David Hyndman

List of Publications by Year in descending order

114 papers	4,079 citations	101543 36 h-index	133252 59 g-index
120 all docs	120 docs citations	120 times ranked	4908 citing authors

#	Article	IF	Citations
1	Examining Relationships Between Groundwater Nitrate Concentrations in Drinking Water and Landscape Characteristics to Understand Health Risks. GeoHealth, 2022, 6, e2021GH000524.	4.0	6
2	Solar array placement, electricity generation, and cropland displacement across California's Central Valley. Science of the Total Environment, 2022, 835, 155240.	8.0	3
3	Connecting microbial, nutrient, physiochemical, and land use variables for the evaluation of water quality within mixed use watersheds. Water Research, 2022, 219, 118526.	11.3	12
4	Detangling Seasonal Relationships of Fecal Contamination Sources and Correlates with Indicators in Michigan Watersheds. Microbiology Spectrum, 2022, 10, .	3.0	3
5	Quantifying the Impact of Lagged Hydrological Responses on the Effectiveness of Groundwater Conservation. Water Resources Research, 2022, 58, .	4.2	5
6	Cross-scale evaluation of dynamic crop growth in WRF and Noah-MP-Crop. Agricultural and Forest Meteorology, 2021, 296, 108217.	4.8	11
7	The land use legacy effect: looking back to see a path forward to improve management. Environmental Research Letters, 2021, 16, 035005.	5.2	15
8	Combining Remote Sensing and Crop Models to Assess the Sustainability of Stakeholderâ€Driven Groundwater Management in the US High Plains Aquifer. Water Resources Research, 2021, 57, e2020WR027756.	4.2	15
9	Climate and hydrologic ensembling lead to differing streamflow and sediment yield predictions. Climatic Change, 2021, 165, 1.	3.6	1
10	Geophysics conquering new territories: The rise of â€œagrogeophysicsâ€• Vadose Zone Journal, 2021, 20, e20115.	2.2	26
11	Root water uptake of biofuel crops revealed by coupled electrical resistivity and soil water content measurements. Vadose Zone Journal, 2021, 20, e20124.	2.2	2
12	Introduction to Special Section: The Quest for Sustainability of Heavily Stressed Aquifers at Regional to Global Scales. Water Resources Research, 2021, 57, e2021WR030446.	4.2	4
13	Sustainable irrigation through local collaborative governance: Evidence for a structural fix in Kansas. Environmental Science and Policy, 2021, 124, 517-526.	4.9	9
14	Snowpacks decrease and streamflows shift across the eastern US as winters warm. Science of the Total Environment, 2021, 793, 148483.	8.0	10
15	Trends in streamflow, evapotranspiration, and groundwater storage across the Amazon Basin linked to changing precipitation and land cover. Journal of Hydrology: Regional Studies, 2020, 32, 100755.	2.4	16
16	Effects of shifting snowmelt regimes on the hydrology of non-alpine temperate landscapes. Journal of Hydrology, 2020, 590, 125517.	5.4	15
17	Trends in Water Use, Energy Consumption, and Carbon Emissions from Irrigation: Role of Shifting Technologies and Energy Sources. Environmental Science & Technology, 2020, 54, 15329-15337.	10.0	29
18	Quantifying linkages between watershed factors and coastal wetland plant invasion in the US Great Lakes. Landscape Ecology, 2020, 35, 2843-2861.	4.2	1

