

Russell L Scott

List of Publications by Citations

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171
papers

9,580
citations

56
h-index

93
g-index

181
ext. papers

11,301
ext. citations

6.3
avg, IF

6.08
L-index

#	Paper	IF	Citations
171	ECOHYDROLOGICAL IMPLICATIONS OF WOODY PLANT ENCROACHMENT. <i>Ecology</i> , 2005 , 86, 308-319	4.6	500
170	The increasing importance of atmospheric demand for ecosystem water and carbon fluxes. <i>Nature Climate Change</i> , 2016 , 6, 1023-1027	21.4	419
169	Measuring soil moisture content non-invasively at intermediate spatial scale using cosmic-ray neutrons. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	293
168	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. <i>Scientific Data</i> , 2020 , 7, 225	8.2	256
167	Warm spring reduced carbon cycle impact of the 2012 US summer drought. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 5880-5	11.5	232
166	Evapotranspiration on western U.S. rivers estimated using the Enhanced Vegetation Index from MODIS and data from eddy covariance and Bowen ratio flux towers. <i>Remote Sensing of Environment</i> , 2005 , 97, 337-351	13.2	223
165	Reduction in carbon uptake during turn of the century drought in western North America. <i>Nature Geoscience</i> , 2012 , 5, 551-556	18.3	216
164	Partitioning overstory and understory evapotranspiration in a semiarid savanna woodland from the isotopic composition of water vapor. <i>Agricultural and Forest Meteorology</i> , 2003 , 119, 53-68	5.8	193
163	Estimation of net ecosystem carbon exchange for the conterminous United States by combining MODIS and AmeriFlux data. <i>Agricultural and Forest Meteorology</i> , 2008 , 148, 1827-1847	5.8	191
162	A continuous measure of gross primary production for the conterminous United States derived from MODIS and AmeriFlux data. <i>Remote Sensing of Environment</i> , 2010 , 114, 576-591	13.2	183
161	Ecohydrological impacts of woody-plant encroachment: seasonal patterns of water and carbon dioxide exchange within a semiarid riparian environment. <i>Global Change Biology</i> , 2006 , 12, 311-324	11.4	179
160	Effects of seasonal drought on net carbon dioxide exchange from a woody-plant-encroached semiarid grassland. <i>Journal of Geophysical Research</i> , 2009 , 114,		162
159	Partitioning of evapotranspiration and its relation to carbon dioxide exchange in a Chihuahuan Desert shrubland. <i>Hydrological Processes</i> , 2006 , 20, 3227-3243	3.3	161
158	Assessing net ecosystem carbon exchange of U.S. terrestrial ecosystems by integrating eddy covariance flux measurements and satellite observations. <i>Agricultural and Forest Meteorology</i> , 2011 , 151, 60-69	5.8	145
157	Interannual and seasonal variation in fluxes of water and carbon dioxide from a riparian woodland ecosystem. <i>Agricultural and Forest Meteorology</i> , 2004 , 122, 65-84	5.8	141
156	Carbon dioxide exchange in a semidesert grassland through drought-induced vegetation change. <i>Journal of Geophysical Research</i> , 2010 , 115,		128
155	Using watershed water balance to evaluate the accuracy of eddy covariance evaporation measurements for three semiarid ecosystems. <i>Agricultural and Forest Meteorology</i> , 2010 , 150, 219-225	5.8	126

