Metadata Records
Irrigation Innovation Consortium-Supported Project Datasets

Please use a separate sheet for each dataset. Answers are automatically saved.
Questions? Contact Diane DeJong: diane.de_jong@colostate.edu.

Thank you!

Question	Answer
Project name	Satellite and UAS imagery use to implement timely irrigation strategies
Project background	Unmanned aerial systems (UASs)and satellites have been recognized as available platforms to provide near real time feedback of temporal and spatial conditions found in agricultural fields throughout the crop growing season. However, UASs have not been widely studied in irrigated settings. Further, traditional multispectral satellites have a low revisit frequency and large pixel sizes; which has limited their wide adoption for routine agricultural water management. With the advent of new multispectral microsatellites, capable of high revisit frequency (daily to several times per day) and high spatial pixel resolution (3 m), an opportunity exists to evaluate their applicability in monitoring crop water use. Therefore, the main objectives of this study were: a) to assess the potential use, and accuracy, of UASs and microsatellite images, in ETa models, to determine actual water use for irrigated maize, citrus, and onions; and b) to assess the accuracy of a single source energy balance and a reflectance based ETa models.
Dataset name	California WSREC Data
Primary author Include first & last name, institution affiliation, and email address.	José Chávez, Colorado State University, jose.chavez@colostate.edu
Primary contact The primary contact may be the same or different from the primary author. Include first & last name, institution affiliation, and email address.	José Chávez, Colorado State University, jose.chavez@colostate.edu
Dataset description Please provide a brief, clear summary description of the dataset contents. Indicate as applicable: purpose and scope; time period; areas of investigation; and any other special characteristics.	Data includes: 1) Twenty-six PlanetScope images were used in the study with onions in CA. The imagery days correspond to April 18, 22-29, May 1-4, 6-7, 13-14, 24-25, 29-31, June 1-3, and 5-6; 2) Summary statistics of the lysimetric evaluation of RS based onions ETa estimates.
Spatial coverage Please be specific as possible about the geographic coverage of your data, and record the information according to defined standards, such as FGDC or the Getty Thesaurus of Geographic Names. You can enter lat/long data, county names, state names, etc.	The study was conducted at the University of California West Side Research and Extension Center (WSREC), located near Five Points, CA (elev. 76 m amsl, Lat. 36.33840 N, Long. -120.11308 W). The region is characterized by an arid climate with very low annual precipitation (avg. 213 mm) and very hot summers (avg. 35 oC). Crop production is entirely dependent on irrigation during the summer months. Soils are deep, well drained, with a clay loam texture (Typic Haplocambids). They are characterized by a slightly basic pH and average electrical conductivity of < 1.5 dS/m in the first 30 cm.

Temporal coverage Describe the temporal coverage of your dataset: Start: Time of day, Date, Month, Year Finish: Time of day, Date, Month Year	Twenty-six PlanetScope images were used in the study with onions in CA in 2019 The imagery days correspond to April 18, 22-29, May 1-4, 6-7, 13-14, 24-25, 29-31, June 1-3, and 5-6.
Re-use limitations Describe known problems or caveats that would limit reuse of the data (e.g., uncertainty, sampling problems, blanks, quality control samples) and/or that future potential users of your dataset should know about. Or indicate "None."	
Citations Please include full citations and DOIs for articles published based on or related to this dataset. Or indicate "None."	
Keywords Please add a few appropriate National Agricultural Library keywords: https://agclass.nal.usda.gov/vocabularies/nalt	unmanned aerial vehicles; multispectral imagery; microsatellites; remote sensing
Tags Please add a few of your own user-defined tags that would be useful to others who might use your dataset in the future.	reflectance based crop coefficient method
Acronyms & abbreviations Please define any acronyms, site abbreviations, or other project specific designations used in your dataset. Or indicate "none."	UAS - unmanned aerial systems
Other dataset storage location Has this dataset already been uploaded elsewhere? Yes or No Reasons may include a requirement as part of publishing a paper or storing data on GitHub or other locations to make accessible to others. If yes, please provide the link or other information to explain where the dataset is located and where or how it can be accessed.	Data results and discussion available in project final report.