Keith E Schilling

List of Publications by Year
in descending order

140 papers	4,716 citations	108046 37 h-index	134545 62 g-index
140 all docs	140 docs citations	140 times ranked	4774 citing authors

#	Article	IF	Citations
1	The Role of Climate in Monthly Baseflow Changes across the Continental United States. Journal of Hydrologic Engineering - ASCE, 2022, 27, .	0.8	9
2	Determination of accurate baseline representation for three Central Iowa watersheds within a HAWQS-based SWAT analyses. Science of the Total Environment, 2022, 839, 156302.	3.9	4
3	Paired riparian water table monitoring to quantify hydraulic loading to a saturated buffer. Environmental Monitoring and Assessment, 2022, 194, .	1.3	0
4	On the statistical attribution of changes in monthly baseflow across the U.S. Midwest. Journal of Hydrology, 2021, 592, 125551.	2.3	16
5	Aquifer lithology affects shallow groundwater quality more than nitrogen fertilizer form and placement method in an Iowa agricultural field. , 2021, 4, e20163.		2
6	Quantifying the Extent of Eroding Streambanks in Iowa. Journal of the American Water Resources Association, 2021, 57, 391-405.	1.0	2
7	Projected changes in monthly baseflow across the U.S. Midwest. International Journal of Climatology, 2021, 41, 5536.	1.5	3
8	Quantifying the effectiveness of a saturated buffer to reduce tile NO3-N concentrations in eastern Iowa. Environmental Monitoring and Assessment, 2021, 193, 500.	1.3	7
9	Development of statistical models for estimating daily nitrate load in Iowa. Science of the Total Environment, 2021, 782, 146643.	3.9	4
10	Temporal scaling of long-term co-occurring agricultural contaminants and the implications for conservation planning. Environmental Research Letters, 2021, 16, 094015.	2.2	1
11	Using baseflow to quantify diffuse groundwater recharge and drought at a regional scale. Journal of Hydrology, 2021, 602, 126765.	2.3	8
12	Nutrient capture in an Iowa farm pond: Insights from high-frequency observations. Journal of Environmental Management, 2021, 299, 113647.	3.8	3
13	Abiotic reduction of nitrite by Fe(<scp>ii</scp>): a comparison of rates and N₂O production. Environmental Sciences: Processes and Impacts, 2021, 23, 1531-1541.	1.7	6
14	Using high-resolution electrical resistivity to estimate hydraulic conductivity and improve characterization of alluvial aquifers. Journal of Hydrology, 2020, 580, 123992.	2.3	29
15	Assessing and mitigating the effects of agricultural soil erosion on roadside ditches. Journal of Soils and Sediments, 2020, 20, 524-534.	1.5	4
16	Total phosphorus export from Iowa agricultural watersheds: Quantifying the scope and scale of a regional condition. Journal of Hydrology, 2020, 581, 124397.	2.3	17
17	Dissolved phosphate concentrations in Iowa shallow groundwater. Journal of Environmental Quality, 2020, 49, 909-920.	1.0	9
18	A critical review on the potential impacts of neonicotinoid insecticide use: current knowledge of environmental fate, toxicity, and implications for human health. Environmental Sciences: Processes and Impacts, 2020, 22, 1315-1346.	1.7	187

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19	Subsurface nutrient export from a cropped field to an agricultural stream: Implications for targeting edge-of-field practices. Agricultural Water Management, 2020, 241, 106339.	2.4	19
20	Assessment of Spatial Nitrate Patterns in An Eastern Iowa Watershed Using Boat-Deployed Sensors. Water (Switzerland), 2020, 12, 146.	1.2	3
21	Nitrate on a Slow Decline: Watershed Water Quality Response during Two Decades of Tallgrass Prairie Ecosystem Reconstruction in Iowa. Journal of Environmental Quality, 2019, 48, 579-585.	1.0	4
22	The Development of a GIS Methodology to Identify Oxbows and Former Stream Meanders from LiDAR-Derived Digital Elevation Models. Remote Sensing, 2019, 11, 12.	1.8	10