154	Evapotranspiration partitioning in semiarid shrubland ecosystems: a two-site evaluation of soil moisture control on transpiration. <i>Ecohydrology</i> , 2011 , 4, 671-681	2.5	125
153	Effect of remote sensing spatial resolution on interpreting tower-based flux observations. <i>Remote Sensing of Environment</i> , 2008 , 112, 337-349	13.2	121
152	Productivity, Respiration, and Light-Response Parameters of World Grassland and Agroecosystems Derived From Flux-Tower Measurements. <i>Rangeland Ecology and Management</i> , 2010 , 63, 16-39	2.2	117
151	The ecohydrologic significance of hydraulic redistribution in a semiarid savanna. <i>Water Resources Research</i> , 2008 , 44,	5.4	116
150	Observed relation between evapotranspiration and soil moisture in the North American monsoon region. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	116
149	Hydraulic redistribution by a dominant, warm-desert phreatophyte: seasonal patterns and response to precipitation pulses. <i>Functional Ecology</i> , 2004 , 18, 530-538	5.6	111
148	Terrestrial carbon balance in a drier world: the effects of water availability in southwestern North America. <i>Global Change Biology</i> , 2016 , 22, 1867-79	11.4	111
147	The carbon balance pivot point of southwestern U.S. semiarid ecosystems: Insights from the 21st century drought. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2015 , 120, 2612-2624	3.7	109
146	The water use of two dominant vegetation communities in a semiarid riparian ecosystem. <i>Agricultural and Forest Meteorology</i> , 2000 , 105, 241-256	5.8	108
145	Relationship between evapotranspiration and precipitation pulses in a semiarid rangeland estimated by moisture flux towers and MODIS vegetation indices. <i>Journal of Arid Environments</i> , 2007 , 70, 443-462	2.5	106
144	Modeling multiyear observations of soil moisture recharge in the semiarid American Southwest. <i>Water Resources Research</i> , 2000 , 36, 2233-2247	5.4	105
143	Whole ecosystem metabolic pulses following precipitation events. <i>Functional Ecology</i> , 2008 , 22, 924-930	5.6	104
142	CO exchange and evapotranspiration across dryland ecosystems of southwestern North America. <i>Global Change Biology</i> , 2017 , 23, 4204-4221	11.4	103
141	Global estimation of evapotranspiration using a leaf area index-based surface energy and water balance model. <i>Remote Sensing of Environment</i> , 2012 , 124, 581-595	13.2	100
140	Productivity of North American grasslands is increased under future climate scenarios despite rising aridity. <i>Nature Climate Change</i> , 2016 , 6, 710-714	21.4	99
139	Remote sensing of dryland ecosystem structure and function: Progress, challenges, and opportunities. <i>Remote Sensing of Environment</i> , 2019 , 233, 111401	13.2	94
138	Energy exchange and evapotranspiration over two temperate semi-arid grasslands in North America. <i>Agricultural and Forest Meteorology</i> , 2012 , 153, 31-44	5.8	93
137	Partitioning evapotranspiration in semiarid grassland and shrubland ecosystems using time series of soil surface temperature. <i>Agricultural and Forest Meteorology</i> , 2009 , 149, 59-72	5.8	92

