Michelle A Walvoord

List of Publications by Citations

52 papers	2,875 citations	26 h-index	53 g-index
56 ext. papers	3,295 ext. citations	6.1 avg, IF	5.5 L-index

#	Paper	IF	Citations
52	Increased groundwater to stream discharge from permafrost thawing in the Yukon River basin: Potential impacts on lateral export of carbon and nitrogen. *Geophysical Research Letters*, **2007**, 34,	4.9	356
51	Hydrologic Impacts of Thawing Permafrost—A Review. *Vadose Zone Journal*, **2016**, 15, vzj2016.01.0010	2.7	340
50	A reservoir of nitrate beneath desert soils. *Science*, **2003**, 302, 1021-4	33.3	266
49	Implications of projected climate change for groundwater recharge in the western United States. *Journal of Hydrology*, **2016**, 534, 124-138	6	215
48	Influence of permafrost distribution on groundwater flow in the context of climate-driven permafrost thaw: Example from Yukon Flats Basin, Alaska, United States. *Water Resources Research*, **2012**, 48,	5.4	182
47	Widespread natural perchlorate in unsaturated zones of the southwest United States. *Environmental Science & Technology*, **2007**, 41, 4522-8	10.3	137
46	ECOHYDROLOGICAL CONTROL OF DEEP DRAINAGE IN ARID AND SEMIARID REGIONS. *Ecology*, **2005**, 86, 277-287	4.6	136
45	Airborne electromagnetic imaging of discontinuous permafrost. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	107
44	Trends in streamflow in the Yukon River Basin from 1944 to 2005 and the influence of the Pacific Decadal Oscillation. *Journal of Hydrology*, **2009**, 371, 108-119	6	102
43	Deep arid system hydrodynamics 1. Equilibrium states and response times in thick desert vadose zones. *Water Resources Research*, **2002**, 38, 44-1-44-15	5.4	74
42	Dissolved organic matter composition of winter flow in the Yukon River basin: Implications of permafrost thaw and increased groundwater discharge. *Global Biogeochemical Cycles*, **2012**, 26, n/a-n/a	5.9	65
41	Linkages between lake shrinkage/expansion and sublacustrine permafrost distribution determined from remote sensing of interior Alaska, USA. *Geophysical Research Letters*, **2013**, 40, 882-887	4.9	64
40	Impacts of climate, lake size, and supra- and sub-permafrost groundwater flow on lake-talik evolution, Yukon Flats, Alaska (USA). *Hydrogeology Journal*, **2013**, 21, 281-298	3.1	62
39	Integrating hydrology and biogeochemistry across frozen landscapes. *Nature Communications*, **2019**, 10, 5377	17.4	49
38	New permafrost is forming around shrinking Arctic lakes, but will it last?. *Geophysical Research Letters*, **2014**, 41, 1585-1592	4.9	48
37	On the in situ aqueous alteration of soils on Mars. *Geochimica Et Cosmochimica Acta*, **2008**, 72, 3845-3864	5.5	44
36	CO2 dynamics in the Amargosa Desert: Fluxes and isotopic speciation in a deep unsaturated zone. *Water Resources Research*, **2005**, 41,	5.4	43