23	Hydrograph separation of subsurface tile discharge. Environmental Monitoring and Assessment, 2019, 191, 231.	1.3	12
24	Livestock manure driving stream nitrate. Ambio, 2019, 48, 1143-1153.	2.8	25
25	Contrasting NO3-N concentration patterns at two karst springs in Iowa (USA): insights on aquifer nitrogen storage and delivery. Hydrogeology Journal, 2019, 27, 1389-1400.	0.9	5
26	Soil sedimentation and quality within the roadside ditches of an agricultural watershed. Science of the Total Environment, 2019, 657, 1432-1440.	3.9	7
27	Changes in lateral floodplain connectivity accompanying stream channel evolution: Implications for sediment and nutrient budgets. Science of the Total Environment, 2019, 660, 1015-1028.	3.9	9
28	Multipurpose Oxbows as a Nitrate Export Reduction Practice in the Agricultural Midwest. Agricultural and Environmental Letters, 2019, 4, 190035.	0.8	11
29	Changes in monthly baseflow across the U.S. Midwest. Hydrological Processes, 2019, 33, 748-758.	1.1	27
30	Soil total phosphorus deposition and variability patterns across the floodplains of an Iowa river. Catena, 2019, 174, 84-94.	2.2	15
31	Relating carbon and nitrogen transport from constructed farm drainage. Agricultural Water Management, 2019, 213, 12-23.	2.4	7
32	Quantifying the contribution of tile drainage to basin-scale water yield using analytical and numerical models. Science of the Total Environment, 2019, 657, 297-309.	3.9	38
33	Water Balance Modeling of Temporary Ponding in a Drained Prairie Pothole Wetland. Environmental Modeling and Assessment, 2019, 24, 37-48.	1.2	6
34	Right practice, right place: A conservation planning toolbox for meeting water quality goals in the Corn Belt. Journal of Soils and Water Conservation, 2018, 73, 29A-34A.	0.8	25
35	Effectiveness of a newly reconstructed floodplain oxbow to reduce NO3-N loads from a spring flood. Journal of Environmental Management, 2018, 215, 385-393.	3.8	8
36	Groundwater Nutrient Concentrations and Mass Loading Rates at Iowa Golf Courses. Journal of the American Water Resources Association, 2018, 54, 211-224.	1.0	4

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37	Distribution and mass of groundwater orthophosphorus in an agricultural watershed. Science of the Total Environment, 2018, 625, 1330-1340.	3.9	12
38	Groundwater monitoring at the watershed scale: An evaluation of recharge and nonpoint source pollutant loading in the Clear Creek Watershed, Iowa. Hydrological Processes, 2018, 32, 562-575.	1.1	15
39	Spatiotemporal Responses of Groundwater Flow and Aquiferâ€River Exchanges to Flood Events. Water Resources Research, 2018, 54, 1513-1532.	1.7	25
40	Sediment delivery and nutrient export as indicators of soil sustainability in an Iowa agricultural watershed. Journal of Soils and Sediments, 2018, 18, 1756-1766.	1.5	8
41	Iowa Statewide Stream Nitrate Load Calculated Using In Situ Sensor Network. Journal of the American Water Resources Association, 2018, 54, 471-486.	1.0	33
42	Nitrate uptake in an agricultural stream estimated from high-frequency, in-situ sensors. Environmental Monitoring and Assessment, 2018, 190, 226.	1.3	11
43	Investigating Hydrologic Connectivity of a Drained Prairie Pothole Region Wetland Complex using a Fully Integrated, Physically-Based Model. Wetlands, 2018, 38, 233-245.	0.7	18
44	Using riparian Zone scaling to optimize buffer placement and effectiveness. Landscape Ecology, 2018, 33, 141-156.	1.9	15
45	Groundwater Hydrology and Quality in Drained Wetlands of the Des Moines Lobe in Iowa. Wetlands, 2018, 38, 247-259.	0.7	18
46	Effects of golf course management on subsurface soil properties in Iowa. Soil, 2018, 4, 93-100.	2.2	1
47	Streambank Alluvial Unit Contributions to Suspended Sediment and Total Phosphorus Loads, Walnut Creek, Iowa, USA. Water (Switzerland), 2018, 10, 111.	1.2	22
