

Flight summary May 25, 2022

Boise State University
Created by Anna Roser

South Trail, Hammett ID

Overview:

- This site is located approximately 1 hour from Boise off I-84 East.
- Anna Roser was Pilot in Command for all flights.
- Anna and Andrii were on site.
- Mission objective was to collect UAS imagery with the goal of creating high spatial resolution point clouds for shrub height measurement, and collect multispectral imagery to assist with differentiating plant types.

Sensor	Above Ground Level	Ground Sampling Distance	Camera Angle	Software	Cross grid	Number of Images	Flight Speed	Forwardlap/Sidelap	Number of batteries	Start/End	Wind Max & Avg
Mavic RGB* <i>Mission not completed*</i>	41m	1cm	90	Map Pilot	NA	173	2m/s	70/75	HP5, HP7	10:30am-10:50am	2.7m/s 0.8m/s
Mavic RGB	41m	1cm	90	Map Pilot	Yes	560	2m/s	70/75	HP7, C2, C1, C3	11am-12:15pm	3.6m/s 0.8m/s
P4 Multispec	66m	3.5cm	90	DJI GS Pro	No	393	2m/s	85/75	2x	12:34pm-12:54pm	3.8m/s 1.3m/s
P4 Multispec	37m	2.0cm	90	DJI GS Pro	No	409	2m/s	77/65	2x	1:12pm-1:40pm	4.2m/s 1.6m/s

Notes:

- UAS: Mavic 2 Pro. RGB Hasselblad 20MP sensor and Phantom 4 Multispectral (5 band).
- GPS: Topcon RTK from BCAL. There were 9 circular, black and white bucket lids used as GCP's within each site. Andrii and Anna recorded the location of each GCP with the rover.
- The first attempt at the mavic mission was aborted after I got a turn radius error from Map Pilot Pro. It said the turn was too sharp. I edited the mission to make the turn less sharp and restarted from the beginning. The images collected first are good and we can use them if we want.
- I recommend trimming off the ends of the rows for the multispectral flight lines. Those photos are more likely to be blurry or have poor orientation which will make image alignment more difficult.
- Sunny day with light wind.

- Small note: the phantom had to take off further from the powerlines than the mavic. It may have an on-board system that has powerlines saved so it won't take off close to them.

Data location:

- Images are on owncloud.