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19	Quantifying Landscape Nutrient Inputs With Spatially Explicit Nutrient Source Estimate Maps. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005134.	3.0	20
20	Evaluating spatial patterns in precipitation trends across the Amazon basin driven by land cover and global scale forcings. Theoretical and Applied Climatology, 2020, 140, 411-427.	2.8	47
21	Water quality trends under rapid agricultural expansion and enhanced in-stream interception in a hilly watershed of Eastern China. Environmental Research Letters, 2020, 15, 084030.	5.2	11
22	Linking Agricultural Nutrient Pollution to the Value of Freshwater Ecosystem Services. Land Economics, 2020, 96, 493-509.	0.9	6
23	Increased Dependence on Irrigated Crop Production Across the CONUS (1945â€“2015). Water (Switzerland), 2019, 11, 1458.	2.7	9
24	Mid-20th century warming hole boosts US maize yields. Environmental Research Letters, 2019, 14, 114008.	5.2	20
25	Mapping three decades of annual irrigation across the US High Plains Aquifer using Landsat and Google Earth Engine. Remote Sensing of Environment, 2019, 233, 111400.	11.0	109
26	Modeling phosphorus sources and transport in a headwater catchment with rapid agricultural expansion. Environmental Pollution, 2019, 255, 113273.	7.5	27
27	Quantity and quality of water percolating below the root zone of three biofuel feedstock crop systems. Agricultural Water Management, 2019, 221, 109-119.	5.6	7
28	Nitrogen transport and retention in a headwater catchment with dense distributions of lowland ponds. Science of the Total Environment, 2019, 683, 37-48.	8.0	42
29	Cellulosic biofuel crops alter evapotranspiration and drainage fluxes: Direct quantification using automated equilibrium tension lysimeters. GCB Bioenergy, 2019, 11, 505-516.	5.6	6
30	Effects of management areas, drought, and commodity prices on groundwater decline patterns across the High Plains Aquifer. Agricultural Water Management, 2019, 218, 259-273.	5.6	11
31	Quantifying irrigation adaptation strategies in response to stakeholder-driven groundwater management in the US High Plains Aquifer. Environmental Research Letters, 2019, 14, 044014.	5.2	58
32	Addressing Challenges for Mapping Irrigated Fields in Subhumid Temperate Regions by Integrating Remote Sensing and Hydroclimatic Data. Remote Sensing, 2019, 11, 370.	4.0	22
33	Groundwater: a call to action. Nature, 2019, 576, 213-213.	27.8	18
34	Impacts of projected climate change on sediment yield and dredging costs. Hydrological Processes, 2018, 32, 1223-1234.	2.6	16
35	Spatially Distinct Seasonal Patterns and Forcings of the U.S. Warming Hole. Geophysical Research Letters, 2018, 45, 2055-2063.	4.0	42
36	Groundwater depletion and climate change: future prospects of crop production in the Central High Plains Aquifer. Climatic Change, 2018, 146, 187-200.	3.6	60