48	The Intensively Managed Landscape Critical Zone Observatory: A Scientific Testbed for Understanding Critical Zone Processes in Agroecosystems. Vadose Zone Journal, 2018, 17, 1-21.	1.3	31
49	Iowa Stream Nitrate, Discharge and Precipitation: 30-Year Perspective. Environmental Management, 2018, 62, 709-720.	1.2	13
50	Nitrate-N load reduction measured in a central Iowa restored oxbow. Ecological Engineering, 2018, 124, 19-22.	1.6	9
51	Monitoring the Wildlife, Hydrology and Water Quality of Drained Wetlands of the Des Moines Lobe, Northern Iowa: Introduction to Special Feature. Wetlands, 2018, 38, 207-210.	0.7	9
52	Evaluating the Timing and Interdependence of Hydrologic Processes at the Watershed Scale Based on Continuously Monitored Data. Water (Switzerland), 2018, 10, 261.	1.2	2
53	Iowa stream nitrate and the Gulf of Mexico. PLoS ONE, 2018, 13, e0195930.	1.1	72
54	Subsurface nutrient processing capacity in agricultural roadside ditches. Science of the Total Environment, 2018, 637-638, 470-479.	3.9	11

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55	Reply to Comment by Roques et al. on â€œBase Flow Recession from Unsaturated-Saturated Porous Media considering Lateral Unsaturated Discharge and Aquifer Compressibilityâ€ Water Resources Research, 2018, 54, 3220-3222.	1.7	0
56	Estimating groundwater age in the Cambrianâ€“Ordovician aquifer in Iowa: implications for biofuel production and other water uses. Environmental Earth Sciences, 2017, 76, 1.	1.3	8
57	Use of continuous monitoring to assess stream nitrate flux and transformation patterns. Environmental Monitoring and Assessment, 2017, 189, 35.	1.3	6
58	Soil Properties in Native, Reconstructed, and Farmed Prairie Potholes: A Chronosequence Study of Restoration Timeframes. Ecological Restoration, 2017, 35, 6-12.	0.5	6
59	Nitrate reduction in a reconstructed floodplain oxbow fed by tile drainage. Ecological Engineering, 2017, 102, 98-107.	1.6	26
60	Use of water quality surrogates to estimate total phosphorus concentrations in Iowa rivers. Journal of Hydrology: Regional Studies, 2017, 12, 111-121.	1.0	28
61	Nitrate transport and supply limitations quantified using high-frequency stream monitoring and turning point analysis. Journal of Hydrology, 2017, 549, 581-591.	2.3	25
62	Base flow recession from unsaturatedâ€saturated porous media considering lateral unsaturated discharge and aquifer compressibility. Water Resources Research, 2017, 53, 7832-7852.	1.7	22
63	Assessment of Bioenergy Cropping Scenarios for the Boone River Watershed in North Central Iowa, United States. Journal of the American Water Resources Association, 2017, 53, 1336-1354.	1.0	17
64	Estimating nitrate retention in a large constructed wetland using high-frequency, continuous monitoring and hydrologic modeling. , 2017, , .		0
65	Estimating nitrate retention in a large constructed wetland using high-frequency, continuous monitoring and hydrologic modeling. , 2017, , .		0
66	Orthophosphorus Contributions to Total Phosphorus Concentrations and Loads in Iowa Agricultural Watersheds. Journal of Environmental Quality, 2017, 46, 828-835.	1.0	13
67	Soybean Area and Baseflow Driving Nitrate in Iowa's Raccoon River. Journal of Environmental Quality, 2016, 45, 1949-1959.	1.0	15
68	Assessing the Relative Importance of Nitrogen-Retention Processes in a Large Reservoir Using Time-Series Modeling. Journal of Agricultural, Biological, and Environmental Statistics, 2016, 21, 152-169.	0.7	6
69	Evaluating the efficacy of distributed detention structures to reduce downstream flooding under variable rainfall, antecedent soil, and structural storage conditions. Advances in Water Resources, 2016, 96, 74-87.	1.7	18
