

# Steve W Lyon

## List of Publications by Year in descending order

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Version: 2024-02-01

110  
papers

4,359  
citations

87723

38  
h-index

123241

61  
g-index

112  
all docs

112  
docs citations

112  
times ranked

5161  
citing authors

#	ARTICLE	IF	CITATIONS
1	How old is streamwater? Open questions in catchment transit time conceptualization, modelling and analysis. <i>Hydrological Processes</i> , 2010, 24, 1745-1754.	1.1	276
2	Wetlands as large-scale nature-based solutions: Status and challenges for research, engineering and management. <i>Ecological Engineering</i> , 2017, 108, 489-497.	1.6	217
3	Using a topographic index to distribute variable source area runoff predicted with the SCS curve-number equation. <i>Hydrological Processes</i> , 2004, 18, 2757-2771.	1.1	138
4	The master transit time distribution of variable flow systems. <i>Water Resources Research</i> , 2012, 48, .	1.7	135
5	Thermokarst lake, hydrological flow and water balance indicators of permafrost change in Western Siberia. <i>Journal of Hydrology</i> , 2012, 464-465, 459-466.	2.3	130
6	Riparian zone hydrology and soil water total organic carbon (TOC): implications for spatial variability and upscaling of lateral riparian TOC exports. <i>Biogeosciences</i> , 2012, 9, 3901-3916.	1.3	121
7	Identifying hydrologically sensitive areas: Bridging the gap between science and application. <i>Journal of Environmental Management</i> , 2006, 78, 63-76.	3.8	115
8	The importance of hydraulic groundwater theory in catchment hydrology: The legacy of Wilfried Brutsaert and Jean-Yves Parlange. <i>Water Resources Research</i> , 2013, 49, 5099-5116.	1.7	114
9	On the role of aspect to quantify water transit times in small mountainous catchments. <i>Water Resources Research</i> , 2009, 45, .	1.7	103
10	Estimation of permafrost thawing rates in a sub-arctic catchment using recession flow analysis. <i>Hydrology and Earth System Sciences</i> , 2009, 13, 595-604.	1.9	101
11	Reviews and syntheses: Carbon use efficiency from organisms to ecosystems – definitions, theories, and empirical evidence. <i>Biogeosciences</i> , 2018, 15, 5929-5949.	1.3	98
12	Changes in Catchment-Scale Recession Flow Properties in Response to Permafrost Thawing in the Yukon River Basin. <i>International Journal of Climatology</i> , 2010, 30, 2138-2145.	1.5	94
13	Improving agricultural water use efficiency with biochar – A synthesis of biochar effects on water storage and fluxes across scales. <i>Science of the Total Environment</i> , 2019, 657, 853-862.	3.9	94
14	Consequences of mixing assumptions for time-variable travel time distributions. <i>Hydrological Processes</i> , 2015, 29, 3460-3474.	1.1	93
15	Separating physical and meteorological controls of variable transit times in zero-order catchments. <i>Water Resources Research</i> , 2013, 49, 7644-7657.	1.7	88
16	Comparing global precipitation data sets in eastern Africa: a case study of Kilombero Valley, Tanzania. <i>International Journal of Climatology</i> , 2016, 36, 2000-2014.	1.5	87
17	Non-isothermal, three-phase simulations of near-surface flows in a model permafrost system under seasonal variability and climate change. <i>Journal of Hydrology</i> , 2011, 403, 352-359.	2.3	83
18	Thermal effects of groundwater flow through subarctic fens: A case study based on field observations and numerical modeling. <i>Water Resources Research</i> , 2016, 52, 1591-1606.	1.7	79

