS format (Version 1.4) with non-ground (1), ground (2), and low point (7) returns
Bare-Earth Elevation Model:	GeoTIFF @ 1-m resolution from classified snow and ground
First-Surface Elevation Model:	GeoTIFF @ 1-m resolution with canopy included

Area of Interest:



Location of survey polygon, aircraft trajectory, and GNSS reference station

The requested survey area consisted of one polygon located northwest of Truckee, CA. The polygon enclosed approximately 40.9 km² (15.8 mi²).