Stephen D Sebestyen

List of Publications by Year
in descending order

71 papers	3,201 citations	159525 30 h-index	161767 54 g-index
90 all docs	90 docs citations	90 times ranked	4408 citing authors

#	Article	IF	Citations
1	Hot Spots and Hot Moments in Riparian Zones: Potential for Improved Water Quality Management¹. Journal of the American Water Resources Association, 2010, 46, 278-298.	1.0	398
2	Taking the pulse of snowmelt: in situ sensors reveal seasonal, event and diurnal patterns of nitrate and dissolved organic matter variability in an upland forest stream. Biogeochemistry, 2012, 108, 183-198.	1.7	226
3	Carbon isotope fractionation of dissolved inorganic carbon (DIC) due to outgassing of carbon dioxide from a headwater stream. Hydrological Processes, 2008, 22, 2410-2423.	1.1	214
4	Stability of peatland carbon to rising temperatures. Nature Communications, 2016, 7, 13723.	5.8	162
5	Sources, transformations, and hydrological processes that control stream nitrate and dissolved organic matter concentrations during snowmelt in an upland forest. Water Resources Research, 2008, 44, .	1.7	155
6	Ecosystem Processes and Human Influences Regulate Streamflow Response to Climate Change at Long-Term Ecological Research Sites. BioScience, 2012, 62, 390-404.	2.2	149
7	Changing forest water yields in response to climate warming: results from longâ€term experimental watershed sites across North America. Global Change Biology, 2014, 20, 3191-3208.	4.2	147
8	Ecoenzymatic stoichiometry and microbial processing of organic matter in northern bogs and fens reveals a common P-limitation between peatland types. Biogeochemistry, 2014, 120, 203-224.	1.7	129
9	Tracing sources of nitrate in snowmelt runoff using a high-resolution isotopic technique. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	93
10	Rapid Net Carbon Loss From a Wholeâ€Ecosystem Warmed Peatland. AGU Advances, 2020, 1, e2020AV000163.	2.3	69
11	Representing northern peatland microtopography and hydrology within the Community Land Model. Biogeosciences, 2015, 12, 6463-6477.	1.3	66
12	Invasive Earthworms Deplete Key Soil Inorganic Nutrients (Ca, Mg, K, and P) in a Northern Hardwood Forest. Ecosystems, 2015, 18, 89-102.	1.6	64
13	Uncertainty in Peat Volume and Soil Carbon Estimated Using Groundâ€Penetrating Radar and Probing. Soil Science Society of America Journal, 2012, 76, 1911-1918.	1.2	63
14	New Insights on Ecosystem Mercury Cycling Revealed by Stable Isotopes of Mercury in Water Flowing from a Headwater Peatland Catchment. Environmental Science & Technology, 2018, 52, 1854-1861.	4.6	60
15	Responses of stream nitrate and DOC loadings to hydrological forcing and climate change in an upland forest of the northeastern United States. Journal of Geophysical Research, 2009, 114, .	3.3	56
16	Coupled hydrological and biogeochemical processes controlling variability of nitrogen species in streamflow during autumn in an upland forest. Water Resources Research, 2014, 50, 1569-1591.	1.7	56
17	Trends in stream nitrogen concentrations for forested reference catchments across the USA. Environmental Research Letters, 2013, 8, 014039.	2.2	54
18	Soil metabolome response to whole-ecosystem warming at the Spruce and Peatland Responses under Changing Environments experiment. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	54