136	Controls on transpiration in a semiarid riparian cottonwood forest. <i>Agricultural and Forest Meteorology</i> , 2006 , 137, 56-67	5.8	91
135	Multiyear riparian evapotranspiration and groundwater use for a semiarid watershed. <i>Journal of Arid Environments</i> , 2008 , 72, 1232-1246	2.5	88
134	Seasonal estimates of riparian evapotranspiration using remote and in situ measurements. <i>Agricultural and Forest Meteorology</i> , 2000 , 105, 281-309	5.8	87
133	The relative controls of temperature, soil moisture, and plant functional group on soil CO ₂ efflux at diel, seasonal, and annual scales. <i>Journal of Geophysical Research</i> , 2011 , 116,		84
132	Latitudinal patterns of magnitude and interannual variability in net ecosystem exchange regulated by biological and environmental variables. <i>Global Change Biology</i> , 2009 , 15, 2905-2920	11.4	84
131	Thermal optimality of net ecosystem exchange of carbon dioxide and underlying mechanisms. <i>New Phytologist</i> , 2012 , 194, 775-783	9.8	81
130	Impacts of droughts and extreme-temperature events on gross primary production and ecosystem respiration: a systematic assessment across ecosystems and climate zones. <i>Biogeosciences</i> , 2018 , 15, 1293-1318	4.6	79
129	Calculating CO ₂ and H ₂ O eddy covariance fluxes from an enclosed gas analyzer using an instantaneous mixing ratio. <i>Global Change Biology</i> , 2012 , 18, 385-399	11.4	77
128	The understory and overstory partitioning of energy and water fluxes in an open canopy, semiarid woodland. <i>Agricultural and Forest Meteorology</i> , 2003 , 114, 127-139	5.8	76
127	Reviews and syntheses: Turning the challenges of partitioning ecosystem evaporation and transpiration into opportunities. <i>Biogeosciences</i> , 2019 , 16, 3747-3775	4.6	75
126	Recent tree die-off has little effect on streamflow in contrast to expected increases from historical studies. <i>Water Resources Research</i> , 2015 , 51, 9775-9789	5.4	74
125	Data-driven diagnostics of terrestrial carbon dynamics over North America. <i>Agricultural and Forest Meteorology</i> , 2014 , 197, 142-157	5.8	73
124	Partitioning evapotranspiration using long-term carbon dioxide and water vapor fluxes. <i>Geophysical Research Letters</i> , 2017 , 44, 6833-6840	4.9	71
123	Chlorophyll Fluorescence Better Captures Seasonal and Interannual Gross Primary Productivity Dynamics Across Dryland Ecosystems of Southwestern North America. <i>Geophysical Research Letters</i> , 2018 , 45, 748-757	4.9	70
122	The AmeriFlux network: A coalition of the willing. <i>Agricultural and Forest Meteorology</i> , 2018 , 249, 444-456	5.8	67
121	Evaluation of the VIIRS BRDF, Albedo and NBAR products suite and an assessment of continuity with the long term MODIS record. <i>Remote Sensing of Environment</i> , 2017 , 201, 256-274	13.2	62
120	Invasion of shrublands by exotic grasses: ecohydrological consequences in cold versus warm deserts. <i>Ecohydrology</i> , 2012 , 5, 160-173	2.5	61
119	When vegetation change alters ecosystem water availability. <i>Global Change Biology</i> , 2014 , 20, 2198-210	11.4	60

118	An integrated modelling framework of catchment-scale ecohydrological processes: 1. Model description and tests over an energy-limited watershed. <i>Ecohydrology</i> , 2014 , 7, 427-439	2.5	59
117	Comparing ecosystem and soil respiration: Review and key challenges of tower-based and soil measurements. <i>Agricultural and Forest Meteorology</i> , 2018 , 249, 434-443	5.8	59
116	Estimating Riparian and Agricultural Actual Evapotranspiration by Reference Evapotranspiration and MODIS Enhanced Vegetation Index. <i>Remote Sensing</i> , 2013 , 5, 3849-3871	5	57
115	Comparison of methods to estimate ephemeral channel recharge, Walnut Gulch, San Pedro River Basin, Arizona. <i>Water Science and Application</i> , 2004 , 77-99		56
114	Land-surface controls on afternoon precipitation diagnosed from observational data: uncertainties and confounding factors. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 8343-8367	6.8	52
113	Temperature and precipitation controls over leaf- and ecosystem-level CO ₂ flux along a woody plant encroachment gradient. <i>Global Change Biology</i> , 2012 , 18, 1389-1400	11.4	52
112	Intraseasonal Variation in Water and Carbon Dioxide Flux Components in a Semiarid Riparian Woodland. <i>Ecosystems</i> , 2007 , 10, 1100-1115	3.9	51
111	Changes in Vegetation Condition and Surface Fluxes during NAME 2004. <i>Journal of Climate</i> , 2007 , 20, 1810-1820	4.4	51
110	Long-term runoff and sediment yields from small semiarid watersheds in southern Arizona. <i>Water Resources Research</i> , 2010 , 46,	5.4	47
109	. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2017 , 55, 6517-6532	8.1	45
108	Actual Evapotranspiration (Water Use) Assessment of the Colorado River Basin at the Landsat Resolution Using the Operational Simplified Surface Energy Balance Model. <i>Remote Sensing</i> , 2014 , 6, 233-256	5	45
107	Biophysical controls on carbon and water vapor fluxes across a grassland climatic gradient in the United States. <i>Agricultural and Forest Meteorology</i> , 2015 , 214-215, 293-305	5.8	44
106	The water balance components of undisturbed tropical woodlands in the Brazilian cerrado. <i>Hydrology and Earth System Sciences</i> , 2015 , 19, 2899-2910	5.5	44
105	Preface paper to the Semi-Arid Land-Surface-Atmosphere (SALSA) Program special issue. <i>Agricultural and Forest Meteorology</i> , 2000 , 105, 3-20	5.8	44
104	Sensitivity of riparian ecosystems in arid and semiarid environments to moisture pulses. <i>Hydrological Processes</i> , 2006 , 20, 3191-3205	3.3	43
103	Representativeness of Eddy-Covariance flux footprints for areas surrounding AmeriFlux sites. <i>Agricultural and Forest Meteorology</i> , 2021 , 301-302, 108350	5.8	43
102	Groundwater recharge decrease with increased vegetation density in the Brazilian cerrado. <i>Ecohydrology</i> , 2017 , 10, e1759	2.5	41
101	The potential of carbonyl sulfide as a proxy for gross primary production at flux tower sites. <i>Journal of Geophysical Research</i> , 2011 , 116,		40

