Thomas H Harter

List of Publications by Year
in descending order

115 papers	5,135 citations	76326 40 h-index	98798 67 g-index
132 all docs	132 docs citations	132 times ranked	5427 citing authors

#	Article	IF	Citations
1	Dairy Wastewater, Aquaculture, and Spawning Fish as Sources of Steroid Hormones in the Aquatic Environment. Environmental Science & Technology, 2004, 38, 6377-6384.	10.0	262
2	Upscaling Hydraulic Properties and Soil Water Flow Processes in Heterogeneous Soils: A Review. Vadose Zone Journal, 2007, 6, 1-28.	2.2	215
3	Colloid Transport and Filtration ofCryptosporidium parvumin Sandy Soils and Aquifer Sediments. Environmental Science & Technology, 2000, 34, 62-70.	10.0	214
4	Assessment of sources and fate of nitrate in shallow groundwater of an agricultural area by using a multi-tracer approach. Science of the Total Environment, 2014, 470-471, 855-864.	8.0	204
5	Use and Environmental Occurrence of Antibiotics in Freestall Dairy Farms with Manured Forage Fields. Environmental Science & Technology, 2010, 44, 6591-6600.	10.0	180
6	Explaining soil moisture variability as a function of mean soil moisture: A stochastic unsaturated flow perspective. Geophysical Research Letters, 2007, 34, .	4.0	177
7	Shallow groundwater quality on dairy farms with irrigated forage crops. Journal of Contaminant Hydrology, 2002, 55, 287-315.	3.3	147
8	Identifying sources of groundwater nitrate contamination in a large alluvial groundwater basin with highly diversified intensive agricultural production. Journal of Contaminant Hydrology, 2013, 151, 140-154.	3.3	146
9	Investigation of the geochemical evolution of groundwater under agricultural land: A case study in northeastern Mexico. Journal of Hydrology, 2015, 521, 410-423.	5.4	137
10	A hybrid machine learning model to predict and visualize nitrate concentration throughout the Central Valley aquifer, California, USA. Science of the Total Environment, 2017, 601-602, 1160-1172.	8.0	124
11	A Numerical Model for Water Flow and Chemical Transport in Variably Saturated Porous Media. Ground Water, 1993, 31, 634-644.	1.3	114
12	Saturated Zone Denitrification:Â Potential for Natural Attenuation of Nitrate Contamination in Shallow Groundwater Under Dairy Operations. Environmental Science & Technology, 2007, 41, 759-765.	10.0	104
13	Neural Networks Prediction of Soil Hydraulic Functions for Alluvial Soils Using Multistep Outflow Data. Soil Science Society of America Journal, 2004, 68, 417-429.	2.2	94
14	The role of perched aquifers in hydrological connectivity and biogeochemical processes in vernal pool landscapes, Central Valley, California. Hydrological Processes, 2006, 20, 1157-1175.	2.6	84
15	Environmental Occurrence and Shallow Ground Water Detection of the Antibiotic Monensin from Dairy Farms. Journal of Environmental Quality, 2008, 37, S78-85.	2.0	84
16	Effect of sulfonamide antibiotics on microbial diversity and activity in a Californian Mollic Haploxeralf. Journal of Soils and Sediments, 2010, 10, 537-544.	3.0	83
17	Association of Cryptosporidium parvum with Suspended Particles: Impact on Oocyst Sedimentation. Applied and Environmental Microbiology, 2005, 71, 1072-1078.	3.1	82
18	Transport ofCryptosporidium parvumin porous media: Long-term elution experiments and continuous time random walk filtration modeling. Water Resources Research, 2006, 42, .	4.2	78

