



**Data Collection & Product Report for 2019 Seed Project:  
Douglas Fire, Oregon – Post-Fire Debris Flow Detection and Erosion  
Under Private and Public Land Management**

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**Data Collection Summary:**

Collection Dates, Flights:	1 flight on November 8, 2020 (DOY 313)
Aircraft, Equipment:	Piper PA-31-350 Navajo Chieftain (N640WA), Optech Titan (14SEN340)
Flight Plan Parameters:	Flying Height: 500 m AGL, Speed: 150 kt, Overlap: 50%
Equipment Parameters:	PRF: 100 kHz, Scan Frequency: 26 Hz, Scan Angle: $\pm 30^\circ$
Collected Area:	60.0 km <sup>2</sup>

**GNSS Reference Station Summary:**

Station Name	Operating Agency	Control Coordinates (NAD83(2011)/Ellipsoid)
GSE3	NCALM	42° 22' 52.26247" N, 122° 52' 45.24568" W, 372.380 m
GSE4	NCALM	42° 30' 38.96669" N, 123° 23' 31.09196" W, 312.839 m
P368	UNAVCO	42° 30' 12.67448" N, 123° 23' 00.25548" W, 319.961 m
P735	UNAVCO	42° 41' 29.78135" N, 123° 13' 51.53873" W, 1578.201 m

**Data Processing Summary:**

Scan Angle Cutoff:	$\pm 1^\circ$
Intensity Normalization:	500 m
Data Adjustments:	Project elevation shift of -0.18 m
Ground Classification:	Two iterations of moderate ground determination, manual classification of misclassified ground
Elevation Model Generation:	Bare-earth generated from Kriging, first-return calculated from average Z TIN model

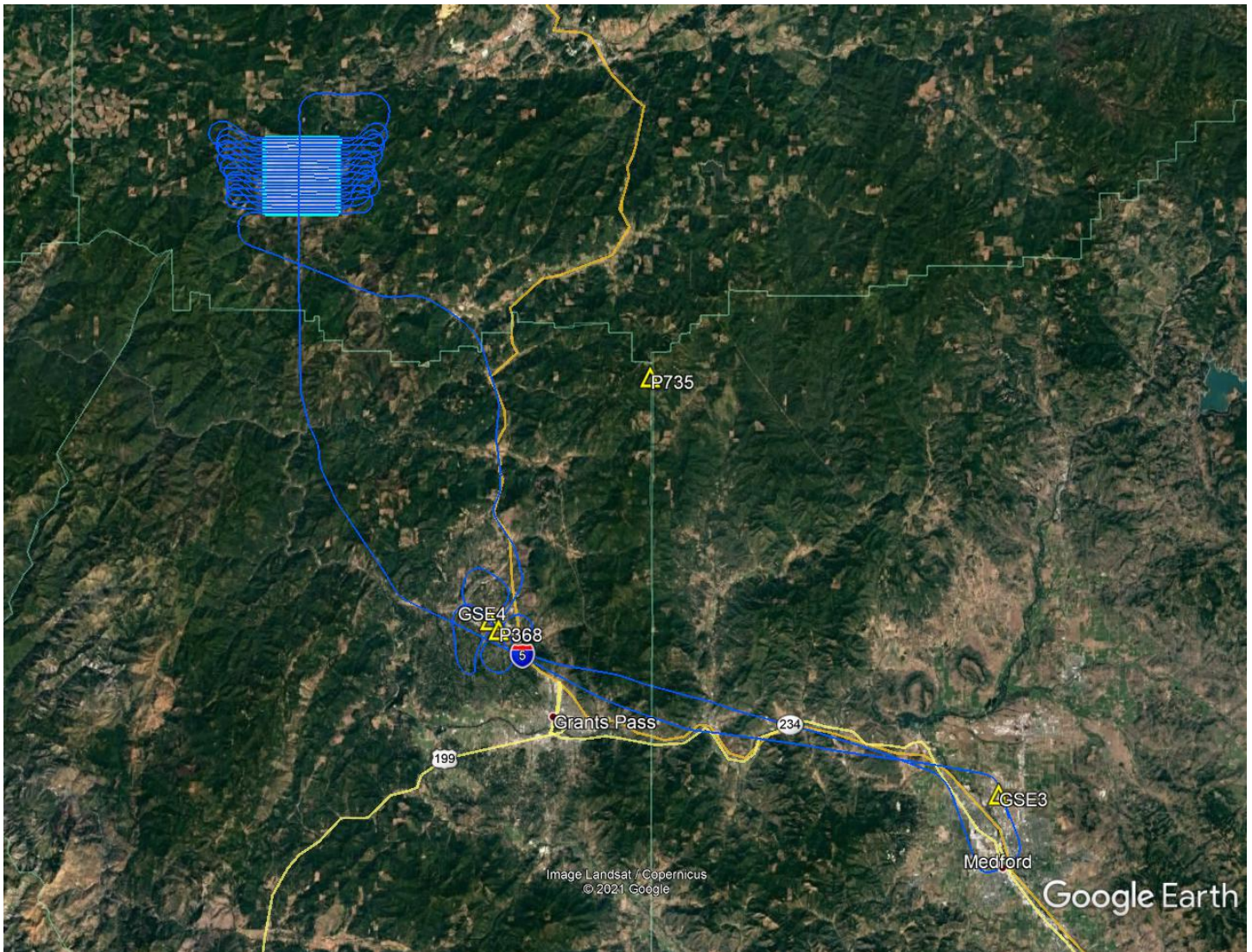
**Data Accuracy Summary**

Strip-to-Strip Average	0.06 m
GCP Residual RMS	N/A

**Data Product Summary:**

Horizontal / Vertical Datum:	NAD83(2011) epoch 2010.00 / NAVD88 (GEOID12B)
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), 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 northwest of Grants Pass, OR. The polygon enclosed approximately 40.0 km<sup>2</sup> (15.4 mi<sup>2</sup>).