100	Estimating evapotranspiration under warmer climates: Insights from a semi-arid riparian system. <i>Journal of Hydrology</i> , 2011 , 399, 1-11	6	40
99	Changes in photosynthesis and soil moisture drive the seasonal soil respiration-temperature hysteresis relationship. <i>Agricultural and Forest Meteorology</i> , 2018 , 259, 184-195	5.8	38
98	High-resolution characterization of a semiarid watershed: Implications on evapotranspiration estimates. <i>Journal of Hydrology</i> , 2014 , 509, 306-319	6	38
97	Impacts of hydraulic redistribution on grass-tree competition vs facilitation in a semi-arid savanna. <i>New Phytologist</i> , 2017 , 215, 1451-1461	9.8	37
96	On the theory relating changes in area-average and pan evaporation. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2009 , 135, 1230-1247	6.4	37
95	Sensitivity of mesquite shrubland CO ₂ exchange to precipitation in contrasting landscape settings. <i>Ecology</i> , 2008 , 89, 2900-10	4.6	37
94	The sensitivity of ecosystem carbon exchange to seasonal precipitation and woody plant encroachment. <i>Oecologia</i> , 2006 , 150, 453-63	2.9	37
93	Functional differences between summer and winter season rain assessed with MODIS-derived phenology in a semi-arid region. <i>Journal of Vegetation Science</i> , 2010 , 21, 16-30	3.1	36
92	Quantifying the timescales over which exogenous and endogenous conditions affect soil respiration. <i>New Phytologist</i> , 2014 , 202, 442-454	9.8	35
91	Timescales of Land Surface Evapotranspiration Response. <i>Journal of Climate</i> , 1997 , 10, 559-566	4.4	35
90	Event to multidecadal persistence in rainfall and runoff in southeast Arizona. <i>Water Resources Research</i> , 2008 , 44,	5.4	35
89	Precipitation legacy effects on dryland ecosystem carbon fluxes: direction, magnitude and biogeochemical carryovers. <i>Biogeosciences</i> , 2016 , 13, 425-439	4.6	35
88	Using observations and a distributed hydrologic model to explore runoff thresholds linked with mesquite encroachment in the Sonoran Desert. <i>Water Resources Research</i> , 2014 , 50, 8191-8215	5.4	34
87	Antecedent Conditions Influence Soil Respiration Differences in Shrub and Grass Patches. <i>Ecosystems</i> , 2013 , 16, 1230-1247	3.9	33
86	Nocturnal soil CO ₂ uptake and its relationship to subsurface soil and ecosystem carbon fluxes in a Chihuahuan Desert shrubland. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2013 , 118, 1593-1603	3.7	33
85	Preface to special section on Fifty Years of Research and Data Collection: U.S. Department of Agriculture Walnut Gulch Experimental Watershed. <i>Water Resources Research</i> , 2008 , 44,	5.4	33
84	How do variations in the temporal distribution of rainfall events affect ecosystem fluxes in seasonally water-limited Northern Hemisphere shrublands and forests?. <i>Biogeosciences</i> , 2012 , 9, 1007-1024	4.6	32
83	Estimation of area-average sensible heat flux using a large-aperture scintillometer during the Semi-Arid Land-Surface-Atmosphere (SALSA) Experiment. <i>Water Resources Research</i> , 1999 , 35, 2505-2517	5.4	31

