

Materials List for

Ground-level Unmanned Aerial System Imagery Coupled with Spatially Balanced Sampling and Route Optimization to Monitor Rangeland Vegetation

Michael F. Curran^{1,2,3}, Paddington Hodza⁴, Samuel E. Cox⁵, Shawn G. Lanning⁴, Blair L. Robertson⁶, Timothy J. Robinson⁷, Peter D. Stahl^{1,2,3}

¹Wyoming Reclamation and Restoration Center, University of Wyoming ²Department of Ecosystem Science and Management, University of Wyoming

³Program in Ecology, University of Wyoming ⁴Wyoming Geographic Information Science Center, University of Wyoming ⁵Wyoming State Office, Bureau of Land Management ⁶School of Mathematics and Statistics, University of Canterbury ⁷Department of Statistics, University of Wyoming

Corresponding Author

Michael F. Curran
mcurran2@uwyo.edu

Citation

Curran, M.F., Hodza, P., Cox, S.E., Lanning, S.G., Robertson, B.L., Robinson, T.J., Stahl, P.D. Ground-level Unmanned Aerial System Imagery Coupled with Spatially Balanced Sampling and Route Optimization to Monitor Rangeland Vegetation. *J. Vis. Exp.* (), e61052, doi:10.3791/61052 (2020).

Date Published

June 14, 2020

DOI

10.3791/61052

URL

jove.com/video/61052

Materials

Name	Company	Catalog Number	Comments
ArcGIS	ESRI	GPS Software	
DJI Phantom 4 Pro	DJI	UAS	
G700SE	Ricoh	GPS-equipped camera	
GeoJot+Core	Geospatial Experts	GPS Software	Used to extract image metadata
Juno 5	Trimble	Handheld GPS device	
Litchi Mission Hub	Litchi	Mission Hub Software	We chose Litchi for its terrain awareness and its ability to plan robust waypoint missions
Program R	R Project	Statistical analysis/programming software	
SamplePoint	N/A	Image analysis software	