Helen P Jarvie

List of Publications by Year
in descending order

140 papers	10,481 citations	26630 56 h-index	34986 98 g-index
141 all docs	141 docs citations	141 times ranked	8118 citing authors

#	Article	IF	Citations
1	Phosphorus Legacy: Overcoming the Effects of Past Management Practices to Mitigate Future Water Quality Impairment. Journal of Environmental Quality, 2013, 42, 1308-1326.	2.0	706
2	Delivery and cycling of phosphorus in rivers: A review. Science of the Total Environment, 2008, 400, 379-395.	8.0	590
3	Sewage-effluent phosphorus: A greater risk to river eutrophication than agricultural phosphorus?. Science of the Total Environment, 2006, 360, 246-253.	8.0	387
4	Agriculture and Eutrophication: Where Do We Go from Here?. Sustainability, 2014, 6, 5853-5875.	3.2	370
5	Long-term accumulation and transport of anthropogenic phosphorus in three river basins. Nature Geoscience, 2016, 9, 353-356.	12.9	282
6	Role of river bed sediments as sources and sinks of phosphorus across two major eutrophic UK river basins: the Hampshire Avon and Herefordshire Wye. Journal of Hydrology, 2005, 304, 51-74.	5.4	261
7	Nitrogen and phosphorus in east coast British rivers: Speciation, sources and biological significance. Science of the Total Environment, 1998, 210-211, 79-109.	8.0	256
8	Phosphorus Mitigation to Control River Eutrophication: Murky Waters, Inconvenient Truths, and â€œPostnormalâ€• Science. Journal of Environmental Quality, 2013, 42, 295-304.	2.0	238
9	Water Quality Remediation Faces Unprecedented Challenges from â€œLegacy Phosphorusâ€• Environmental Science & Technology, 2013, 47, 8997-8998.	10.0	228
10	Increased Soluble Phosphorus Loads to Lake Erie: Unintended Consequences of Conservation Practices?. Journal of Environmental Quality, 2017, 46, 123-132.	2.0	226
11	Future agriculture with minimized phosphorus losses to waters: Research needs and direction. Ambio, 2015, 44, 163-179.	5.5	210
12	Agriculture as a phosphorus source for eutrophication in the northâ€west European countries, Norway, Sweden, United Kingdom and Ireland: a review. Soil Use and Management, 2007, 23, 5-15.	4.9	197
13	Characterising phosphorus and nitrate inputs to a rural river using high-frequency concentrationâ€"flow relationships. Science of the Total Environment, 2015, 511, 608-620.	8.0	176
14	Review of robust measurement of phosphorus in river water: sampling, storage, fractionation and sensitivity. Hydrology and Earth System Sciences, 2002, 6, 113-131.	4.9	168
15	Sustainable Phosphorus Management and the Need for a Long-Term Perspective: The Legacy Hypothesis. Environmental Science & Technology, 2014, 48, 8417-8419.	10.0	161
16	Modelling of phosphorus inputs to rivers from diffuse and point sources. Science of the Total Environment, 2008, 395, 125-138.	8.0	152
17	An assessment of the fate, behaviour and environmental risk associated with sunscreen TiO2 nanoparticles in UK field scenarios. Science of the Total Environment, 2011, 409, 2503-2510.	8.0	150
18	Do septic tank systems pose a hidden threat to water quality?. Frontiers in Ecology and the Environment, 2014, 12, 123-130.	4.0	139

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19	The British river of the future: How climate change and human activity might affect two contrasting river ecosystems in England. Science of the Total Environment, 2009, 407, 4787-4798.	8.0	134
20	Fate of Silica Nanoparticles in Simulated Primary Wastewater Treatment. Environmental Science & Technology, 2009, 43, 8622-8628.	10.0	127
21	Nutrient criteria for surface waters under the European Water Framework Directive: Current state-of-the-art, challenges and future outlook. Science of the Total Environment, 2019, 695, 133888.	8.0	127
22	The Pivotal Role of Phosphorus in a Resilient Water-Energy-Food Security Nexus. Journal of Environmental Quality, 2015, 44, 1049-1062.	2.0	125
23	Quantifying the impact of septic tank systems on eutrophication risk in rural headwaters. Environment International, 2011, 37, 644-653.	10.0	120
24	Major ion concentrations and the inorganic carbon chemistry of the Humber rivers. Science of the Total Environment, 1997, 194-195, 285-302.	8.0	119
25	Phosphorus and nitrogen limitation and impairment of headwater streams relative to rivers in Great Britain: A national perspective on eutrophication. Science of the Total Environment, 2018, 621, 849-862.	8.0	113
26	Streamwater phosphorus and nitrogen across a gradient in ruralâ€“agricultural land use intensity. Agriculture, Ecosystems and Environment, 2010, 135, 238-252.	5.3	106
27	Trace element inter-relationships for the Humber rivers: inferences for hydrological and chemical controls. Science of the Total Environment, 1997, 194-195, 321-343.	8.0	103
28	Phosphorus sources, speciation and dynamics in the lowland eutrophic River Kennet, UK. Science of the Total Environment, 2002, 282-283, 175-203.	8.0	103
29	Water quality of treated sewage effluent in a rural area of the upper Thames Basin, southern England, and the impacts of such effluents on riverine phosphorus concentrations. Journal of Hydrology, 2005, 304, 103-117.	5.4	97
30	The significance of dissolved carbon dioxide in major lowland rivers entering the North Sea. Science of the Total Environment, 1998, 210-211, 187-203.	8.0	94
31	Within-River Phosphorus Retention: Accounting for a Missing Piece in the Watershed Phosphorus Puzzle. Environmental Science & Technology, 2012, 46, 13284-13292.	10.0	94
32	Small Water Bodies in Great Britain and Ireland: Ecosystem function, human-generated degradation, and options for restorative action. Science of the Total Environment, 2018, 645, 1598-1616.	8.0	87
33	The geography of the Humber catchment. Science of the Total Environment, 1997, 194-195, 87-99.	8.0	84
34	The water quality of the River Kennet: initial observations on a lowland chalk stream impacted by sewage inputs and phosphorus remediation. Science of the Total Environment, 2000, 251-252, 477-495.	8.0	81
35	The LOIS river monitoring network: strategy and implementation. Science of the Total Environment, 1997, 194-195, 101-109.	8.0	80
36	Phosphorusî—¸calcium carbonate saturation relationships in a lowland chalk river impacted by sewage inputs and phosphorus remediation: an assessment of phosphorus self-cleansing mechanisms in natural waters. Science of the Total Environment, 2002, 282-283, 295-310.	8.0	79