82	Ecosystem transpiration and evaporation: Insights from three water flux partitioning methods across FLUXNET sites. <i>Global Change Biology</i> , 2020 , 26, 6916-6930	11.4	31
81	Endogenous circadian regulation of carbon dioxide exchange in terrestrial ecosystems. <i>Global Change Biology</i> , 2012 , 18, 1956-1970	11.4	30
80	Vegetation productivity responds to sub-annual climate conditions across semiarid biomes. <i>Ecosphere</i> , 2016 , 7, e01339	3.1	30
79	Implementing Dynamic Root Optimization in Noah-MP for Simulating Phreatophytic Root Water Uptake. <i>Water Resources Research</i> , 2018 , 54, 1560-1575	5.4	29
78	Understanding ecohydrological connectivity in savannas: a system dynamics modelling approach. <i>Ecohydrology</i> , 2012 , 5, 200-220	2.5	29
77	Carbon dioxide and water vapour exchange in a tropical dry forest as influenced by the North American Monsoon System (NAMS). <i>Journal of Arid Environments</i> , 2010 , 74, 556-563	2.5	28
76	Shrubland carbon sink depends upon winter water availability in the warm deserts of North America. <i>Agricultural and Forest Meteorology</i> , 2018 , 249, 407-419	5.8	28
75	Critical Zone Water Balance Over 13 Years in a Semiarid Savanna. <i>Water Resources Research</i> , 2019 , 55, 574-588	5.4	27
74	Robust estimates of soil moisture and latent heat flux coupling strength obtained from triple collocation. <i>Geophysical Research Letters</i> , 2015 , 42, 8415-8423	4.9	25
73	Shrub encroachment alters sensitivity of soil respiration to temperature and moisture. <i>Journal of Geophysical Research</i> , 2012 , 117,		24
72	Effect of a Canopy Interception Reservoir on Hydrological Persistence in a General Circulation Model. <i>Journal of Climate</i> , 1995 , 8, 1917-1922	4.4	24
71	Combined measurement and modeling of the hydrological impact of hydraulic redistribution using CLM4.5 at eight AmeriFlux sites. <i>Hydrology and Earth System Sciences</i> , 2016 , 20, 2001-2018	5.5	24
70	Long-term decrease in satellite vegetation indices in response to environmental variables in an iconic desert riparian ecosystem: the Upper San Pedro, Arizona, United States. <i>Ecohydrology</i> , 2015 , 8, 610-625	2.5	23
69	Thermal adaptation of net ecosystem exchange. <i>Biogeosciences</i> , 2011 , 8, 1453-1463	4.6	23
68	Quantification of terrestrial ecosystem carbon dynamics in the conterminous United States combining a process-based biogeochemical model and MODIS and AmeriFlux data. <i>Biogeosciences</i> , 2011 , 8, 2665-2688	4.6	22
67	Gross primary production variability associated with meteorology, physiology, leaf area, and water supply in contrasting woodland and grassland semiarid riparian ecosystems. <i>Journal of Geophysical Research</i> , 2009 , 114,		22
66	Growing season ecosystem and leaf-level gas exchange of an exotic and native semiarid bunchgrass. <i>Oecologia</i> , 2010 , 163, 561-70	2.9	22
65	COSORE: A community database for continuous soil respiration and other soil-atmosphere greenhouse gas flux data. <i>Global Change Biology</i> , 2020 , 26, 7268-7283	11.4	22