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37	Regional Variations of Bovine and Porcine Fecal Pollution as a Function of Landscape, Nutrient, and Hydrological Factors. Journal of Environmental Quality, 2018, 47, 1024-1032.	2.0	16
38	Quantifying Soil Water and Root Dynamics Using a Coupled Hydrogeophysical Inversion. Vadose Zone Journal, 2018, 17, 1-13.	2.2	13
39	Sustainable hydropower in the 21st century. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11891-11898.	7.1	378
40	Sea Level Rise Cut in Half?. Ground Water, 2018, 56, 845-845.	1.3	0
41	Soil Organic Carbon and Nitrogen Feedbacks on Crop Yields under Climate Change. Agricultural and Environmental Letters, 2018, 3, 180026.	1.2	36
42	Agricultural implications of providing soil-based constraints on urban expansion: Land use forecasts to 2050. Journal of Environmental Management, 2018, 217, 677-689.	7.8	17
43	A Review of the Integrated Effects of Changing Climate, Land Use, and Dams on Mekong River Hydrology. Water (Switzerland), 2018, 10, 266.	2.7	155
44	A spatially explicit statistical model to quantify nutrient sources, pathways, and delivery at the regional scale. Biogeochemistry, 2017, 133, 37-57.	3.5	14
45	Introduction to special section on Modeling highly heterogeneous aquifers: Lessons learned in the last 30 years from the <scp>MADE</scp> experiments and others. Water Resources Research, 2017, 53, 2581-2584.	4.2	15
46	The land-use legacy effect: Towards a mechanistic understanding of time-lagged water quality responses to land use/cover. Science of the Total Environment, 2017, 579, 1794-1803.	8.0	38
47	Annual Irrigation Dynamics in the U.S. Northern High Plains Derived from Landsat Satellite Data. Geophysical Research Letters, 2017, 44, 9350-9360.	4.0	101
48	Quantifying changes in water use and groundwater availability in a megacity using novel integrated systems modeling. Geophysical Research Letters, 2017, 44, 8359-8368.	4.0	13
49	Groundwater Depletion: A Significant Unreported Source of Atmospheric Carbon Dioxide. Earth's Future, 2017, 5, 1133-1135.	6.3	44
50	Elimination of the Reaction Rate â€œScale Effectâ€• Application of the Lagrangian Reactive Particleâ€Tracking Method to Simulate Mixingâ€Limited, Fieldâ€Scale Biodegradation at the Schoolcraft (MI,) Tj ET Q q 0 0 0 rg BT /Overlo	4.1	38
51	Electrical Resistivity tomography to image convective flow in groundwater: Examples from the United Arab Emirates Sabkha. , 2017, , .		1
52	Urban water sustainability: framework and application. Ecology and Society, 2016, 21, .	2.3	42
53	Water Level Declines in the High Plains Aquifer: Predevelopment to Resource Senescence. Ground Water, 2016, 54, 231-242.	1.3	130
54	Effects of Irrigation on Summer Precipitation over the United States. Journal of Climate, 2016, 29, 3541-3558.	3.2	75

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55	Complex water management in modern agriculture: Trends in the water-energy-food nexus over the High Plains Aquifer. Science of the Total Environment, 2016, 566-567, 988-1001.	8.0	96
56	High resolution spatially explicit nutrient source models for the Lower Peninsula of Michigan. Journal of Great Lakes Research, 2015, 41, 618-629.	1.9	20
57	Linking fecal bacteria in rivers to landscape, geochemical, and hydrologic factors and sources at the basin scale. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10419-10424.	7.1	108
58	Quantifying beaver dam dynamics and sediment retention using aerial imagery, habitat characteristics, and economic drivers. Landscape Ecology, 2015, 30, 1129-1144.	4.2	13
59	Can Impacts of Climate Change and Agricultural Adaptation Strategies Be Accurately Quantified if Crop Models Are Annually Re-Initialized?. PLoS ONE, 2015, 10, e0127333.	2.5	44
60	WRF Model Sensitivity to Land Surface Model and Cumulus Parameterization under Short-Term Climate Extremes over the Southern Great Plains of the United States. Journal of Climate, 2014, 27, 7703-7724.	3.2	45
61	Predicting flow and transport in highly heterogeneous alluvial aquifers. Geophysical Research Letters, 2014, 41, 7560-7565.	4.0	35
62	Improved methods for satelliteâ€based groundwater storage estimates: A decade of monitoring the high plains aquifer from space and ground observations. Geophysical Research Letters, 2014, 41, 6167-6173.	4.0	54
63	Electrical imaging and fluid modeling of convective fingering in a shallow water-table aquifer. Water Resources Research, 2014, 50, 954-968.	4.2	19
64	Impacts of Projected Changes in Climate on Hydrology. , 2014, , 211-220.		3
65	Hydraulic conductivity fields: Gaussian or not?. Water Resources Research, 2013, 49, 4730-4737.	4.2	34
66	Paleoflood Hydrology of the Paria River, Southern Utah and Northern Arizona, USA. Water Science and Application, 2013, , 295-310.	0.3	6
67	The future of agriculture over the Ogallala Aquifer: Solutions to grow crops more efficiently with limited water. Earth's Future, 2013, 1, 39-41.	6.3	34
68	Coupling land use and groundwater models to map land use legacies: Assessment of model uncertainties relevant to land use planning. Applied Geography, 2012, 34, 356-370.	3.7	30
69	Geostatistical analysis of centimeterâ€scale hydraulic conductivity variations at the MADE site. Water Resources Research, 2012, 48, .	4.2	63
70	Electrical Resistivity Imaging and Fluid Modeling of Free Convection in a Coastal Sabkha. , 2012, , .		1
71	Hydrostratigraphic analysis of the MADE site with full-resolution GPR and direct-push hydraulic profiling. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	31
72	The landâ€use legacy effect: Adding temporal context to lake chemistry. Limnology and Oceanography, 2011, 56, 2362-2370.	3.1	27