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19	Inverse modeling of large-scale spatially distributed vadose zone properties using global optimization. Water Resources Research, 2004, 40, .	4.2	77
20	Transport of <i>Cryptosporidium parvum</i> Oocysts through Vegetated Buffer Strips and Estimated Filtration Efficiency. Applied and Environmental Microbiology, 2002, 68, 5517-5527.	3.1	74
21	Soil suitability index identifies potential areas for groundwater banking on agricultural lands. California Agriculture, 2015, 69, 75-84.	0.8	73
22	Estimation of groundwater pumping as closure to the water balance of a semi-arid, irrigated agricultural basin. Journal of Hydrology, 2004, 297, 51-73.	5.4	71
23	Fate of Endogenous Steroid Hormones in Steer Feedlots Under Simulated Rainfall-Induced Runoff. Environmental Science & Technology, 2011, 45, 8811-8818.	10.0	70
24	Hydro-economic analysis of groundwater pumping for irrigated agriculture in Californiaâ€™s Central Valley, USA. Hydrogeology Journal, 2015, 23, 1205-1216.	2.1	64
25	Stochastic analysis of solute transport in heterogeneous, variably saturated soils. Water Resources Research, 1996, 32, 1585-1595.	4.2	63
26	Capture and Retention of Cryptosporidium parvum Oocysts by Pseudomonas aeruginosa Biofilms. Applied and Environmental Microbiology, 2006, 72, 6242-6247.	3.1	61
27	Finite-size scaling analysis of percolation in three-dimensional correlated binary Markov chain random fields. Physical Review E, 2005, 72, 026120.	2.1	59
28	Antibiotic-resistant E. coli in surface water and groundwater in dairy operations in Northern California. Environmental Monitoring and Assessment, 2014, 186, 1253-1260.	2.7	57
29	Assessing the effectiveness of drywells as tools for stormwater management and aquifer recharge and their groundwater contamination potential. Journal of Hydrology, 2016, 539, 539-553.	5.4	57
30	Estimating Nitrate Leaching to Groundwater from Orchards: Comparing Crop Nitrogen Excess, Deep Vadose Zone Dataâ€Driven Estimates, and HYDRUS Modeling. Vadose Zone Journal, 2016, 15, 1-13.	2.2	55
31	Spatial Variability and Transport of Nitrate in a Deep Alluvial Vadose Zone. Vadose Zone Journal, 2005, 4, 41-54.	2.2	54
32	Deposition of Cryptosporidium Oocysts in Streambeds. Applied and Environmental Microbiology, 2006, 72, 1810-1816.	3.1	54
33	Conditional stochastic analysis of solute transport in heterogeneous, variably saturated soils. Water Resources Research, 1996, 32, 1597-1609.	4.2	51
34	Water flow and solute spreading in heterogeneous soils with spatially variable water content. Water Resources Research, 1999, 35, 415-426.	4.2	51
35	Agriculture's Contribution to Nitrate Contamination of Californian Groundwater (1945-2005). Journal of Environmental Quality, 2014, 43, 895-907.	2.0	51
36	Assessment of Root Zone Nitrogen Leaching as Affected by Irrigation and Nutrient Management Practices. Vadose Zone Journal, 2004, 3, 1353-1366.	2.2	48