64	Soil evaporation response to Lehmann lovegrass (<i>Eragrostis lehmanniana</i>) invasion in a semiarid watershed. <i>Agricultural and Forest Meteorology</i> , 2009 , 149, 2133-2142	5.8	21
63	Modeling evapotranspiration and its partitioning over a semiarid shrub ecosystem from satellite imagery: a multiple validation. <i>Journal of Applied Remote Sensing</i> , 2013 , 7, 073495	1.4	20
62	Improving the accuracy of the gradient method for determining soil carbon dioxide efflux. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017 , 122, 50-64	3.7	19
61	Evapotranspiration Estimates Derived Using Multi-Platform Remote Sensing in a Semiarid Region. <i>Remote Sensing</i> , 2017 , 9, 184	5	19
60	Landscape and environmental controls over leaf and ecosystem carbon dioxide fluxes under woody plant expansion. <i>Journal of Ecology</i> , 2013 , 101, 1471-1483	6	19
59	An integrated modelling framework of catchment-scale ecohydrological processes: 2. The role of water subsidy by overland flow on vegetation dynamics in a semi-arid catchment. <i>Ecohydrology</i> , 2014 , 7, 815-827	2.5	18
58	Coupling diffusion and maximum entropy models to estimate thermal inertia. <i>Remote Sensing of Environment</i> , 2012 , 119, 222-231	13.2	18
57	Multiple year effects of a biological control agent (<i>Diorhabda carinulata</i>) on <i>Tamarix</i> (saltcedar) ecosystem exchanges of carbon dioxide and water. <i>Agricultural and Forest Meteorology</i> , 2012 , 164, 161-169	5.8	18
56	Consequences of Cool-Season Drought-Induced Plant Mortality to Chihuahuan Desert Grassland Ecosystem and Soil Respiration Dynamics. <i>Ecosystems</i> , 2013 , 16, 1178-1191	3.9	18
55	Soil moisture and ecosystem function responses of desert grassland varying in vegetative cover to a saturating precipitation pulse. <i>Ecohydrology</i> , 2012 , 5, 297-305	2.5	17
54	Comparative rates of wind versus water erosion from a small semiarid watershed in southern Arizona, USA. <i>Aeolian Research</i> , 2011 , 3, 197-204	3.9	17
53	Downscaling SMAP and SMOS soil moisture with moderate-resolution imaging spectroradiometer visible and infrared products over southern Arizona. <i>Journal of Applied Remote Sensing</i> , 2017 , 11, 026021-4	1.4	17
52	Runoff and erosional responses to a drought-induced shift in a desert grassland community composition. <i>Journal of Geophysical Research</i> , 2010 , 115,		16
51	Woody plants modulate the temporal dynamics of soil moisture in a semi-arid mesquite savanna. <i>Ecohydrology</i> , 2009 , 3, n/a-n/a	2.5	16
50	Subterranean ventilation of allochthonous CO ₂ governs net CO ₂ exchange in a semiarid Mediterranean grassland. <i>Agricultural and Forest Meteorology</i> , 2017 , 234-235, 115-126	5.8	15
49	Wide-area ratios of evapotranspiration to precipitation in monsoon-dependent semiarid vegetation communities. <i>Journal of Arid Environments</i> , 2015 , 117, 84-95	2.5	15
48	Evaluating the effect of rainfall variability on vegetation establishment in a semidesert grassland. <i>Environmental Monitoring and Assessment</i> , 2014 , 186, 395-406	3.1	15
47	Commonalities of carbon dioxide exchange in semiarid regions with monsoon and Mediterranean climates. <i>Journal of Arid Environments</i> , 2012 , 84, 71-79	2.5	15