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19	A tale of two isotopes: differences in hydrograph separation for a runoff event when using $\delta^{18}\text{O}$ versus $\delta^2\text{H}$ . <i>Hydrological Processes</i> , 2009, 23, 2095-2101.	1.1	74
20	Quantifying the hydrological impact of simulated changes in land use on peak discharge in a small catchment. <i>Science of the Total Environment</i> , 2014, 466-467, 741-754.	3.9	66
21	Multicriteria design of rain gauge networks for flash flood prediction in semiarid catchments with complex terrain. <i>Water Resources Research</i> , 2010, 46, .	1.7	64
22	Exploring hydroclimatic change disparity via the Budyko framework. <i>Hydrological Processes</i> , 2014, 28, 4110-4118.	1.1	63
23	Controls on snowmelt water mean transit times in northern boreal catchments. <i>Hydrological Processes</i> , 2010, 24, 1672-1684.	1.1	62
24	A method for mapping flood hazard along roads. <i>Journal of Environmental Management</i> , 2014, 133, 69-77.	3.8	61
25	Characterizing the response of a catchment to an extreme rainfall event using hydrometric and isotopic data. <i>Water Resources Research</i> , 2008, 44, .	1.7	60
26	Dissecting the variable source area concept – Subsurface flow pathways and water mixing processes in a hillslope. <i>Journal of Hydrology</i> , 2012, 420-421, 125-141.	2.3	60
27	Temporal Behavior of Lake Size-Distribution in a Thawing Permafrost Landscape in Northwestern Siberia. <i>Remote Sensing</i> , 2014, 6, 621-636.	1.8	59
28	Isotopic investigation of runoff generation in a glacierized catchment in northern Sweden. <i>Hydrological Processes</i> , 2014, 28, 1383-1398.	1.1	58
29	Specific discharge variability in a boreal landscape. <i>Water Resources Research</i> , 2012, 48, .	1.7	56
30	Using streamflow characteristics to explore permafrost thawing in northern Swedish catchments. <i>Hydrogeology Journal</i> , 2013, 21, 121-131.	0.9	56
31	Data-driven regionalization of river discharges and emergent land cover – evapotranspiration relationships across Sweden. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 2576-2587.	1.2	53
32	Multimethod assessment of evapotranspiration shifts due to non-irrigated agricultural development in Sweden. <i>Journal of Hydrology</i> , 2013, 484, 55-62.	2.3	49
33	Decoupling of carbon dioxide and dissolved organic carbon in boreal headwater streams. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2016, 121, 2630-2651.	1.3	49
34	Defining probability of saturation with indicator kriging on hard and soft data. <i>Advances in Water Resources</i> , 2006, 29, 181-193.	1.7	47
35	THE IMPACT OF RUNOFF GENERATION MECHANISMS ON THE LOCATION OF CRITICAL SOURCE AREAS. <i>Journal of the American Water Resources Association</i> , 2006, 42, 793-804.	1.0	43
36	Interacting effects of change in climate, human population, land use, and water use on biodiversity and ecosystem services. <i>Ecology and Society</i> , 2015, 20, .	1.0	43

