Supplementary Materials: Mapping coastal wetland biomass from high-resolution UAV imagery

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Table S1. Site conditions and flight data for seasonal field surveys.

Season	Date	Initial Flight Time (hh:mm PST)	Sky Conditions	Tidal level (m NAVD88)	Flight Duration (h:mm)	Flight Altitude (m)	Coverage Area (km²)	Ground Resolution (cm pixel⁻¹)	Orthophoto Horizontal Error (cm)*
Winter	02/23/2018	11:45	Clear	0.28	0:32	92.5	0.24	6.23	11.9
Spring	05/24/2018	11:43	Overcast	0.24	0:28	91.8	0.35	6.11	4.3
Summer	07/19/2018	11:55	Clear	0.58	0:31	92.0	0.33	6.12	7.3
Fall	11/13/2018	12:13	Partly cloudy	1.29	0:37	92.0	0.35	6.11	11.1

Average tidal levels are reported for the nearest open-ocean NOAA tidal station, Santa Barbara, CA (9411340).
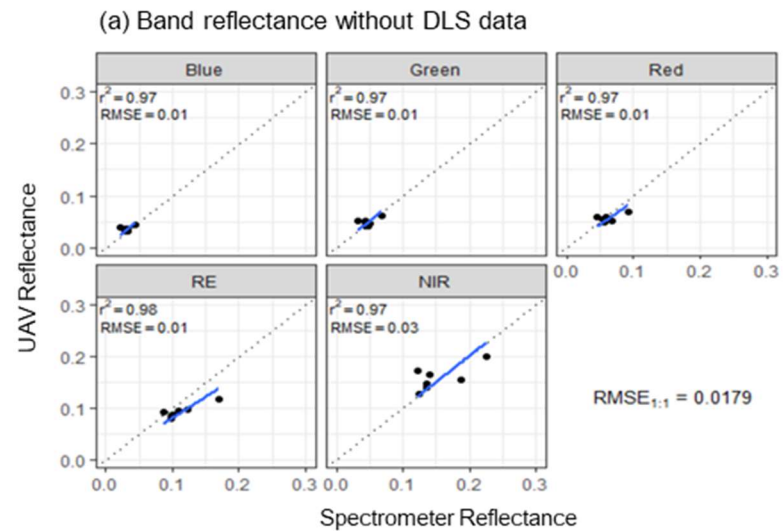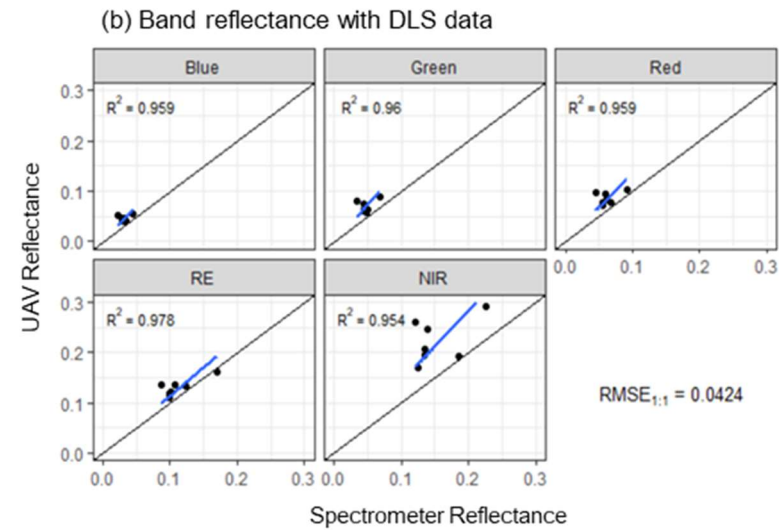
Figure S1. Radiomatric performance of UAV orthomosaic (a) with and (b) without the inclusion of downwelling light sensor (DLS) data in image processing. Reflectance derived from UAV orthomosaics were compared to spectrometer reflectance of the vegetation canopy measured *in situ*.

Table S2. Live aboveground biomass estimation equations for vegetation indices.

Index	Biomass Estimation Equation (g m^{-2})	R^2	RMSE (g m^{-2})	p-value
CIgreen	1423.6 × CIgreen + 819.3	0.166	1952.7	<0.005
CIrededge	1993.2 × CIrededge + 2231.2	0.041	2093.4	0.12
EVI2	11060.4 × EVI2 + 1017.7	0.303	1784.2	<0.005
GNDVI	8437.8 × GNDVI − 506.1	0.194	1918.9	<0.005
NRDE	5933.4 × NDRE + 2087.3	0.047	2087	0.1
NDVI	8433.9 × NDVI − 342.3	0.36	1710.8	<0.005

Table S3. Seasonal NDVI-Live aboveground biomass estimation equations.

Season	NDVI Live Biomass Estimation Equation (g m^{-2})	R^2	RMSE (g m^{-2})	p-value
Winter	6002.5 × NDVI − 725.7	0.626	557.8	<0.005
Spring	9790.3 × NDVI − 1784.7	0.709	1158.4	<0.005
Summer	13743.8 × NDVI − 1225.4	0.493	1666.6	<0.005
Fall	12997.2 × NDVI − 828.6	0.474	1666.6	<0.005