46	Impact of Hydraulic Redistribution on Multispecies Vegetation Water Use in a Semiarid Savanna Ecosystem: An Experimental and Modeling Synthesis. <i>Water Resources Research</i> , 2018 , 54, 4009-4027	5.4	13
45	Inter- and under-canopy soil water, leaf-level and whole-plant gas exchange dynamics of a semi-arid perennial C4 grass. <i>Oecologia</i> , 2011 , 165, 17-29	2.9	13
44	Spatio-temporal variations in surface characteristics over the North American Monsoon region. <i>Journal of Arid Environments</i> , 2010 , 74, 540-548	2.5	13
43	Evaluating Soil Resistance Formulations in Thermal-Based Two-Source Energy Balance (TSEB) Model: Implications for Heterogeneous Semiarid and Arid Regions. <i>Water Resources Research</i> , 2019 , 55, 1059-1078	5.4	13
42	Environmental and Vegetative Controls on Soil CO ₂ Efflux in Three Semiarid Ecosystems. <i>Soil Systems</i> , 2019 , 3, 6	3.5	12
41	Synergistic use of SMAP and OCO-2 data in assessing the responses of ecosystem productivity to the 2018 U.S. drought. <i>Remote Sensing of Environment</i> , 2020 , 251, 112062	13.2	11
40	Intensification of the North American Monsoon Rainfall as Observed From a Long-Term High-Density Gauge Network. <i>Geophysical Research Letters</i> , 2019 , 46, 6839-6847	4.9	10
39	Hydraulic redistribution affects modeled carbon cycling via soil microbial activity and suppressed fire. <i>Global Change Biology</i> , 2018 , 24, 3472-3485	11.4	10
38	Hydrologic response to precipitation pulses under and between shrubs in the Chihuahuan Desert, Arizona. <i>Water Resources Research</i> , 2010 , 46,	5.4	10
37	Ecosystem carbon and water cycling from a sky island montane forest. <i>Agricultural and Forest Meteorology</i> , 2020 , 281, 107835	5.8	10
36	Water Availability Impacts on Evapotranspiration Partitioning. <i>Agricultural and Forest Meteorology</i> , 2021 , 297, 108251	5.8	10
35	Integrating continuous atmospheric boundary layer and tower-based flux measurements to advance understanding of land-atmosphere interactions. <i>Agricultural and Forest Meteorology</i> , 2021 , 307, 108509	5.8	10
34	A remote sensing approach for estimating distributed daily net carbon dioxide flux in semiarid grasslands. <i>Water Resources Research</i> , 2008 , 44,	5.4	9
33	Cool-season whole-plant gas exchange of exotic and native semiarid bunchgrasses. <i>Plant Ecology</i> , 2012 , 213, 1229-1239	1.7	8
32	The three major axes of terrestrial ecosystem function. <i>Nature</i> , 2021 , 598, 468-472	50.4	8
31	Insights for empirically modeling evapotranspiration influenced by riparian and upland vegetation in semiarid regions. <i>Journal of Arid Environments</i> , 2014 , 111, 42-52	2.5	7
30	Quantification of terrestrial ecosystem carbon dynamics in the conterminous United States combining a process-based biogeochemical model and MODIS and AmeriFlux data		7
29	Montane forest productivity across a semiarid climatic gradient. <i>Global Change Biology</i> , 2020 , 26, 6945-6958	5.8	7