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37	A groundwater nonpoint source pollution modeling framework to evaluate longâ€term dynamics of pollutant exceedance probabilities in wells and other discharge locations. Water Resources Research, 2012, 48, .	4.2	48
38	Spatial Variability of Hydraulic Properties and Sediment Characteristics in a Deep Alluvial Unsaturated Zone. Vadose Zone Journal, 2009, 8, 276-289.	2.2	45
39	Effects of pH and Manure on Transport of Sulfonamide Antibiotics in Soil. Journal of Environmental Quality, 2011, 40, 1652-1660.	2.0	45
40	Increasing Groundwater Availability and Seasonal Base Flow Through Agricultural Managed Aquifer Recharge in an Irrigated Basin. Water Resources Research, 2019, 55, 7464-7492.	4.2	45
41	Fecal Indicator and Pathogenic Bacteria and Their Antibiotic Resistance in Alluvial Groundwater of an Irrigated Agricultural Region with Dairies. Journal of Environmental Quality, 2015, 44, 1435-1447.	2.0	41
42	Geological control of physical and chemical hydrology in California vernal pools. Wetlands, 2008, 28, 347-362.	1.5	39
43	Occurrence of Trenbolone Acetate Metabolites in Simulated Confined Animal Feeding Operation (CAFO) Runoff. Environmental Science & Technology, 2012, 46, 3803-3810.	10.0	39
44	Deep vadose zone hydrology demonstrates fate of nitrate in eastern San Joaquin Valley. California Agriculture, 2005, 59, 124-132.	0.8	38
45	Domestic wells have high probability of pumping septic tank leachate. Hydrology and Earth System Sciences, 2012, 16, 2453-2467.	4.9	37
46	An Integrated Approach Toward Sustainability via Groundwater Banking in the Southern Central Valley, California. Water Resources Research, 2019, 55, 2742-2759.	4.2	37
47	A field study of unstable preferential flow during soil water redistribution. Water Resources Research, 2003, 39, .	4.2	36
48	Economically Driven Simulation of Regional Water Systems: Friant-Kern, California. Journal of Water Resources Planning and Management - ASCE, 2006, 132, 468-479.	2.6	36
49	Richards Equationâ€"Based Modeling to Estimate Flow and Nitrate Transport in a Deep Alluvial Vadose Zone. Vadose Zone Journal, 2012, 11, vzj2011.0145.	2.2	35
50	Source area management practices as remediation tool to address groundwater nitrate pollution in drinking supply wells. Journal of Contaminant Hydrology, 2019, 226, 103521.	3.3	35
51	Flow in unsaturated random porous media, nonlinear numerical analysis and comparison to analytical stochastic models. Advances in Water Resources, 1998, 22, 257-272.	3.8	34
52	Assessment of orchard N losses to groundwater with a vadose zone monitoring network. Agricultural Water Management, 2016, 172, 83-95.	5.6	32
53	Characterizing sources of nitrate leaching from an irrigated dairy farm in Merced County, California. Journal of Contaminant Hydrology, 2009, 110, 9-21.	3.3	30
54	Effect of Groundwater Age and Recharge Source on Nitrate Concentrations in Domestic Wells in the San Joaquin Valley. Environmental Science & Technology, 2021, 55, 2265-2275.	10.0	29

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55	Nitrate Leaching in Californian Rice Fields: A Field- and Regional-Scale Assessment. Journal of Environmental Quality, 2014, 43, 881-894.	2.0	27
56	Assessing biosynthetic potential of agricultural groundwater through metagenomic sequencing: A diverse anammox community dominates nitrate-rich groundwater. PLoS ONE, 2017, 12, e0174930.	2.5	26
57	Out of sight but not out of mind: California refocuses on groundwater. California Agriculture, 2014, 68, 54-55.	0.8	26
58	Land Management Impacts on Dairyâ€Derived Dissolved Organic Carbon in Ground Water. Journal of Environmental Quality, 2008, 37, 333-343.	2.0	24
59	California groundwater management, science-policy interfaces, and the legacies of artificial legal distinctions. Environmental Research Letters, 2019, 14, 045016.	5.2	24
60	Nonpoint source solute transport normal to aquifer bedding in heterogeneous, Markov chain random fields. Water Resources Research, 2006, 42, .	4.2	22
61	Stochastic Assessment of Nonpoint Source Contamination: Joint Impact of Aquifer Heterogeneity and Well Characteristics on Management Metrics. Water Resources Research, 2019, 55, 6773-6794.	4.2	22
62	Domestic Well Capture Zone and Influence of the Gravel Pack Length. Ground Water, 2009, 47, 277-286.	1.3	21
63	Sensitivity Analysis and Calibration of an Integrated Hydrologic Model in an Irrigated Agricultural Basin With a Groundwaterâ€Dependent Ecosystem. Water Resources Research, 2019, 55, 7876-7901.	4.2	21
64	California's agricultural regions gear up to actively manage groundwater use and protection. California Agriculture, 2015, 69, 193-201.	0.8	21
65	Deposition of <i>Cryptosporidium parvum</i> Oocysts in Porous Media: A Synthesis of Attachment Efficiencies Measured under Varying Environmental Conditions. Environmental Science & Technology, 2012, 46, 9491-9500.	10.0	20
66	Developing Risk Models of <i>Cryptosporidium</i> Transport in Soils from Vegetated, Tilted Soilbox Experiments. Journal of Environmental Quality, 2008, 37, 245-258.	2.0	19
67	Anthropogenic basin closure and groundwater salinization (ABCSAL). Journal of Hydrology, 2021, 593, 125787.	5.4	19
68	Coupling a spatiotemporally distributed soil water budget with streamâ€depletion functions to inform stakeholderâ€driven management of groundwaterâ€dependent ecosystems. Water Resources Research, 2013, 49, 7292-7310.	4.2	18
69	Microbial Transport and Fate in the Subsurface Environment: Introduction to the Special Section. Journal of Environmental Quality, 2015, 44, 1333-1337.	2.0	18
70	An efficient method for simulating steady unsaturated flow in random porous media: Using an analytical perturbation solution as initial guess to a numerical model. Water Resources Research, 1993, 29, 4139-4149.	4.2	17
71	Modeling shallow water table evaporation in irrigated regions. Irrigation and Drainage Systems, 2007, 21, 119-132.	0.5	17
72	Analysis of matrix effects critical to microbial transport in organic wasteâ€affected soils across laboratory and field scales. Water Resources Research, 2012, 48, .	4.2	16