35	Development of perennial thaw zones in boreal hillslopes enhances potential mobilization of permafrost carbon. *Environmental Research Letters*, **2019**, 14, 015003	6.2	39
34	Landscape matters: Predicting the biogeochemical effects of permafrost thaw on aquatic networks with a state factor approach. *Permafrost and Periglacial Processes*, **2020**, 31, 358-370	4.2	36
33	Constraining the Inferred Paleohydrologic Evolution of a Deep Unsaturated Zone in the Amargosa Desert. *Vadose Zone Journal*, **2004**, 3, 502-512	2.7	35
32	Deep arid system hydrodynamics 2. Application to paleohydrologic reconstruction using vadose zone profiles from the northern Mojave Desert. *Water Resources Research*, **2002**, 38, 27-1-27-12	5.4	35
31	Using dissolved organic matter age and composition to detect permafrost thaw in boreal watersheds of interior Alaska. *Journal of Geophysical Research G: Biogeosciences*, **2014**, 119, 2155-2170	3.7	33
30	A 14.6 kyr record of nitrogen flux from desert soil profiles as inferred from vadose zone pore waters. *Geophysical Research Letters*, **2001**, 28, 2955-2958	4.9	30
29	Sensitivity analysis of lake mass balance in discontinuous permafrost: the example of disappearing Twelvemile Lake, Yukon Flats, Alaska (USA). *Hydrogeology Journal*, **2013**, 21, 185-200	3.1	29
28	Transport of elemental mercury in the unsaturated zone from a waste disposal site in an arid region. *Applied Geochemistry*, **2008**, 23, 572-583	3.5	29
27	Extending Airborne Electromagnetic Surveys for Regional Active Layer and Permafrost Mapping with Remote Sensing and Ancillary Data, Yukon Flats Ecoregion, Central Alaska. *Permafrost and Periglacial Processes*, **2013**, 24, 184-199	4.2	28
26	Multiphase, Multicomponent Parameter Estimation for Liquid and Vapor Fluxes in Deep Arid Systems Using Hydrologic Data and Natural Environmental Tracers. *Vadose Zone Journal*, **2006**, 5, 934-950	2.7	26
25	Surface Geophysical Methods for Characterising Frozen Ground in Transitional Permafrost Landscapes. *Permafrost and Periglacial Processes*, **2017**, 28, 52-65	4.2	23
24	Identifying areas of basin-floor recharge in the Trans-Pecos region and the link to vegetation. *Journal of Hydrology*, **2004**, 292, 59-74	6	23
23	Spatial variability and landscape controls of near-surface permafrost within the Alaskan Yukon River Basin. *Journal of Geophysical Research G: Biogeosciences*, **2014**, 119, 1244-1265	3.7	22
22	Investigating lake-area dynamics across a permafrost-thaw spectrum using airborne electromagnetic surveys and remote sensing time-series data in Yukon Flats, Alaska. *Environmental Research Letters*, **2019**, 14, 025001	6.2	21
21	Groundwater flow and geochemistry in the Southeastern San Juan Basin: Implications for microbial transport and activity. *Water Resources Research*, **1999**, 35, 1409-1424	5.4	21
20	Soil Physical, Hydraulic, and Thermal Properties in Interior Alaska, USA: Implications for Hydrologic Response to Thawing Permafrost Conditions. *Water Resources Research*, **2019**, 55, 4427-4447	5.4	20
19	Constraining the Inferred Paleohydrologic Evolution of a Deep Unsaturated Zone in the Amargosa Desert. *Vadose Zone Journal*, **2004**, 3, 502-512	2.7	19
18	Sensitivity of airborne geophysical data to sublacustrine and near-surface permafrost thaw. *Cryosphere*, **2015**, 9, 781-794	5.5	17

17	Susceptibility to Enhanced Chemical Migration from Depression-Focused Preferential Flow, High Plains Aquifer. *Vadose Zone Journal*, **2008**, 7, 1218-1230	2.7	17
16	Invited perspective: What lies beneath a changing Arctic?. *Cryosphere*, **2021**, 15, 479-484	5.5	15
15	Effect of permafrost thaw on the dynamics of lakes recharged by ice-jam floods: case study of Yukon Flats, Alaska. *Hydrological Processes*, **2016**, 30, 1782-1795	3.3	10
14	Wildfire-Initiated Talik Development Exceeds Current Thaw Projections: Observations and Models From Alaska's Continuous Permafrost Zone. *Geophysical Research Letters*, **2020**, 47, e2020GL087565	4.9	8
13	Hydrologic Processes in Deep Vadose Zones in Interdrainage Arid Environments. *Water Science and Application*, **2004**, 15-28		7
12	Effects of environmental change on groundwater recharge in the desert southwest. *Water Science and Application*, **2004**, 273-294		7
11	Focused ground-water recharge in the Amargosa Desert basin: Chapter E in Ground-water recharge in the arid and semiarid southwestern United States (Professional Paper 1703). *US Geological Survey Profesional Paper*,107-136		7
10	Multimodel analysis of anisotropic diffusive tracer-gas transport in a deep arid unsaturated zone. *Water Resources Research*, **2015**, 51, 6052-6073	5.4	6
9	Field-Scale Sulfur Hexafluoride Tracer Experiment to Understand Long Distance Gas Transport in the Deep Unsaturated Zone. *Vadose Zone Journal*, **2014**, 13, 1-10	2.7	6
8	Thermal and hydrological observations near Twelvemile Lake in discontinuous permafrost, Yukon Flats, interior Alaska, September 2010-August 2011. *US Geological Survey Open-File Report*,		4
7	Complex Vulnerabilities of the Water and Aquatic Carbon Cycles to Permafrost Thaw. *Frontiers in Climate*, **2021**, 3,	7.1	3
6	Rapid-Response Unsaturated Zone Hydrology: Small-Scale Data, Small-Scale Theory, Big Problems. *Frontiers in Earth Science*, **2021**, 9,	3.5	3
5	Response to Comment on "A Reservoir of Nitrate Beneath Desert Soils". *Science*, **2004**, 304, 51c-51c	33.3	2
4	Permafrost Hydrogeology **2021**, 493-523		2
3	Integrating observations and models to determine the effect of seasonally frozen ground on hydrologic partitioning in alpine hillslopes in the Colorado Rocky Mountains, USA. *Hydrological Processes*, **2021**, 35, e14374	3.3	1
2	Saltwater Intrusion Intensifies Coastal Permafrost Thaw. *Geophysical Research Letters*, **2021**, 48, e2021GL094776	4.9	1
1	Sea-level rise and warming mediate coastal groundwater discharge in the Arctic. *Environmental Research Letters*, **2022**, 17, 045027	6.2	0