70	Groundwater loading of nitrate-nitrogen and phosphorus from watershed source areas to an Iowa Great Lake. Journal of Great Lakes Research, 2016, 42, 588-598.	0.8	14
71	Comment on â€œClimate and agricultural land use change impacts on streamflow in the upper midwestern United Statesâ€•by Satish C. Gupta et al.. Water Resources Research, 2016, 52, 5694-5696.	1.7	16
72	Assessing the relation of USDA conservation expenditures to suspended sediment reductions in an Iowa watershed. Journal of Environmental Management, 2016, 180, 375-383.	3.8	2

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73	Total Phosphorus Concentration Trends in 40 Iowa Rivers, 1999 to 2013. Journal of Environmental Quality, 2016, 45, 1351-1358.	1.0	8
74	Numerical investigation of the spatial scale and time dependency of tile drainage contribution to stream flow. Journal of Hydrology, 2016, 538, 651-666.	2.3	22
75	Water and nutrient discharge to a highâ€value terraceâ€“floodplain fen: resilience and risk. Ecohydrology, 2016, 9, 1196-1207.	1.1	7
76	Effect of heterogeneity on spatiotemporal variations of groundwater level in a bounded unconfined aquifer. Stochastic Environmental Research and Risk Assessment, 2016, 30, 1-8.	1.9	10
77	Co-Kriging Estimation of Nitrate-Nitrogen Loads in an Agricultural River. Water Resources Management, 2016, 30, 1771-1784.	1.9	10
78	Projected Changes in Discharge in an Agricultural Watershed in Iowa. Journal of the American Water Resources Association, 2015, 51, 1361-1371.	1.0	16
79	Reducing Fertilizerâ€Nitrogen Losses from Rowcrop Landscapes: Insights and Implications from a Spatially Explicit Watershed Model. Journal of the American Water Resources Association, 2015, 51, 1003-1019.	1.0	12
80	Tile Drainage Density Reduces Groundwater Travel Times and Compromises Riparian Buffer Effectiveness. Journal of Environmental Quality, 2015, 44, 1754-1763.	1.0	37
81	Effects of Land Cover on Streamflow Variability in a Small Iowa Watershed: Assessing Future Vulnerabilities. American Journal of Environmental Sciences, 2015, 11, 186-198.	0.3	7
82	Evaluation of Alternative Cropping and Nutrient Management Systems with Soil and Water Assessment Tool for the Raccoon River Watershed Master Plan. American Journal of Environmental Sciences, 2015, 11, 227-244.	0.3	6
83	Analytical solutions for two-dimensional groundwater flow with subsurface drainage tiles. Journal of Hydrology, 2015, 521, 556-564.	2.3	10
84	Agricultural conversion of floodplain ecosystems: Implications for groundwater quality. Journal of Environmental Management, 2015, 153, 74-83.	3.8	18
85	Agro-hydrologic Landscapes in the Upper Mississippi and Ohio River Basins. Environmental Management, 2015, 55, 646-656.	1.2	24
86	A comparison of soil properties observed in farmed, restored and natural closed depressions on the Des Moines Lobe of Iowa. Catena, 2015, 129, 39-45.	2.2	10
87	Mining unique soft old water within the Manson Impact Structure, Iowa (USA). Hydrogeology Journal, 2015, 23, 95-103.	0.9	3
88	Reducing Nitrogen Export from the Corn Belt to the Gulf of Mexico: Agricultural Strategies for Remediating Hypoxia. Journal of the American Water Resources Association, 2015, 51, 263-289.	1.0	63
89	Restoration of Prairie Hydrology at the Watershed Scale: Two Decades of Progress at Neal Smith National Wildlife Refuge, Iowa. Land, 2014, 3, 206-238.	1.2	15
90	Nitrate-Nitrogen Export: Magnitude and Patterns from Drainage Districts to Downstream River Basins. Journal of Environmental Quality, 2014, 43, 2024-2033.	1.0	59

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91	Homogenization of spatial patterns of hydrologic response in artificially drained agricultural catchments. Hydrological Processes, 2014, 28, 5010-5020.	1.1	38
92	Effectiveness of natural riparian buffers to reduce subsurface nutrient losses to incised streams. Catena, 2014, 114, 140-148.	2.2	30
