David R Steward

List of Publications by Year
in descending order

48	697	13	25
papers	citations	h-index	g-index
		687363	580821

51	51	51	714
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Tapping unsustainable groundwater stores for agricultural production in the High Plains Aquifer of Kansas, projections to 2110. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E3477-86.	7.1	163
2	Peak groundwater depletion in the High Plains Aquifer, projections from 1930 to 2110. Agricultural Water Management, 2016, 170, 36-48.	5.6	82
3	Accessible integration of agriculture, groundwater, and economic models using the Open Modeling Interface (OpenMI): methodology and initial results. Hydrology and Earth System Sciences, 2010, 14, 521-534.	4.9	34
4	Three-dimensional analysis of the capture of contaminated leachate by fully penetrating, partially penetrating, and horizontal wells. Water Resources Research, 1999, 35, 461-468.	4.2	28
5	Is transverse macrodispersivity in threeâ€dimensional groundwater transport equal to zero? A counterexample. Water Resources Research, 2009, 45, .	4.2	27
6	Improved coastal boundary condition for surface water waves. Ocean Engineering, 2001, 28, 139-157.	4.3	25
7	The Synergistic Powers of AEM and GIS Geodatabase Models in Water Resources Studies. Ground Water, 2006, 44, 56-61.	1.3	24
8	Groundwater economics: An objectâ€oriented foundation for integrated studies of irrigated agricultural systems. Water Resources Research, 2009, 45, .	4.2	24
9	The Simple Script Wrapper for OpenMI: Enabling interdisciplinary modeling studies. Environmental Modelling and Software, 2013, 39, 283-294.	4.5	21
10	Gaining and losing sections of horizontal wells. Water Resources Research, 2001, 37, 2677-2685.	4.2	20
11	Stream surfaces in two-dimensional and three-dimensional divergence-free flows. Water Resources Research, 1998, 34, 1345-1350.	4.2	19
12	Calibration of a crop model to irrigated water use using a genetic algorithm. Hydrology and Earth System Sciences, 2009, 13, 1467-1483.	4.9	18
13	Analytic formulation of Cauchy integrals for boundaries with curvilinear geometry. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 223-248.	2.1	17
14	Groundwater surface water interactions and the role of phreatophytes in identifying recharge zones. Hydrology and Earth System Sciences, 2012, 16, 4133-4142.	4.9	17
15	Data model for system conceptualization in groundwater studies. International Journal of Geographical Information Science, 2010, 24, 677-694.	4.8	16
16	An analytic solution for groundwater uptake by phreatophytes spanning spatial scales from plant to field to regional. Journal of Engineering Mathematics, 2009, 64, 85-103.	1.2	15
17	Groundwater response to changing waterâ€use practices in sloping aquifers using convolution of transient response functions. Water Resources Research, 2009, 45, .	4.2	12
18	From precipitation to groundwater baseflow in a native prairie ecosystem: a regional study of the Konza LTER in the Flint Hills of Kansas, USA. Hydrology and Earth System Sciences, 2011, 15, 3181-3194.	4.9	10

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19	The Analytic Element Method for rectangular gridded domains, benchmark comparisons and application to the High Plains Aquifer. Advances in Water Resources, 2013, 60, 89-99.	3.8	10
20	Evaluating Baseflow Simulation in the National Water Model: A Case Study in the Northern High Plains Region, USA. Journal of the American Water Resources Association, 2021, 57, 267-280.	2.4	10
21	Drawdown and capture zone topology for nonvertical wells. Water Resources Research, 2003, 39, .	4.2	9
22	Groundwater response to changing water-use practices in sloping aquifers. Water Resources Research, 2007, 43, .	4.2	9
23	Analysis of discontinuities across thin inhomogeneities, groundwater/surface water interactions in river networks, and circulation about slender bodies using slit elements in the <scp>A</scp>nalytic <scp>E</scp>lement <scp>M</scp>ethod. Water Resources Research, 2015, 51, 8684-8703.	4.2	9
24	Conceptualizing Groundwater-Surface Water Interactions within the Ogallala Aquifer Region using Electrical Resistivity Imaging. Journal of Environmental and Engineering Geophysics, 2019, 24, 185-199.	0.5	8
25	Uniform Head in Horizontal and Vertical Wells. Ground Water, 2006, 44, 86-90.	1.3	7
26	A distributed data component for the Open Modeling Interface. Environmental Modelling and Software, 2014, 57, 138-151.	4.5	7
27	Effects of Groundwaterâ€Surface Water Exchange Mechanism in the National Water Model over the Northern High Plains Aquifer, USA. Journal of the American Water Resources Association, 2021, 57, 241-255.	2.4	7
28	Deformation of stream surfaces in steady axisymmetric flow. Water Resources Research, 2001, 37, 307-315.	4.2	6
29	A vector potential and exact flux through surfaces using Lagrange and Stokes stream functions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 489-509.	2.1	5
30	The transition of flow patterns through critical stagnation points in two-dimensional groundwater flow. Advances in Water Resources, 2007, 30, 16-28.	3.8	5
31	Hyper-extractive counties in the U.S.: A coupled-systems approach. Applied Geography, 2013, 37, 88-100.	3.7	5
32	Conserving the Ogallala Aquifer in southwestern Kansas: from the wells to people, a holistic coupled naturalâ€"human model. Hydrology and Earth System Sciences, 2017, 21, 6167-6183.	4.9	5
33	A vector potential for a partly penetrating well and flux in an approximate method of images. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 2093-2111.	2.1	4
34	Water and Society: Interdisciplinary Education in Natural Resources. Journal of Contemporary Water Research and Education, 2016, 158, 120-131.	0.7	4
35	Wave Resonance and Dissipation in Collections of Partially Reflecting Vertical Cylinders. Journal of Waterway, Port, Coastal and Ocean Engineering, 2018, 144, .	1.2	4
36	Characterizing Riverbed Heterogeneity across Shifts in River Discharge through Temporal Changes in Electrical Resistivity. Journal of Environmental and Engineering Geophysics, 2020, 25, 581-587.	0.5	4

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37	Analysis of vadose zone inhomogeneity toward distinguishing recharge rates: Solving the nonlinear interface problem with <scp>N</scp>ewton method. Water Resources Research, 2016, 52, 8756-8774.	4.2	2
38	Explore the Interactions between Human-induced Groundwater Salt Intrusion and Salt Cedar Invasion in the Upper Arkansas River Corridor in Kansas, U.S. Procedia Environmental Sciences, 2012, 12, 744-750.	1.4	1
39	Waves in Collections of Circular Shoals and Bathymetric Depressions. Journal of Waterway, Port, Coastal and Ocean Engineering, 2020, 146, 04020018.	1.2	1
40	Analytic techniques for three-dimensional steady flow with two-dimensional and axisymmetric components. Developments in Water Science, 2002, , 771-772.	0.1	0
41	Reply to Butler et al.: A sound hydrologic foundation for interdisciplinary studies of the High Plains Aquifer. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E532-E533.	7.1	0
42	MODELING THE EFFECT OF LOW-PERMEABILITY LAYERS ON VADOSE WELL RECHARGE RATES. , 2017, , .		0
43	Analytic Element Method across Fields of Study. , 2020, , 1-70.		0
44	Analytic Elements from Separation of Variables. , 2020, , 165-226.		0
45	Foundation of the Analytic Element Method. , 2020, , 71-102.		0
46	Analytic Elements from Singular Integral Equations. , 2020, , 227-284.		0
47	Analytic Elements from Complex Functions. , 2020, , 103-164.		0
48	Research Integrated Curriculum In Geoenvironmental Engineering. , 0, , .		0