

Metadata Report

Project Name

Bigelow Hills, Yolo County, northern California, July 2021

Summary

LAZ-format point cloud and GeoTIF digital surface model for the Bigelow Hills, just west of the city of Winters, Yolo County, CA derived from UAV photography with ground control using RTK GPS. The Bigelow Hills lie along the West Winters strand of the Great Valley Fault System (Trout Creek section).

Personnel

- PI(s)

Alexander Morelan (California Geological Survey), Charles Trexler (U.S. Geological Survey), and Alexandra Pickering (U.S. Geological Survey)

Site Information

- Site description:

The Bigelow Hills lie approximately 2 km west of the city of Winters, CA, and just north of the active channel of Putah Creek. The hills themselves have a sharp, linear western margin interpreted to be fault-controlled.

- Site objective:

This survey was conducted to create a high-resolution (~10cm pixel) digital surface model of the study site, to assist in site characterization and local geomorphologic mapping at the Bigelow Hills site.

- Site location (GPS cords and/or map)

38.509934 N , -121.986812 E

- Site conditions

Dry, minimal grass cover (grazed by miniature horses). Clear skies.

- Date/time spent at each site

Survey flown on July 30, 2021 between 10am and 3pm.

Survey Results

- Equipment used

DJI Matrice 210 quadcopter with mounted DJI FC6510 camera and onboard GPS



- GPS solutions

Leica Viva GNSS system

- Errors

Camera location error +/- 3.1 m (XYZ). 10 ground control points with error +/- 1.6 m.

- Alignments

1680 aligned images with 803,821 tie points

Products

- Date of dataset collection

July 30, 2021

- Coordinate system of datasets

WGS 84 / UTM Zone 10 N

- Spatial resolution

13.9 cm/pixel (51.9 points/square m)

- Horizontal Accuracy

0.94 m (limited by ground control point accuracy)

- Vertical Accuracy

1.6 m (limited by ground control point accuracy)

- Data formats

LAZ, GeoTIF

- Data processing methods

Agisoft Metashape Professional v. 1.6.3 build 10732

Misc Notes