93	Streambank erosion rates and loads within a single watershed: Bridging the gap between temporal and spatial scales. Geomorphology, 2014, 209, 66-78.	1.1	59
94	The potential for agricultural land use change to reduce flood risk in a large watershed. Hydrological Processes, 2014, 28, 3314-3325.	1.1	86
95	Nitrate loss in Saylorville Lake reservoir in Iowa. Journal of Hydrology, 2014, 513, 1-6.	2.3	11
96	Relative importance of climate and land surface changes on hydrologic changes in the US Midwest since the 1930s: Implications for biofuel production. Journal of Hydrology, 2013, 497, 110-120.	2.3	77
97	Dynamic regression modeling of daily nitrate-nitrogen concentrations in a large agricultural watershed. Environmental Monitoring and Assessment, 2013, 185, 4605-4617.	1.3	22
98	Letting Wet Spots be Wet: Restoring Natural Bioreactors in the Dissected Glacial Landscape. Environmental Management, 2013, 52, 1440-1452.	1.2	15
99	Nitrate Concentration Trends in Iowa's Rivers, 1998 to 2012: What Challenges Await Nutrient Reduction Initiatives?. Journal of Environmental Quality, 2013, 42, 1822-1828.	1.0	17
100	How Paired Is Paired? Comparing Nitrate Concentrations in Three Iowa Drainage Districts. Journal of Environmental Quality, 2013, 42, 1412-1421.	1.0	14
101	Carbon Export from the Raccoon River, Iowa: Patterns, Processes, and Opportunities. Journal of Environmental Quality, 2013, 42, 155-163.	1.0	14
102	Nitrate-nitrogen patterns in engineered catchments in the upper Mississippi River basin. Ecological Engineering, 2012, 42, 1-9.	1.6	47
103	Evaluation of analytical and numerical approaches for the estimation of groundwater travel time distribution. Journal of Hydrology, 2012, 475, 65-73.	2.3	56
104	Temporal Scaling of Groundwater Level Fluctuations Near a Stream. Ground Water, 2012, 50, 59-67.	0.7	25
105	Impact of artificial subsurface drainage on groundwater travel times and baseflow discharge in an agricultural watershed, Iowa (USA). Hydrological Processes, 2012, 26, 3092-3100.	1.1	63
106	Effects of slow recovery rates on water column geochemistry in aquitard wells. Applied Geochemistry, 2011, 26, 1108-1114.	1.4	1
107	From Agricultural Intensification to Conservation: Sediment Transport in the Raccoon River, Iowa, 1916â€“2009. Journal of Environmental Quality, 2011, 40, 1911-1923.	1.0	42
108	Impacts of Land-Cover Change on Suspended Sediment Transport in Two Agricultural Watersheds1. Journal of the American Water Resources Association, 2011, 47, 672-686.	1.0	45

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109	Rating curve estimation of nutrient loads in Iowa rivers. Journal of Hydrology, 2011, 396, 158-169.	2.3	92
110	Groundwater conditions under a reconstructed prairie chronosequence. Agriculture, Ecosystems and Environment, 2010, 135, 81-89.	2.5	23
111	Quantifying the effect of land use land cover change on increasing discharge in the Upper Mississippi River. Journal of Hydrology, 2010, 387, 343-345.	2.3	151
112	Assessment of Total Maximum Daily Load Implementation Strategies for Nitrate Impairment of the Raccoon River, Iowa. Journal of Environmental Quality, 2010, 39, 1317-1327.	1.0	69
113	Temporal variations of Escherichia coli concentrations in a large Midwestern river. Journal of Hydrology, 2009, 365, 79-85.	2.3	55
114	A simple approach to distinguish land-use and climate-change effects on watershed hydrology. Journal of Hydrology, 2009, 376, 24-33.	2.3	315
115	Water uptake and nutrient concentrations under a floodplain oak savanna during a nonâ€flood period, lower Cedar River, Iowa. Hydrological Processes, 2009, 23, 3006-3016.	1.1	14
116	Investigating local variation in groundwater recharge along a topographic gradient, Walnut Creek, Iowa, USA. Hydrogeology Journal, 2009, 17, 397-407.	0.9	32