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37	Variability of groundwater levels and total organic carbon in the riparian zone of a boreal catchment. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	42
38	Early melt season snowpack isotopic evolution in the Tarfala valley, northern Sweden. <i>Annals of Glaciology</i> , 2013, 54, 149-156.	2.8	39
39	Assessing hydrologic changes across the Lower Mekong Basin. <i>Journal of Hydrology: Regional Studies</i> , 2017, 12, 303-314.	1.0	39
40	Using concurrent DNA tracer injections to infer glacial flow pathways. <i>Hydrological Processes</i> , 2015, 29, 5257-5274.	1.1	38
41	Predicting and communicating flood risk of transport infrastructure based on watershed characteristics. <i>Journal of Environmental Management</i> , 2016, 182, 505-518.	3.8	35
42	Natural Hazard Susceptibility Assessment for Road Planning Using Spatial Multi-Criteria Analysis. <i>Environmental Management</i> , 2017, 60, 823-851.	1.2	35
43	Future Nutrient Load Scenarios for the Baltic Sea Due to Climate and Lifestyle Changes. <i>Ambio</i> , 2014, 43, 337-351.	2.8	31
44	Do alternative irrigation strategies for rice cultivation decrease water footprints at the cost of long-term soil health?. <i>Environmental Research Letters</i> , 2019, 14, 074011.	2.2	30
45	Spatial distribution and frequency of precipitation during an extreme event: July 2006 mesoscale convective complexes and floods in southeastern Arizona. <i>Water Resources Research</i> , 2009, 45, .	1.7	29
46	Modelling variable source area dynamics in a CEAP watershed. <i>Ecohydrology</i> , 2009, 2, 337-349.	1.1	28
47	Spatiotemporal variations of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ in subarctic streams in northern Sweden. <i>Global Biogeochemical Cycles</i> , 2013, 27, 176-186.	1.9	28
48	On the utilization of hydrological modelling for road drainage design under climate and land use change. <i>Science of the Total Environment</i> , 2014, 475, 97-103.	3.9	28
49	Streamflow recession patterns can help unravel the role of climate and humans in landscape co-evolution. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 1413-1432.	1.9	28
50	On the variability of cold region flooding. <i>Journal of Hydrology</i> , 2016, 534, 669-679.	2.3	28
51	Soda Bottle Science – Citizen Science Monsoon Precipitation Monitoring in Nepal. <i>Frontiers in Earth Science</i> , 2019, 7, .	0.8	28
52	Effects of Different Retention Parameter Estimation Methods on the Prediction of Surface Runoff Using the SCS Curve Number Method. <i>Water Resources Management</i> , 2014, 28, 3241-3254.	1.9	27
53	Interpreting characteristic drainage timescale variability across Kilombero Valley, Tanzania. <i>Hydrological Processes</i> , 2015, 29, 1912-1924.	1.1	27
54	Modelling rating curves using remotely sensed LiDAR data. <i>Hydrological Processes</i> , 2012, 26, 1427-1434.	1.1	26

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55	Selecting Sustainability Indicators for Small to Medium Sized Urban Water Systems Using Fuzzyâ€ELECTRE. <i>Water Environment Research</i> , 2017, 89, 238-249.	1.3	26
56	Assessment of Water Quality Across Irrigation Schemes: A Case Study of Wetland Agriculture Impacts in Kilombero Valley, Tanzania. <i>Water (Switzerland)</i> , 2019, 11, 671.	1.2	26
57	The Hydrological Effects of Lateral Preferential Flow Paths in a Glaciated Watershed in the Northeastern USA. <i>Vadose Zone Journal</i> , 2010, 9, 397-414.	1.3	24
58	Comparing Remotely-Sensed Surface Energy Balance Evapotranspiration Estimates in Heterogeneous and Data-Limited Regions: A Case Study of Tanzaniaâ€™s Kilombero Valley. <i>Remote Sensing</i> , 2019, 11, 1289.	1.8	23
59	Monitoring the timing of snowmelt and the initiation of streamflow using a distributed network of temperature/light sensors. <i>Ecohydrology</i> , 2008, 1, 215-224.	1.1	22
60	Mojito, Anyone? An Exploration of Low-Tech Plant Water Extraction Methods for Isotopic Analysis Using Locally-Sourced Materials. <i>Frontiers in Earth Science</i> , 2019, 7, .	0.8	22
61	Using landscape characteristics to define an adjusted distance metric for improving kriging interpolations. <i>International Journal of Geographical Information Science</i> , 2010, 24, 723-740.	2.2	20
62	Sensitivity of stream dissolved organic carbon to temperature and discharge: Implications of future climates. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2016, 121, 126-144.	1.3	20
63	Development and application of a catchment similarity index for subsurface flow. <i>Water Resources Research</i> , 2010, 46, .	1.7	19
64	Flood seasonality across Scandinaviaâ€™Evidence of a shifting hydrograph?. <i>Hydrological Processes</i> , 2017, 31, 4354-4370.	1.1	19
65	Impact of recent extreme Arizona storms. <i>Eos</i> , 2007, 88, 191-193.	0.1	18
66	Societal, land cover and climatic controls on river nutrient flows into the Baltic Sea. <i>Journal of Hydrology: Regional Studies</i> , 2014, 1, 44-56.	1.0	18
67	Impacts of multi-purpose reservoir construction, land-use change and climate change on runoff characteristics in the Poyang Lake basin, China. <i>Journal of Hydrology: Regional Studies</i> , 2020, 29, 100694.	1.0	18
68	Modeller subjectivity and calibration impacts on hydrological model applications: An event-based comparison for a road-adjacent catchment in south-east Norway. <i>Science of the Total Environment</i> , 2015, 502, 315-329.	3.9	17
69	Soil frost effects on streamflow recessions in a subarctic catchment. <i>Hydrological Processes</i> , 2019, 33, 1304-1316.	1.1	17
70	Particle tracer transport in a sloping soil lysimeter under periodic, steady state conditions. <i>Journal of Hydrology</i> , 2019, 569, 61-76.	2.3	17
71	Tile drainage causes flashy streamflow response in Ohio watersheds. <i>Hydrological Processes</i> , 2021, 35, e14326.	1.1	17
72	Problemâ€Based Learning and Assessment in Hydrology Courses: Can Nonâ€Traditional Assessment Better Reflect Intended Learning Outcomes?. <i>Journal of Natural Resources and Life Sciences Education</i> , 2011, 40, 199-205.	0.3	16