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19	Gaseous mercury fluxes from forest soils in response to forest harvesting intensity: A field manipulation experiment. Science of the Total Environment, 2014, 496, 678-687.	3.9	53
20	Water's Way at Sleepers River watershed â€“ revisiting flow generation in a postâ€glacial landscape, Vermont USA. Hydrological Processes, 2015, 29, 3447-3459.	1.1	53
21	Metabolic and physiochemical responses to a whole-lake experimental increase in dissolved organic carbon in a north-temperate lake. Limnology and Oceanography, 2016, 61, 723-734.	1.6	48
22	Dataâ€Constrained Projections of Methane Fluxes in a Northern Minnesota Peatland in Response to Elevated CO₂ and Warming. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2841-2861.	1.3	47
23	TheÂInfluence of HydrologicÂResidenceÂTime on Lake Carbon Cycling Dynamics Following Extreme Precipitation Events. Ecosystems, 2017, 20, 1000-1014.	1.6	46
24	Drivers of atmospheric nitrate processing and export in forested catchments. Water Resources Research, 2015, 51, 1333-1352.	1.7	44
25	Nitrogen and Phosphorus Loads to Temperate Seepage Lakes Associated With Allochthonous Dissolved Organic Carbon Loads. Geophysical Research Letters, 2018, 45, 5481-5490.	1.5	41
26	Dynamic Vertical Profiles of Peat Porewater Chemistry in a Northern Peatland. Wetlands, 2016, 36, 1119-1130.	0.7	38
27	Iron (Oxyhydr)Oxides Serve as Phosphate Traps in Tundra and Boreal Peat Soils. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 227-246.	1.3	38
28	Dynamic temporal patterns of nearshore seepage flux in a headwater Adirondack lake. Journal of Hydrology, 2001, 247, 137-150.	2.3	36
29	Temporal and Spatial Variation in Peatland Carbon Cycling and Implications for Interpreting Responses of an Ecosystemâ€Scale Warming Experiment. Soil Science Society of America Journal, 2017, 81, 1668-1688.	1.2	34
30	Unprocessed Atmospheric Nitrate in Waters of the Northern Forest Region in the U.S. and Canada. Environmental Science & Technology, 2019, 53, 3620-3633.	4.6	34
31	Seepage patterns, pore water, and aquatic plants: hydrological and biogeochemical relationships in lakes. Biogeochemistry, 2004, 68, 383-409.	1.7	33
32	Comparisons of soil nitrogen mass balances for an ombrotrophic bog and a minerotrophic fen in northern Minnesota. Science of the Total Environment, 2016, 550, 880-892.	3.9	30
33	Impact of Exotic Earthworms on Organic Carbon Sorption on Mineral Surfaces and Soil Carbon Inventories in a Northern Hardwood Forest. Ecosystems, 2015, 18, 16-29.	1.6	24
34	Biophysical drivers of seasonal variability in <i>Sphagnum</i> gross primary production in a northern temperate bog. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 1078-1097.	1.3	22
35	Invertebrate Community Patterns in Seasonal Ponds in Minnesota, USA: Response to Hydrologic and Environmental Variability. Wetlands, 2013, 33, 245-256.	0.7	21
36	Climate Sensitivity of Peatland Methane Emissions Mediated by Seasonal Hydrologic Dynamics. Geophysical Research Letters, 2020, 47, e2020GL088875.	1.5	21

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37	Elemental and mineralogical changes in soils due to bioturbation along an earthworm invasion chronosequence in Northern Minnesota. Applied Geochemistry, 2011, 26, S127-S131.	1.4	19
38	Topographic, edaphic, and vegetative controls on plantâ€available water. Ecohydrology, 2017, 10, e1897.	1.1	19
39	Variation in peatland porewater chemistry over time and space along a bog to fen gradient. Science of the Total Environment, 2019, 697, 134152.	3.9	18
40	Hydrological and meteorological data from research catchments at the Marcell Experimental Forest, Minnesota, USA. Hydrological Processes, 2021, 35, e14092.	1.1	18
41	Longâ€Term Soil Moisture Patterns in a Northern Minnesota Forest. Soil Science Society of America Journal, 2014, 78, S208.	1.2	15
42	Influence of soil temperature and moisture on the dissolved carbon, nitrogen, and phosphorus in organic matter entering lake ecosystems. Biogeochemistry, 2018, 139, 293-305.	1.7	15
43	Nitrogen and phosphorus cycling in an ombrotrophic peatland: a benchmark for assessing change. Plant and Soil, 2021, 466, 649-674.	1.8	15
44	Role of Ester Sulfate and Organic Disulfide in Mercury Methylation in Peatland Soils. Environmental Science & Technology, 2022, 56, 1433-1444.	4.6	15
45	Stream Runoff and Nitrate Recovery Times After Forest Disturbance in the USA and Japan. Water Resources Research, 2018, 54, 6042-6054.	1.7	14
46	Long-Term Monitoring Sites and Trends at the Marcell Experimental Forest. , 2011, , 39-96.		14
47	Warming Stimulates Iron-Mediated Carbon and Nutrient Cycling in Mineral-Poor Peatlands. Ecosystems, 2022, 25, 44-60.	1.6	13
48	Whole-Ecosystem Warming Increases Plant-Available Nitrogen and Phosphorus in an Ombrotrophic Bog. Ecosystems, 2023, 26, 86-113.	1.6	13
49	An Integrative Model for Soil Biogeochemistry and Methane Processes: I. Model Structure and Sensitivity Analysis. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2019JG005468.	1.3	11
50	Carbonâ€“mineral interactions along an earthworm invasion gradient at a Sugar Maple Forest in Northern Minnesota. Applied Geochemistry, 2011, 26, S85-S88.	1.4	9
51	Changes in hillslope hydrology in a perched, shallow soil system due to clearcutting and residual biomass removal. Hydrological Processes, 2020, 34, 5354-5369.	1.1	9
52	Sources and biodegradability of dissolved organic matter in two headwater peatland catchments at the Marcell Experimental Forest, northern Minnesota, <scp>USA</scp>. Hydrological Processes, 2021, 35, e14049.	1.1	9
53	Acidic Groundwater Discharge and in Situ Egg Survival in Redds of Lake-Spawning Brook Trout. Transactions of the American Fisheries Society, 2005, 134, 1193-1201.	0.6	8
54	Growthâ€“climate relationships across topographic gradients in the northern Great Lakes. Ecohydrology, 2016, 9, 918-929.	1.1	7

