James J Butler

List of Publications by Year
in descending order

95 papers	4,307 citations	76326 40 h-index	114465 63 g-index
101 all docs	101 docs citations	101 times ranked	2333 citing authors

#	Article	IF	Citations
1	Estimation of groundwater consumption by phreatophytes using diurnal water table fluctuations: A saturated-unsaturated flow assessment. Water Resources Research, 2005, 41, .	4.2	241
2	Slug tests in partially penetrating wells. Water Resources Research, 1994, 30, 2945-2957.	4.2	151
3	Relationship Between Pumping-Test and Slug-Test Parameters: Scale Effect or Artifact?. Ground Water, 1998, 36, 305-312.	1.3	131
4	Drawdown and Stream Depletion Produced by Pumping in the Vicinity of a Partially Penetrating Stream. Ground Water, 2001, 39, 651-659.	1.3	124
5	A field investigation of phreatophyte-induced fluctuations in the water table. Water Resources Research, 2007, 43, .	4.2	122
6	Steady shape analysis of tomographic pumping tests for characterization of aquifer heterogeneities. Water Resources Research, 2002, 38, 60-1-60-15.	4.2	121
7	A field assessment of the value of steady shape hydraulic tomography for characterization of aquifer heterogeneities. Water Resources Research, 2007, 43, .	4.2	113
8	A Smallâ€Diameter <scp>NMR</scp> Logging Tool forÂGroundwater Investigations. Ground Water, 2013, 51, 914-926.	1.3	112
9	Spatial connectivity in a highly heterogeneous aquifer: From cores to preferential flow paths. Water Resources Research, 2011, 47, .	4.2	111
10	Pumping tests in nonuniform aquifers â€” The radially symmetric case. Journal of Hydrology, 1988, 101, 15-30.	5.4	108
11	Hydraulic Tests with Direct-Push Equipment. Ground Water, 2002, 40, 25-36.	1.3	101
12	Direct-Push Electrical Conductivity Logging for High-Resolution Hydrostratigraphic Characterization. Ground Water Monitoring and Remediation, 2003, 23, 52-62.	0.8	98
13	Analysis of Slug Tests in Formations of High Hydraulic Conductivity. Ground Water, 2003, 41, 620-631.	1.3	95
14	Pumping tests in networks of multilevel sampling wells: Motivation and methodology. Water Resources Research, 1999, 35, 3553-3560.	4.2	94
15	Pumping tests in nonuniform aquifers: The radially asymmetric case. Water Resources Research, 1993, 29, 259-269.	4.2	92
16	Investigation of flow and transport processes at the MADE site using ensemble Kalman filter. Advances in Water Resources, 2008, 31, 975-986.	3.8	92
17	A Rapid Method for Hydraulic Profiling in Unconsolidated Formations. Ground Water, 2008, 46, 323-328.	1.3	92
18	Improving the Quality of Parameter Estimates Obtained from Slug Tests. Ground Water, 1996, 34, 480-490.	1.3	91

#	Article	IF	Citations
19	The Role of Pumping Tests in Site Characterization: Some Theoretical Considerations. Ground Water, 1990, 28, 394-402.	1.3	87
20	Characterizing Hydraulic Conductivity with the Direct-Push Permeameter. Ground Water, 2007, 45, 409-419.	1.3	83
21	Hydrogeological Methods for Estimation of Spatial Variations in Hydraulic Conductivity. Water Science and Technology Library, 2005, , 23-58.	0.3	80
22	Pumping tests in non-uniform aquifers â€" the linear strip case. Journal of Hydrology, 1991, 128, 69-99.	5.4	68
23	Inherent Limitations of Hydraulic Tomography. Ground Water, 2010, 48, 809-824.	1.3	66
24	Slug Tests in Unconfined Formations: An Assessment of the Bouwer and Rice Technique. Ground Water, 1995, 33, 16-22.	1.3	65
25	Limits of applicability of the advection-dispersion model in aquifers containing connected high-conductivity channels. Water Resources Research, 2004, 40, .	4.2	65
26	A new method for highâ€resolution characterization of hydraulic conductivity. Water Resources Research, 2009, 45, .	4.2	65
27	Assessing the major drivers of water-level declines: new insights into the future of heavily stressed aquifers. Hydrological Sciences Journal, 2016, 61, 134-145.	2.6	65
28	Patterns of Tamarix water use during a record drought. Oecologia, 2010, 162, 283-292.	2.0	63
29	Geostatistical analysis of centimeterâ€scale hydraulic conductivity variations at the MADE site. Water Resources Research, 2012, 48, .	4.2	63
30	Dynamic interpretation of slug tests in highly permeable aquifers. Water Resources Research, 2002, 38, 7-1-7-18.	4.2	62
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	Hydraulic tests in highly permeable aquifers. Water Resources Research, 2004, 40, .	4.2	57
33	A Simple Correction for Slug Tests in Small-Diameter Wells. Ground Water, 2002, 40, 303-308.	1.3	54
34	Evaluation of the applicability of the dualâ€domain mass transfer model in porous media containing connected highâ€conductivity channels. Water Resources Research, 2007, 43, .	4.2	50
35	<scp>NMR</scp> Logging to Estimate Hydraulic Conductivity in Unconsolidated Aquifers. Ground Water, 2016, 54, 104-114.	1.3	49
36	Direct-Push Hydrostratigraphic Profiling: Coupling Electrical Logging and Slug Tests. Ground Water, 2005, 43, 19-29.	1.3	47