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73	Bayesian nitrate source apportionment to individual groundwater wells in the Central Valley by use of elemental and isotopic tracers. Water Resources Research, 2016, 52, 5577-5597.	4.2	16
74	Quantifying the uncertainty in nitrogen application and groundwater nitrate leaching in manure based cropping systems. Agricultural Systems, 2020, 184, 102877.	6.1	16
75	Planning for groundwater sustainability accounting for uncertainty and costs: An application to California's Central Valley. Journal of Environmental Management, 2020, 264, 110426.	7.8	16
76	Vectorized simulation of groundwater flow and streamline transport. Environmental Modelling and Software, 2014, 52, 207-221.	4.5	15
77	Economic Feasibility of Irrigated Agricultural Land Use Buffers to Reduce Groundwater Nitrate in Rural Drinking Water Sources. Water (Switzerland), 2015, 7, 12-37.	2.7	15
78	Solute transport in a heterogeneous aquifer: a search for nonlinear deterministic dynamics. Nonlinear Processes in Geophysics, 2005, 12, 211-218.	1.3	14
79	Potential to assess nitrate leaching vulnerability of irrigated cropland. Journal of Soils and Water Conservation, 2015, 70, 63-72.	1.6	14
80	A Bayesian approach to infer nitrogen loading rates from crop and land-use types surrounding private wells in the Central Valley, California. Hydrology and Earth System Sciences, 2018, 22, 2739-2758.	4.9	14
81	Microbial Groundwater Sampling Protocol for Fecalâ€Rich Environments. Ground Water, 2014, 52, 126-136.	1.3	13
82	A fractal investigation of solute travel time in a heterogeneous aquifer: transition probability/Markov chain representation. Ecological Modelling, 2005, 182, 355-370.	2.5	12
83	Parallel simulation of groundwater non-point source pollution using algebraic multigrid preconditioners. Computational Geosciences, 2014, 18, 851-867.	2.4	12
84	Assessment of Root Zone Nitrogen Leaching as Affected by Irrigation and Nutrient Management Practices. Vadose Zone Journal, 2004, 3, 1353-1366.	2.2	11
85	Advancing water resource management in agricultural, rural, and urbanizing watersheds: Why land-grant universities matter. Journal of Soils and Water Conservation, 2013, 68, 337-348.	1.6	11
86	Evaluation of Monensin Transport to Shallow Groundwater after Irrigation with Dairy Lagoon Water. Journal of Environmental Quality, 2016, 45, 480-487.	2.0	11
87	On the conceptual complexity of non-point source management: impact of spatial variability. Hydrology and Earth System Sciences, 2020, 24, 1189-1209.	4.9	11
88	Machine learning predictions of mean ages of shallow well samples in the Great Lakes Basin, USA. Journal of Hydrology, 2021, 603, 126908.	5.4	11
89	Visualizing Preferential Flow Paths using Ammonium Carbonate and a pH Indicator. Soil Science Society of America Journal, 2002, 66, 347-351.	2.2	10
90	Evaluation of a Simple, Inexpensive Dialysis Sampler for Small Diameter Monitoring Wells. Ground Water Monitoring and Remediation, 2004, 24, 97-105.	0.8	10