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73	Increasing non-linearity of the storage-discharge relationship in Arctic catchments. <i>Hydrological Processes</i> , 2020, 34, 3894-3909.	1.1	16
74	Modeling Potential Water Resource Impacts of Mediterranean Tourism in a Changing Climate. <i>Environmental Modeling and Assessment</i> , 2015, 20, 117-128.	1.2	13
75	Advancing understanding in data-limited conditions: estimating contributions to streamflow across Tanzania's rapidly developing Kilombero Valley. <i>Hydrological Sciences Journal</i> , 2018, 63, 197-209.	1.2	13
76	Water Balance and Level Change of Lake Babati, Tanzania: Sensitivity to Hydroclimatic Forcings. <i>Water (Switzerland)</i> , 2016, 8, 572.	1.2	12
77	Synergy of Satellite, In Situ and Modelled Data for Addressing the Scarcity of Water Quality Information for Eutrophication Assessment and Monitoring of Swedish Coastal Waters. <i>Remote Sensing</i> , 2019, 11, 2051.	1.8	12
78	Rapid Stage-Discharge Rating Curve Assessment Using Hydraulic Modeling in an Uncertainty Framework. <i>Water Resources Research</i> , 2019, 55, 9765-9787.	1.7	11
79	Stable isotopes of water and specific conductance reveal complimentary information on streamflow generation in snowmelt-dominated, seasonally arid watersheds. <i>Journal of Hydrology</i> , 2021, 596, 126075.	2.3	11
80	Utilization of Global Precipitation Datasets in Data Limited Regions: A Case Study of Kilombero Valley, Tanzania. <i>Atmosphere</i> , 2017, 8, 246.	1.0	10
81	Drone-Based Hyperspectral and Thermal Imagery for Quantifying Upland Rice Productivity and Water Use Efficiency after Biochar Application. <i>Remote Sensing</i> , 2021, 13, 1866.	1.8	10
82	Understanding coastal wetland conditions and futures by closing their hydrologic balance: the case of the Gialova lagoon, Greece. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 3557-3571.	1.9	10
83	Lessons learned from monitoring the stable water isotopic variability in precipitation and streamflow across a snow-dominated subarctic catchment. <i>Arctic, Antarctic, and Alpine Research</i> , 2018, 50, .	0.4	9
84	Tile Drainage Increases Total Runoff and Phosphorus Export During Wet Years in the Western Lake Erie Basin. <i>Frontiers in Water</i> , 2021, 3, .	1.0	9
85	Seasonal Influence of Insolation on Fine-Resolved Air Temperature Variation and Snowmelt. <i>Journal of Applied Meteorology and Climatology</i> , 2014, 53, 323-332.	0.6	7
86	Can Low-Resolution Airborne Laser Scanning Data Be Used to Model Stream Rating Curves?. <i>Water (Switzerland)</i> , 2015, 7, 1324-1339.	1.2	7
87	A Cost-Effective Laser Scanning Method for Mapping Stream Channel Geometry and Roughness. <i>Journal of the American Water Resources Association</i> , 2015, 51, 1211-1220.	1.0	7
88	Seasonal and Regional Patterns in Performance for a Baltic Sea Drainage Basin Hydrologic Model. <i>Journal of the American Water Resources Association</i> , 2015, 51, 550-566.	1.0	7
89	Simulating the impact of roads on hydrological responses: examples from Swedish terrain. <i>Hydrology Research</i> , 2016, 47, 767-781.	1.1	7
90	Soil Carbon, Nitrogen and Phosphorus Contents along a Gradient of Agricultural Intensity in the Kilombero Valley, Tanzania. <i>Land</i> , 2020, 9, 121.	1.2	7