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37	Pumping-Induced Drawdown and Stream Depletion in a Leaky Aquifer System. Ground Water, 2007, 45, 178-186.	1.3	46
38	Variableâ€rate pumping tests for radially symmetric nonuniform aquifers. Water Resources Research, 1990, 26, 291-306.	4.2	45
39	The use of slug tests to describe vertical variations in hydraulic conductivity. Journal of Hydrology, 1994, 156, 137-162.	5.4	41
40	Sustainability of aquifers supporting irrigated agriculture: a case study of the High Plains aquifer in Kansas. Water International, 2018, 43, 815-828.	1.0	41
41	Hydraulic conductivity profiling with direct push methods. Grundwasser, 2012, 17, 19-29.	1.4	40
42	A new approach for assessing the future of aquifers supporting irrigated agriculture. Geophysical Research Letters, 2016, 43, 2004-2010.	4.0	40
43	Groundwater Withdrawal Prediction Using Integrated Multitemporal Remote Sensing Data Sets and Machine Learning. Water Resources Research, 2020, 56, e2020WR028059.	4.2	40
44	A New Sampling System for Obtaining Relatively Undisturbed Samples of Unconsolidated Coarse Sand and Gravel. Ground Water Monitoring and Remediation, 1991, 11, 182-191.	0.8	38
45	Sensitivity analysis of slug tests. Part 1. The slugged well. Journal of Hydrology, 1995, 164, 53-67.	5.4	37
46	New Insights from Well Responses to Fluctuations in Barometric Pressure. Ground Water, 2011, 49, 525-533.	1.3	37
47	Predicting flow and transport in highly heterogeneous alluvial aquifers. Geophysical Research Letters, 2014, 41, 7560-7565.	4.0	35
48	Human Intervention Will Stabilize Groundwater Storage Across the North China Plain. Water Resources Research, 2022, 58, .	4.2	34
49	Numerical assessment of ASR recharge using small-diameter wells and surface basins. Journal of Hydrology, 2014, 517, 54-63.	5.4	33
50	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
51	Sensitivity analysis of slug tests Part 2. Observation wells. Journal of Hydrology, 1995, 164, 69-87.	5.4	29
52	A dual-tube direct-push method for vertical profiling of hydraulic conductivity in unconsolidated formations. Environmental and Engineering Geoscience, 2002, 8, 75-84.	0.9	29
53	Resolving centimeterâ€scale flows in aquifers and their hydrostratigraphic controls. Geophysical Research Letters, 2013, 40, 1098-1103.	4.0	28
54	Relative importance of dispersion and rateâ€limited mass transfer in highly heterogeneous porous media: Analysis of a new tracer test at the Macrodispersion Experiment (MADE) site. Water Resources Research, 2010, 46, .	4.2	27

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55	A Stochastic Analysis of Pumping Tests in Laterally Nonuniform Media. Water Resources Research, 1991, 27, 2401-2414.	4.2	24
56	lr2dinv: A finite-difference model for inverse analysis of two-dimensional linear or radial groundwater flow. Computers and Geosciences, 2001, 27, 1147-1156.	4.2	24
57	Interpretation of Water Level Changes in the High Plains Aquifer in Western Kansas. Ground Water, 2013, 51, 180-190.	1.3	24
58	Direct-push geochemical profiling for assessment of inorganic chemical heterogeneity in aquifers. Journal of Contaminant Hydrology, 2004, 69, 215-232.	3.3	22
59	Pumping-induced leakage in a bounded aquifer: An example of a scale-invariant phenomenon. Water Resources Research, 2003, 39, .	4.2	21
60	Simulation assessment of the directâ€push permeameter for characterizing vertical variations in hydraulic conductivity. Water Resources Research, 2008, 44, .	4.2	19
61	Bootstrap Calibration and Uncertainty Estimation of Downhole <scp>NMR</scp> Hydraulic Conductivity Estimates in an Unconsolidated Aquifer. Ground Water, 2015, 53, 111-121.	1.3	19
62	Reassessing the MADE directâ€push hydraulic conductivity data using a revised calibration procedure. Water Resources Research, 2016, 52, 8970-8985.	4.2	19
63	Charting Pathways Toward Sustainability for Aquifers Supporting Irrigated Agriculture. Water Resources Research, 2020, 56, e2020WR027961.	4.2	18
64	Noise in Pressure Transducer Readings Produced by Variations in Solar Radiation. Ground Water, 2004, 42, 939-944.	1.3	17
65	Pumping Tests for Aquifer Evaluationâ€"Time for a Change?. Ground Water, 2009, 47, 615-617.	1.3	17
66	A roadblock on the path to aquifer sustainability: underestimating the impact of pumping reductions. Environmental Research Letters, 2020, 15, 014003.	5.2	17
67	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
68	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
69	Understanding Hydrological Alteration. , 2017, , 37-64.		12
70	Assessment of <scp>NMR</scp> Logging for Estimating Hydraulic Conductivity in Glacial Aquifers. Ground Water, 2021, 59, 31-48.	1.3	12
71	Assessment of small-diameter shallow wells for managed aquifer recharge at a site in southern Styria, Austria. Hydrogeology Journal, 2016, 24, 2079-2091.	2.1	10
72	Optimal Siting of Artificial Recharge: An Analysis of Objective Functions. Ground Water, 1987, 25, 141-150.	1.3	9

