

Springville Rockfall, 587 N 970 E, Springville Utah

40.174273°, -111.594122° Impacted house location

Cathy Robertson missed her house and was present when rock fell

Happened 17:55 July 16, 2019, according to the firefighters (part of the active Round Peak Fire) that witnessed the rockfall.

Visited the site July 17, 2019

Measurements of boulder impacts starting from the across the street when the boulder struck level ground.

East curb impact to West curb impact - 35.4ft

West curb to center driveway - 22.6ft

Center driveway to North driveway - 7.8ft

North driveway to South flowerbed - 4.9ft

South flowerbed to North flowerbed - 6.0ft

North flowerbed to gravel bed - 9.0ft

Gravel bed to porch - 4.0ft

Porch to boulder rest - 4.5ft

Total distance on level ground: 94.2ft

Boulder measured dimensions

6.1x4.7x4.3ft

15.7ft - max circumference

July 23, 2019, Rich Giraud, Greg McDonald, Jessica Castelton, and Chrisitan Hardwick flew the hillside for general rockfall mapping. They were able to capture the lower portion of the mountain but would need to return to capture the upper portions where the outcrops are more prominent.

Revisited the site July 29, 2019 with Christian Hardwick

40.17773249999,-111.58917578124 Rockfall source outcrop, no ground impacts were located above outcrop

Collected more photos for boulder model, hiked the path of rockfall, few drone video for model

Boulder Mass (calculated with 3D model)

1.128 m<sup>3</sup> (39.83 ft<sup>3</sup>)

6372 lbs (using 160 lbs/ft<sup>3</sup> for limestone density)

3.186 tons

Secondary Boulder

Traveled from split - 193 m (633 ft)

No volume calculated

Photos were taken to determine volume and mass from SfM model.

DNR FFSL employee provided rockfall time and estimation of source. Suggested we wait until the fire crews have cleared the area to investigate the path and where the boulder originated. He will also provide photos via email.

USFS Reps were present documenting the rockfall and requested SfM data when we have it prepared. I provided my card and he will email me his contact info.

Chritian's quote: The UGS sUAS has made a significant impact to UGS research by optimizing data collection workflows, lowering costs, and reducing risk to staff in hazardous areas.

All photos and videos are placed in this archive collection:

<https://geodata.geology.utah.gov/?c=582>