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91	Estimating Aquifer Transmissivity Using the Recession-Curve-Displacement Method in Tanzania's Kilombero Valley. <i>Water (Switzerland)</i> , 2017, 9, 948.	1.2	6
92	The relationship between land use and water. <i>Eos</i> , 2012, 93, 259-259.	0.1	5
93	Improving Water Management Education across the Latin America and Caribbean Region. <i>Water (Switzerland)</i> , 2019, 11, 2318.	1.2	5
94	Quantifying contributions of snowmelt water to streamflow using graphical and chemical hydrograph separation. <i>Hydrological Processes</i> , 2020, 34, 5606-5623.	1.1	5
95	Defining a Topographic Index Threshold to Delineate Hydrologically Sensitive Areas for Water Resources Planning and Management. <i>Water Resources Management</i> , 2020, 34, 3675-3688.	1.9	5
96	Hydro-climatic controls explain variations in catchment-scale nitrogen use efficiency. <i>Environmental Research Letters</i> , 2020, 15, 094006.	2.2	5
97	Using Lidar to Advance Critical Zone Science. <i>Eos</i> , 2014, 95, 364-364.	0.1	4
98	Data-driven Nutrient-landscape Relationships across Regions and Scales. <i>Water Environment Research</i> , 2016, 88, 2023-2031.	1.3	4
99	Modelling impacts of development on water resources in the Huai Sai Bat sub-basin in north-eastern Thailand with a participatory approach. <i>International Journal of Water Resources Development</i> , 2017, 33, 1020-1040.	1.2	4
100	Internet mapping tools make scientific applications easy. <i>Eos</i> , 2006, 87, 386.	0.1	3
101	Optimal Wastewater Loading under Conflicting Goals and Technology Limitations in a Riverine System. <i>Water Environment Research</i> , 2017, 89, 211-220.	1.3	3
102	Leveraging a Participatory Process for Restoration Return on Investment: The Nature Conservancy's Floodplain Investment Tool. <i>Journal of the American Water Resources Association</i> , 2018, 54, 1285-1301.	1.0	3
103	Role-play simulations as an aid to achieve complex learning outcomes in hydrological science. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 2369-2378.	1.9	3
104	On the Potential of Biochar Soil Amendments as a Sustainable Water Management Strategy. <i>Sustainability</i> , 2022, 14, 7026.	1.6	3
105	Why monitor carbon in high-alpine streams?. <i>Geografiska Annaler, Series A: Physical Geography</i> , 2016, 98, 237-245.	0.6	2
106	Modeling streamflow from coupled airborne laser scanning and acoustic Doppler current profiler data. <i>Hydrology Research</i> , 2017, 48, 981-996.	1.1	2
107	On using initial monitoring data to communicate restoration potentials and limitations. <i>Applied Environmental Education and Communication</i> , 2020, 19, 287-302.	0.6	2
108	Specialty crop retention reservoir performance and design considerations to secure quality water and mitigate non-point source runoff. <i>Journal of Cleaner Production</i> , 2021, 321, 128925.	4.6	2

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109	Estimating uncertainties in hydraulically modelled rating curves for discharge time series assessment. E3S Web of Conferences, 2018, 40, 06013.	0.2	0
110	Storage-Discharge Relationships under Forest Cover Change in Ethiopian Highlands. Water (Switzerland), 2021, 13, 2310.	1.2	0