

**Data Collection & Product Report for 2017 Seed Project:
Spatio-temporal distribution and legacy of large landslides in the San
Gabriel Mountains, California**



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Data Collection Summary:

Collection Dates, Flights:	1 flight on October 13, 2017 (DOY 286)
Aircraft, Equipment:	Piper PA-31-350 Navajo Chieftain (N640WA), Optech Titan (14SEN340)
Flight Plan Parameters:	Flying Height: ~1300 m AGL, Swath Width: ~1213 m, Overlap: more than 50%
Equipment Parameters:	PRF: 50 kHz, Scan Frequency: 32 Hz, Scan Angle: $\pm 25^\circ$
Imagery Flight Plan Parameters:	None collected
Collected Area:	40 km ² (requested) 62.8 km ² (actual)

GNSS Reference Station Summary:

LORS	UNAVCO PBO	N 34 7 59.96464 W 117 45 14.60437 EL HGT: 449.599(m)
P574	UNAVCO PBO	N 34 17 12.35609 W 117 38 1.93805 EL HGT: 2874.489(m)
P575	UNAVCO PBO	N 34 12 55.83136 W 117 32 31.73035 EL HGT: 1929.124(m)

Data Processing Summary:

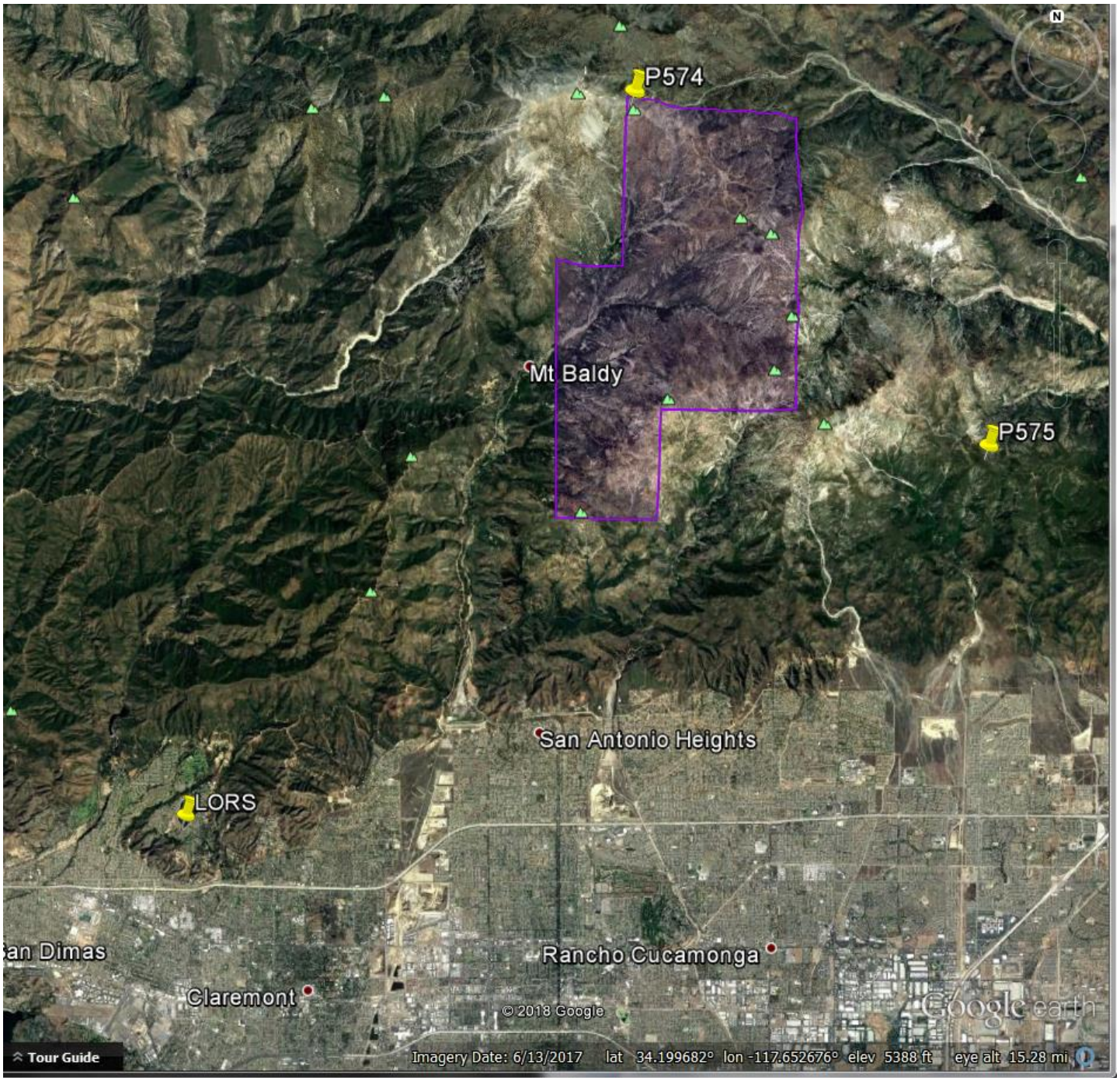
Scan Angle Cutoff:	$\pm 5^\circ$
Intensity Normalization:	1000 m
Data Adjustments:	Line-by-line elevation correction (Z-shift)
Ground Classification:	Two iterations of aggressive ground determination
Elevation Model Generation:	Elevation model values calculated as mean elevation from all ground class points inside each 1 meter cell.

Data Product Summary:

Horizontal / Vertical Datum:	NAD83(2011) epoch 2010.00 / NAVD88 via GEOID12B
Projection / Units:	UTM Zone 11N / meters and SPC CA Zone 5 (0405) / US Survey FEET
Point Cloud Tiles:	1000-m \times 1000-m tiles in LAS format (Version 1.2) classified as ground or non-ground returns (scan cut-off points as medium vegetation 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 and buildings 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 purple) and GNSS reference stations (yellow pushpins)

The requested survey area consisted of a single polygon located north of Pomona, CA. in the San Gabriel Mountains. The polygon encloses approximately 40 km²; the total area surveyed and processed was 62 km²