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73	Hydrological consequences of land-cover change: Quantifying the influence of plants on soil moisture with time-lapse electrical resistivity. Geophysics, 2010, 75, WA43-WA50.	2.6	51
74	A multi-modeling approach to evaluating climate and land use change impacts in a Great Lakes River Basin. Hydrobiologia, 2010, 657, 243-262.	2.0	67
75	A multi-modeling approach to evaluating climate and land use change impacts in a Great Lakes River Basin. , 2010, , 243-262.		4
76	Examining the influence of heterogeneous porosity fields on conservative solute transport. Journal of Contaminant Hydrology, 2009, 108, 77-88.	3.3	36
77	A new method for highâ€resolution characterization of hydraulic conductivity. Water Resources Research, 2009, 45, .	4.2	65
78	Natural free convection in porous media: First field documentation in groundwater. Geophysical Research Letters, 2009, 36, .	4.0	71
79	Impacts of The 2004 Tsunami and Subsequent Water Restorations Actions in Sri Lanka. NATO Science for Peace and Security Series C: Environmental Security, 2009, , 3-28.	0.2	0
80	Climate Changes on Natural Hazards and Water Resources. NATO Science for Peace and Security Series C: Environmental Security, 2009, , 63-80.	0.2	0
81	Subsurface imaging of vegetation, climate, and rootâ€zone moisture interactions. Geophysical Research Letters, 2008, 35, .	4.0	71
82	Integrating statistical rock physics and sedimentology for quantitative seismic interpretation. Geophysical Monograph Series, 2007, , 45-60.	0.1	2
83	Evaluating temporal and spatial variations in recharge and streamflow using the Integrated Landscape Hydrology Model (ILHM). Geophysical Monograph Series, 2007, , 121-141.	0.1	11
84	Integrating hydrologic and geophysical data to constrain coastal surficial aquifer processes at multiple spatial and temporal scales. Geophysical Monograph Series, 2007, , 161-182.	0.1	1
85	Examining watershed processes using spectral analysis methods including the scaled-windowed fourier transform. Geophysical Monograph Series, 2007, , 183-200.	0.1	4
86	Accounting for tomographic resolution in estimating hydrologic properties from geophysical data. Geophysical Monograph Series, 2007, , 227-241.	0.1	12
87	Evaluating the influence of land cover on seasonal water budgets using Next Generation Radar (NEXRAD) rainfall and streamflow data. Water Resources Research, 2007, 43, .	4.2	15
88	Using Backcast Land-Use Change and Groundwater Travel-Time Models to Generate Land-Use Legacy Maps for Watershed Management. Ecology and Society, 2007, 12, .	2.3	38
89	Subsurface Hydrology: Data Integration for Properties and Processes. Geophysical Monograph Series, 2007, , .	0.1	7
90	Impacts of the 2004 tsunami on groundwater resources in Sri Lanka. Water Resources Research, 2006, 42, .	4.2	115