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55	Contemporary Mobilization of Legacy Pb Stores by DOM in a Boreal Peatland. Environmental Science & Technology, 2018, 52, 3375-3383.	4.6	7
56	Radiocarbon Analyses Quantify Peat Carbon Losses With Increasing Temperature in a Whole Ecosystem Warming Experiment. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2021JG006511.	1.3	7
57	Climatic controls on peatland black spruce growth in relation to water table variation and precipitation. Ecohydrology, 2019, 12, e2137.	1.1	5
58	Differential subsurface mobilization of ambient mercury and isotopically enriched mercury tracers in a harvested and residue harvested hardwood forest in northern Minnesota. Biogeochemistry, 2021, 154, 119-138.	1.7	5
59	Nonstationary flood-frequency analysis to assess effects of harvest and cover type conversion on peak flows at the Marcell Experimental Forest, Minnesota, USA. Journal of Hydrology, 2021, 596, 126054.	2.3	5
60	Effects of Clearcutting and Residual Biomass Harvesting on Hillslope Mercury Mobilization and Downgradient Mercury Accumulation. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	5
61	Hydrological feedbacks on peatland CH4 emission under warming and elevated CO2: A modeling study. Journal of Hydrology, 2021, 603, 127137.	2.3	4
62	Further Development of a Specific Conductivity Approach to Measure Groundwater Discharge Area within Lakes. Journal of the American Water Resources Association, 2019, 55, 485-496.	1.0	3
63	Mercury dynamics in the pore water of peat columns during experimental freezing and thawing. Journal of Environmental Quality, 2020, 49, 404-416.	1.0	3
64	Hydrology and biogeochemistry datasets from Sleepers River Research Watershed, Danville, Vermont, USA. Hydrological Processes, 0, , .	1.1	3
65	Controls on decadal, annual, and seasonal concentrationâ€discharge relationships in the <scp>Sleepers River Research Watershed</scp>, <scp>Vermont, northeastern United States</scp>. Hydrological Processes, 2022, 36, .	1.1	3
66	Analyzing Trends in Water Table Elevations at the Marcell Experimental Forest, Minnesota, U.S.A.. American Journal of Undergraduate Research, 2021, 17, 19-32.	0.3	2
67	The stable isotopes of natural waters at the Marcell Experimental Forest. Hydrological Processes, 2021, 35, e14336.	1.1	2
68	Element Cycling in Upland/Peatland Watersheds. , 2011, , 237-266.		2
69	Merging perspectives in the catchment sciences: the US-Japan Joint Seminar on catchment hydrology and forest biogeochemistry. Hydrological Processes, 2014, 28, 2878-2880.	1.1	1
70	IRON REDOX CYCLING AND IMPACTS ON PHOSPHORUS SOLUBILITY IN TUNDRA AND BOREAL ECOSYSTEMS. , 2016, , .		0
71	Deciphering the shifting role of intrinsic and extrinsic drivers on moss decomposition in peatlands over a 5â€year period. Oikos, 2022, 2022, .	1.2	0