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73	Field Investigation of a New Recharge Approach for <scp>ASR</scp> Projects in Nearâ€Surface Aquifers. Ground Water, 2016, 54, 425-433.	1.3	9
74	A Physically Based Approach for Estimating Hydraulic Conductivity from <scp>HPT</scp> Pressure and Flowrate. Ground Water, 2021, 59, 266-272.	1.3	8
75	Estimation of Specific Yield for Regional Groundwater Models: Pitfalls, Ramifications, and a Promising Path Forward. Water Resources Research, 2022, 58, .	4.2	8
76	Hydraulic profiling with the direct-push permeameter: Assessment of probe configuration and analysis methodology. Journal of Hydrology, 2013, 496, 195-204.	5.4	6
77	Simulation Assessment of Direct Push Injection Logging for Highâ€Resolution Aquifer Characterization. Ground Water, 2019, 57, 562-574.	1.3	6
78	Evaluation of Data Needs for Assessments of Aquifers Supporting Irrigated Agriculture. Water Resources Research, 2021, 57, e2020WR028320.	4.2	6
79	Water well hydrographs: An underutilized resource for characterizing subsurface conditions. Ground Water, 2021, 59, 808-818.	1.3	6
80	HIGH-RESOLUTION STRATIGRAPHIC CHARACTERIZATION OF UNCONSOLIDATED DEPOSITS USING DIRECT-PUSH ELECTRICAL CONDUCTIVITY LOGGING: A FLOODPLAIN-MARGIN EXAMPLE. , 2004, , 67-78.		5
81	Quantifying the Impact of Lagged Hydrological Responses on the Effectiveness of Groundwater Conservation. Water Resources Research, 2022, 58, .	4.2	5
82	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
83	Groundwater Transport in Highly Heterogeneous Aquifers. Eos, 2016, 97, .	0.1	4
84	A<scp>uthorâ€™s </scp>R<scp>eply</scp>. Ground Water, 2008, 46, 530-531.	1.3	3
85	Isotopic Composition of the Ogallala-high Plains Aquifer Andvadose Zone. Procedia Earth and Planetary Science, 2015, 13, 39-42.	0.6	3
86	Discussion of â€œ <i>Type Curves for Twoâ€Regime Well Flow</i> â€•by ZekÃ¢i Åžen (December, 1988, Vol. 114, No.) Tj ETQq0 0 0 rgB	1.5	2
87	An Assessment of the Nguyen and Finder Method for Slug Test Analysis. Ground Water Monitoring and Remediation, 1994, 14, 124-131.	0.8	2
88	KGS-HighK: A Fortran 90 program for simulation of hydraulic tests in highly permeable aquifers. Computers and Geosciences, 2006, 32, 704-707.	4.2	2
89	Slug Tests in Wells Screened Across the Water Table: Some Additional Considerations. Ground Water, 2014, 52, 311-316.	1.3	2
90	Direct Push Technology and Application to Vertical Profiling of Hydraulic Conductivity in Unconsolidated Formations. , 2003, , 1933.		1

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91	A Potentialâ€Based Inversion of Unconfined Steadyâ€State Hydraulic Tomography. Ground Water, 2010, 48, 343-344.	1.3	1
92	Characterizing Hydraulic Conductivity with the Directâ€push Permeameter. Ground Water, 2010, 48, 792-795.	1.3	1
93	Importance of a sound hydrologic foundation for assessing the future of the High Plains Aquifer in Kansas. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E531-E531.	7.1	1
94	Estimating Local-Scale Groundwater Withdrawals Using Integrated Remote Sensing Products and Deep Learning. , 2021, , .		1
95	Integration of surface and logging NMR data to map hydraulic conductivity. ASEG Extended Abstracts, 2013, 2013, 1-4.	0.1	0