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91	Regional-scale assessment of a sequence-bounding paleosol on fluvial fans using ground-penetrating radar, eastern San Joaquin Valley, California. Bulletin of the Geological Society of America, 2006, 118, 724-732.	3.3	15
92	Geophysical and Tracer Characterization Methods. , 2006, , 15-1-15-30.		0
93	Analysis of Recharge-Induced Geochemical Change in a Contaminated Aquifer. Ground Water, 2005, 43, 518-530.	1.3	30
94	Heterogeneity of chlorinated hydrocarbon sorption properties in a sandy aquifer. Journal of Contaminant Hydrology, 2005, 78, 327-342.	3.3	16
95	A three-dimensional model of microbial transport and biodegradation at the Schoolcraft, Michigan, site. Water Resources Research, 2005, 41, .	4.2	28
96	Hydrogeophysical Case Studies at the Local Scale: The Saturated Zone. , 2005, , 391-412.		15
97	Spatial and temporal changes in microbial community structure associated with recharge-influenced chemical gradients in a contaminated aquifer. Environmental Microbiology, 2004, 6, 438-448.	3.8	79
98	INTEGRATION OF SEDIMENTOLOGIC AND HYDROGEOLOGIC PROPERTIES FOR IMPROVED TRANSPORT SIMULATIONS. , 2004, , 3-13.		8
99	Interactions between sorption and biodegradation: Exploring bioavailability and pulsed nutrient injection efficiency. Water Resources Research, 2003, 39, .	4.2	13
100	Identifying Relationships between Baseflow Geochemistry and Land Use with Synoptic Sampling and Râ€ŀMode Factor Analysis. Journal of Environmental Quality, 2003, 32, 180-190.	2.0	116
101	Identifying Relationships between Baseflow Geochemistry and Land Use with Synoptic Sampling and R-Mode Factor Analysis. Journal of Environmental Quality, 2003, 32, 180.	2.0	32
102	Tracer/Timeâ€ŀLapse Radar Imaging Test at the Boise Hydrogeophysical Research Site. , 2003, , .		6
103	Development, Operation, and Long-Term Performance of a Full-Scale Biocurtain Utilizing Bioaugmentation. Environmental Science & Technology, 2002, 36, 3635-3644.	10.0	62
104	Simulation of microbial transport and carbon tetrachloride biodegradation in intermittently-fed aquifer columns. Water Resources Research, 2002, 38, 4-1-4-13.	4.2	30
105	Evaluating Behavior of Oxygen, Nitrate, and Sulfate during Recharge and Quantifying Reduction Rates in a Contaminated Aquifer. Environmental Science & Technology, 2002, 36, 2693-2700.	10.0	78
106	Modelling the impact of historical land uses on surface-water quality using groundwater flow and solute-transport models. Lakes and Reservoirs: Research and Management, 2002, 7, 189-199.	0.9	18
107	Biocurtain Design Using Reactive Transport Models. Ground Water Monitoring and Remediation, 2002, 22, 113-123.	0.8	3
108	Identifying Potential Land Useâ€ŀDerived Solute Sources to Stream Baseflow Using Ground Water Models and GIS. Ground Water, 2001, 39, 24-34.	1.3	68

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109	Hydraulic Characterization and Design of a Full-Scale Biocurtain. Ground Water, 2000, 38, 462-474.	1.3	48
110	Temporal variations in parameters reflecting terminal-electron-accepting processes in an aquifer contaminated with waste fuel and chlorinated solvents. Chemical Geology, 2000, 169, 471-485.	3.3	48
111	Inferring the relation between seismic slowness and hydraulic conductivity in heterogeneous aquifers. Water Resources Research, 2000, 36, 2121-2132.	4.2	60
112	Estimating Lithologic and Transport Properties in Three Dimensions Using Seismic and Tracer Data: The Kesterson aquifer. Water Resources Research, 1996, 32, 2659-2670.	4.2	104
113	Traveltime inversion for the geometry of aquifer lithologies. Geophysics, 1996, 61, 1728-1737.	2.6	32
114	Coupled seismic and tracer test inversion for aquifer property characterization. Water Resources Research, 1994, 30, 1965-1977.	4.2	101