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91	Assessing the Potential Exposure of Groundwater to Pesticides: A Model Comparison. Vadose Zone Journal, 2017, 16, 1-13.	2.2	10
92	Visualizing Preferential Flow Paths using Ammonium Carbonate and a pH Indicator. Soil Science Society of America Journal, 2002, 66, 347.	2.2	10
93	Comment on â€œField observations of soil moisture variability across scalesâ€•by James S. Famiglietti et al.. Water Resources Research, 2008, 44, .	4.2	9
94	Prediction of capillary air-liquid interfacial area vs. saturation function from relationship between capillary pressure and water saturation. Advances in Water Resources, 2016, 97, 219-223.	3.8	9
95	Measuring nitrate leaching across the critical zone at the field to farm scale. Vadose Zone Journal, 2021, 20, e20094.	2.2	9
96	Effective conductivity of periodic media with cuboid inclusions. Advances in Water Resources, 2004, 27, 1017-1032.	3.8	8
97	Effects of upscaling temporal resolution of groundwater flow and transport boundary conditions on the performance of nitrate-transport models at the regional management scale. Hydrogeology Journal, 2020, 28, 1299-1322.	2.1	8
98	Modeling guides groundwater management in a basin with riverâ€“aquifer interactions. California Agriculture, 2018, 72, 84-95.	0.8	8
99	Potential effects on groundwater quality associated with infiltrating stormwater through dry wells for aquifer recharge. Journal of Contaminant Hydrology, 2022, 246, 103964.	3.3	8
100	Cryptosporidium oocyst persistence in agricultural streams â€“a mobile-immobile model framework assessment. Scientific Reports, 2018, 8, 4603.	3.3	7
101	Stochastic assessment of the effect of land-use change on nonpoint source-driven groundwater quality using an efficient scaling approach. Stochastic Environmental Research and Risk Assessment, 2021, 35, 959-970.	4.0	7
102	Linearized cosimulation of hydraulic conductivity, pressure head, and flux in saturated and unsaturated, heterogeneous porous media. Journal of Hydrology, 1996, 183, 169-190.	5.4	6
103	Agroeconomic Analysis of Nitrate Crop Source Reductions. Journal of Water Resources Planning and Management - ASCE, 2013, 139, 501-511.	2.6	6
104	UV light and temperature induced fluridone degradation in water and sediment and potential transport into aquifer. Environmental Pollution, 2020, 265, 114750.	7.5	5
105	Effects of solid-liquid separation and storage on monensin attenuation in dairy waste management systems. Journal of Environmental Management, 2017, 190, 28-34.	7.8	4
106	Californiaâ€™s 2014 Sustainable Groundwater Management ActÂâ€“ From the Back Seat to the Driver Seat in the (Inter)National Groundwater Sustainability Movement. Global Issues in Water Policy, 2020, , 511-536.	0.1	3
107	Denitrification in heterogeneous aquifers: Relevance of spatial variability and performance of homogenized parameters. Advances in Water Resources, 2022, , 104168.	3.8	3
108	Application of stochastic theory in groundwater contamination risk analysis: Suggestions for the consulting geologist and/or engineer. , 2000, , .		2

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109	Stochastic Analysis of Reactive Transport Processes in Heterogeneous Porous Media. , 2002, , 89-167.		2
110	Comment on â€œGroundwater â€˜Durabilityâ€™ Not â€˜Sustainabilityâ€™â€. Ground Water, 2020, 58, 861-862.	1.3	1
111	Transdisciplinary contributions and opportunities in soil physical hydrology. Vadose Zone Journal, 2021, 20, e20114.	2.2	1
112	Raising the voice of science in complex socio-political contexts: an assessment of contested water decisions. Journal of Environmental Policy and Planning, 0, , 1-19.	2.8	1
113	Simulation of Unconfined Aquifer Flow Based on Parallel Adaptive Mesh Refinement. Water Resources Research, 2021, 57, .	4.2	1
114	Land Retirement Option and Retired Land Management. , 2001, , 1.		0
115	Minimizing N-losses at the orchard scale. Acta Horticulturae, 2022, , 25-34.	0.2	0