



## Data Collection & Product Report for Lidar Acquisition of Eagle Creek Fire Area in the Columbia River Gorge, Oregon

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### Data Collection Summary:

Collection Dates, Flights:	May 3–6, 2018 (DOY 123–126) comprising seven (7) flights
Aircraft, Equipment:	Robinson R44 Raven II (N86JD) with CRREL HeliPod Lidar (RIEGL VQ-480i)
Flight Plan Parameters:	Flying Height: 500 m AGL, Swath Width: 580 m, Overlap: 50%
Equipment Parameters:	PRF: 100 kHz, Scan Frequency: 44 Hz, Scan Angle: $\pm 30^\circ$
Collected Area:	305.7 km <sup>2</sup>

### GNSS Reference Station Summary:

Station Name	Operating Agency	Control Coordinates (NAD83(2011) epoch 2010.00/Ellipsoid)	RMS (OPUS)
P427	UNAVCO	45°25'48.62856" N, 122°20'26.21213" W, 149.592 m	0.017 m
P429	UNAVCO	45°40'34.04507" N, 121°52'38.43649" W, 25.953 m	0.011 m

### Data Processing Summary:

Scan Angle Cutoff:	0°
Intensity Normalization:	RIEGL reflectance
Data Adjustments:	Line-by-line elevation correction
Ground Classification:	Three iterations of aggressive ground determination, manual classification of cliff edges and misclassified ground
Elevation Model Generation:	Elevation values calculated from Kriging

### Data Accuracy Summary

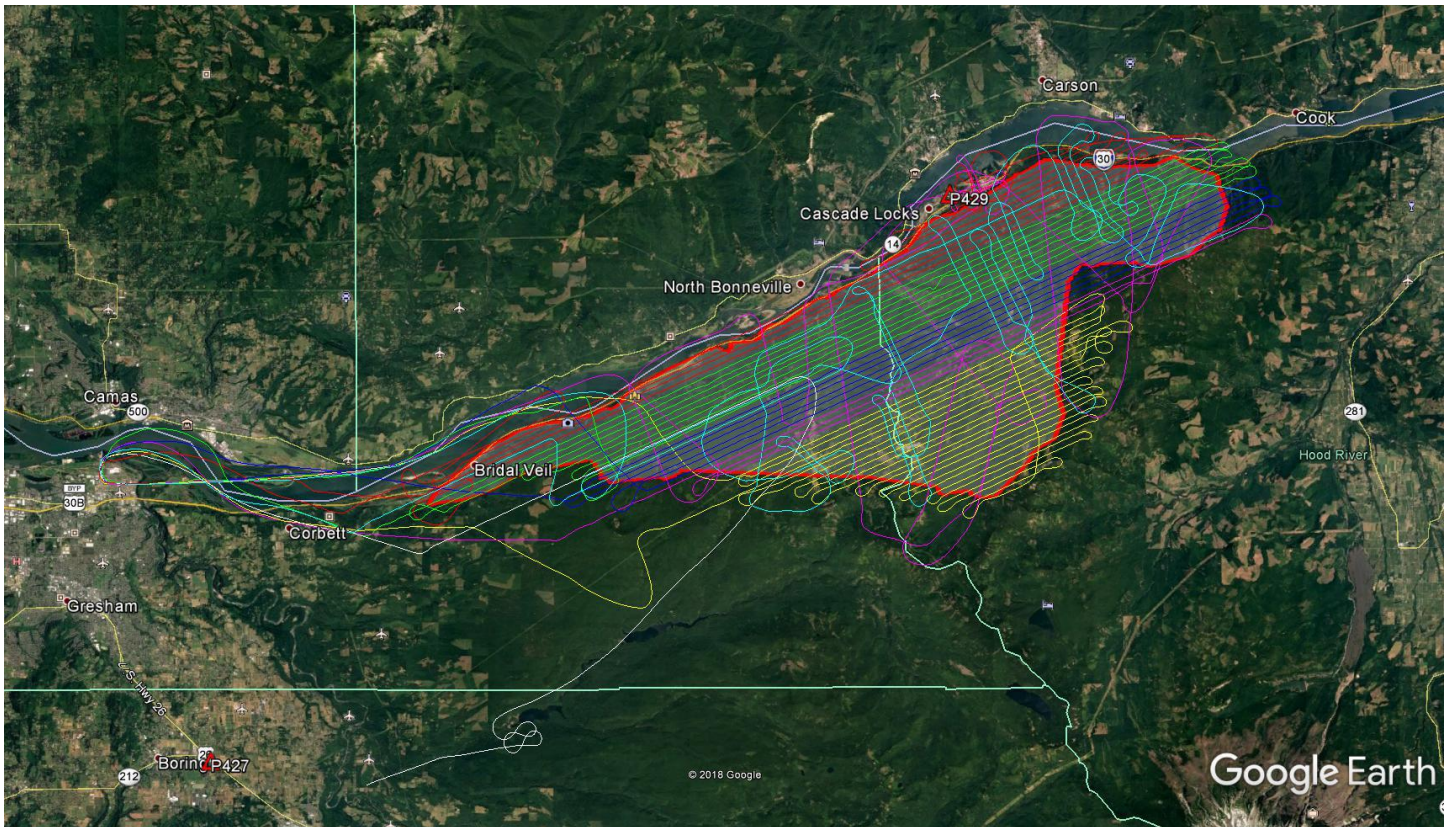
Strip-to-Strip Average	0.134 m
GCP Residual Average	0.038 m

### 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) classified by non-ground (1), ground (2), intermediate echo (4), low point (7), and high point (18) returns
Bare-Earth Elevation Model:	ESRI FLT format @ 1-m resolution from classified ground points
Bare-Earth Hillshade:	ESRI-created raster @ 1-m resolution
First-Surface Elevation Model:	ESRI FLT format @ 1-m resolution with canopy included
First-Surface Hillshade:	ESRI-created raster @ 1-m resolution

A detailed summary of the equipment and processing techniques used by NCALM is included in the [Data Collection & Processing Summary](#).

## Area of Interest:



**Location of survey polygon (in red), aircraft trajectories, and GNSS reference stations**

The requested survey area consisted of one polygon located in the gorge and mountains between Troutdale and Hood River, OR. The polygon encloses approximately 259.5 km<sup>2</sup> (100.2 mi<sup>2</sup>).