117	Time-series modeling of reservoir effects on river nitrate concentrations. Advances in Water Resources, 2009, 32, 1197-1205.	1.7	21
118	Modeling Nitrate-Nitrogen Load Reduction Strategies for the Des Moines River, Iowa Using SWAT. Environmental Management, 2009, 44, 671-682.	1.2	78
119	Vertical distribution of total carbon, nitrogen and phosphorus in riparian soils of Walnut Creek, southern Iowa. Catena, 2009, 77, 266-273.	2.2	53
120	Groundwater nutrient concentrations near an incised midwestern stream: effects of floodplain lithology and land management. Biogeochemistry, 2008, 87, 199-216.	1.7	27
121	Effects of subsurface drainage tiles on streamflow in Iowa agricultural watersheds: Exploratory hydrograph analysis. Hydrological Processes, 2008, 22, 4497-4506.	1.1	132
122	Tile drainage as karst: Conduit flow and diffuse flow in a tile-drained watershed. Journal of Hydrology, 2008, 349, 291-301.	2.3	67
123	Impact of land use and land cover change on the water balance of a large agricultural watershed: Historical effects and future directions. Water Resources Research, 2008, 44, .	1.7	333
124	Water table fluctuations under three riparian land covers, Iowa (USA). Hydrological Processes, 2007, 21, 2415-2424.	1.1	62
125	A GIS-based groundwater travel time model to evaluate stream nitrate concentration reductions from land use change. Environmental Geology, 2007, 53, 433-443.	1.2	34
126	Groundwaterâ€"surface water interaction in the riparian zone of an incised channel, Walnut Creek, Iowa. Journal of Hydrology, 2006, 327, 140-150.	2.3	56

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127	Cokriging estimation of daily suspended sediment loads. Journal of Hydrology, 2006, 327, 389-398.	2.3	28
128	Effects of Watershed-Scale Land Use Change on Stream Nitrate Concentrations. Journal of Environmental Quality, 2006, 35, 2132-2145.	1.0	104
129	ESTIMATION OF STREAMFLOW, BASE FLOW, AND NITRATE-NITROGEN LOADS IN IOWA USING MULTIPLE LINEAR REGRESSION MODELS. Journal of the American Water Resources Association, 2005, 41, 1333-1346.	1.0	33
130	Temporal variations and scaling of streamflow and baseflow and their nitrate-nitrogen concentrations and loads. Advances in Water Resources, 2005, 28, 701-710.	1.7	49
131	RELATION OF NITRATE CONCENTRATIONS TO BASEFLOW IN THE RACCOON RIVER, IOWA. Journal of the American Water Resources Association, 2004, 40, 889-900.	1.0	49
132	Temporal scaling of hydraulic head and river base flow and its implication for groundwater recharge. Water Resources Research, 2004, 40, .	1.7	68
133	Baseflow contribution to nitrate-nitrogen export from a large, agricultural watershed, USA. Journal of Hydrology, 2004, 295, 305-316.	2.3	173
134	INCREASED BASEFLOW IN IOWA OVER THE SECOND HALF OF THE 20TH CENTURY. Journal of the American Water Resources Association, 2003, 39, 851-860.	1.0	157
135	Occurrence and Distribution of Ammonium in Iowa Groundwater. Water Environment Research, 2002, 74, 177-186.	1.3	28
136	Chemical Transport from Paired Agricultural and Restored Prairie Watersheds. Journal of Environmental Quality, 2002, 31, 1184-1193.	1.0	71
137	Contribution of Base Flow to Nonpoint Source Pollution Loads in an Agricultural Watershed. Ground Water, 2001, 39, 49-58.	0.7	63
138	WALNUT CREEK WATERSHED MONITORING PROJECT, IOWA MONITORING WATER QUALITY IN RESPONSE TO PRAIRIE RESTORATION. Journal of the American Water Resources Association, 2000, 36, 1101-1114.	1.0	24
139	APPLICATION OF GPS AND GIS TO MAP CHANNEL FEATURES IN WALNUT CREEK, IOWA. Journal of the American Water Resources Association, 2000, 36, 1423-1434.	1.0	39
140	The Relationship of Nitrate Concentrations in Streams to Row Crop Land Use in Iowa. Journal of Environmental Quality, 2000, 29, 1846-1851.	1.0	124