28	The Photochemical Reflectance Index (PRI) Captures the Ecohydrologic Sensitivity of a Semiarid Mixed Conifer Forest. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020 , 125, e2019JG005624	3.7	5
27	. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2020 , 58, 6181-6196	8.1	5
26	Testing water fluxes and storage from two hydrology configurations within the ORCHIDEE land surface model across US semi-arid sites. <i>Hydrology and Earth System Sciences</i> , 2020 , 24, 5203-5230	5.5	5
25	High Vapor Pressure Deficit Decreases the Productivity and Water Use Efficiency of Rain-Induced Pulses in Semiarid Ecosystems. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020 , 125, e2020JG005665	3.7	5
24	Long-term research catchments to investigate shrub encroachment in the Sonoran and Chihuahuan deserts: Santa Rita and Jornada experimental ranges. <i>Hydrological Processes</i> , 2021 , 35, e14031	3.3	5
23	Dynamic global vegetation models underestimate net CO2 flux mean and inter-annual variability in dryland ecosystems. <i>Environmental Research Letters</i> , 2021 , 16, 094023	6.2	5
22	Ecosystem hydrologic and metabolic flashiness are shaped by plant community traits and precipitation. <i>Agricultural and Forest Meteorology</i> , 2019 , 279, 107674	5.8	3
21	Water use efficiency of annual-dominated and bunchgrass-dominated savanna intercanopy space. <i>Ecohydrology</i> , 2013 , 7, n/a-n/a	2.5	3
20	Satellite solar-induced chlorophyll fluorescence and near-infrared reflectance capture complementary aspects of dryland vegetation productivity dynamics. <i>Remote Sensing of Environment</i> , 2022 , 270, 112858	13.2	3
19	Impacts of droughts and extreme temperature events on gross primary production and ecosystem respiration: a systematic assessment across ecosystems and climate zones		3
18	Evaluation of an extreme-condition-inverse calibration remote sensing model for mapping energy balance fluxes in arid riparian areas		3
17	Seasonality in aerodynamic resistance across a range of North American ecosystems. <i>Agricultural and Forest Meteorology</i> , 2021 , 310, 108613	5.8	3
16	Monitoring agroecosystem productivity and phenology at a national scale: A metric assessment framework. <i>Ecological Indicators</i> , 2021 , 131, 108147	5.8	3
15	Confronting the water potential information gap.. <i>Nature Geoscience</i> , 2022 , 15, 158-164	18.3	3
14	Longer term effects of biological control on tamarisk evapotranspiration and carbon dioxide exchange. <i>Hydrological Processes</i> , 2020 , 34, 223-236	3.3	2
13	Improved dryland carbon flux predictions with explicit consideration of water-carbon coupling. <i>Communications Earth & Environment</i> , 2021 , 2,	6.1	2
12	Land surface controls on afternoon precipitation diagnosed from observational data: uncertainties, confounding factors and the possible role of vegetation interception		2
11	Reviews and syntheses: Turning the challenges of partitioning ecosystem evaporation and transpiration into opportunities		2

10	Precipitation legacy effects on dryland ecosystem carbon fluxes: direction, magnitude and biogeochemical carryovers		2
9	How do more extreme rainfall regimes affect ecosystem fluxes in seasonally water-limited Northern Hemisphere temperate shrublands and forests?		2
8	The water balance components of undisturbed tropical woodlands in the Brazilian Cerrado		2
7	Evaluating the Met Office Unified Model land surface temperature in Global Atmosphere/Land 3.1 (GA/L3.1), Global Atmosphere/Land 6.1 (GA/L6.1) and limited area 2.2 km configurations. <i>Geoscientific Model Development</i> , 2019 , 12, 1703-1724	6.3	1
6	A Microbial-Explicit Soil Organic Carbon Decomposition Model (MESDM): Development and Testing at a Semiarid Grassland Site. <i>Journal of Advances in Modeling Earth Systems</i> , 2022 , 14, e2021MS002485	7.1	1
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3	A micrometeorological flux perspective on brush management in a shrub-encroached Sonoran Desert grassland. <i>Agricultural and Forest Meteorology</i> , 2022 , 313, 108763	5.8	0
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1	The USDA-Agricultural Research Service's long term agro-ecosystems Walnut Gulch Experimental Watershed, Arizona, USA. <i>Hydrological Processes</i> , 2021 , 35, e14349	3.3	0