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37	Introduction to the Landâ€"Ocean Interaction Study (LOIS): Rationale and international context. Science of the Total Environment, 1998, 210-211, 5-20.	8.0	75
38	The strategic significance of wastewater sources to pollutant phosphorus levels in English rivers and to environmental management for rural, agricultural and urban catchments. Science of the Total Environment, 2010, 408, 1485-1500.	8.0	73
39	The prediction and management of water quality in a relatively unpolluted major Scottish catchment: current issues and experimental approaches. Science of the Total Environment, 1997, 194-195, 419-435.	8.0	72
40	Agriculture, community, river eutrophication and the Water Framework Directive. Hydrological Processes, 2005, 19, 1895-1901.	2.6	72
41	Phosphorus uptake into algal biofilms in a lowland chalk river. Science of the Total Environment, 2002, 282-283, 353-373.	8.0	70
42	Within-river nutrient processing in Chalk streams: The Pang and Lambourn, UK. Journal of Hydrology, 2006, 330, 101-125.	5.4	70
43	Influence of rural land use on streamwater nutrients and their ecological significance. Journal of Hydrology, 2008, 350, 166-186.	5.4	69
44	Stream-bed phosphorus in paired catchments with different agricultural land use intensity. Agriculture, Ecosystems and Environment, 2009, 134, 53-66.	5.3	69
45	Titanium in UK rural, agricultural and urban/industrial rivers: Geogenic and anthropogenic colloidal/sub-colloidal sources and the significance of within-river retention. Science of the Total Environment, 2011, 409, 1843-1853.	8.0	68
46	Identifying priorities for nutrient mitigation using river concentrationâ€"flow relationships: The Thames basin, UK. Journal of Hydrology, 2014, 517, 1-12.	5.4	68
47	Factors regulating the spatial and temporal distribution of solute concentrations in a major river system in NE Scotland. Science of the Total Environment, 1998, 221, 93-110.	8.0	67
48	On modeling the mechanisms that control in-stream phosphorus, macrophyte, and epiphyte dynamics: An assessment of a new model using general sensitivity analysis. Water Resources Research, 2001, 37, 2777-2792.	4.2	67
49	Internal loading of phosphorus in a sedimentation pond of a treatment wetland: Effect of a phytoplankton crash. Science of the Total Environment, 2011, 409, 2222-2232.	8.0	67
50	Impact of Point-Source Pollution on Phosphorus and Nitrogen Cycling in Stream-Bed Sediments. Environmental Science & Technology, 2010, 44, 908-914.	10.0	65
51	Highâ€frequency water quality monitoring in an urban catchment: hydrochemical dynamics, primary production and implications for the Water Framework Directive. Hydrological Processes, 2015, 29, 3388-3407.	2.6	65
52	Handling the phosphorus paradox in agriculture and natural ecosystems: Scarcity, necessity, and burden of P. Ambio, 2018, 47, 3-19.	5.5	64
53	Change in riverine suspended sediment concentration in central Japan in response to late 20th century human activities. Catena, 2004, 55, 231-254.	5.0	60
54	Characterization of Phosphorus Sources in Rural Watersheds. Journal of Environmental Quality, 2009, 38, 1998-2011.	2.0	60

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55	Declines in phosphorus concentration in the upper River Thames (UK): Links to sewage effluent cleanup and extended end-member mixing analysis. Science of the Total Environment, 2010, 408, 1315-1330.	8.0	60
56	Nutrient hydrochemistry for a groundwater-dominated catchment: The Hampshire Avon, UK. Science of the Total Environment, 2005, 344, 143-158.	8.0	59
57	Measurement of soluble reactive phosphorus concentration profiles and fluxes in river-bed sediments using DET gel probes. Journal of Hydrology, 2008, 350, 261-273.	5.4	59
58	Nutrient emissions to water from septic tank systems in rural catchments: Uncertainties and implications for policy. Environmental Science and Policy, 2012, 24, 71-82.	4.9	58
59	Macrophyte and periphyton dynamics in a UK Cretaceous chalk stream: the River Kennet, a tributary of the Thames. Science of the Total Environment, 2002, 282-283, 143-157.	8.0	57
60	European land-based pollutant loads to the North Sea: an analysis of the Paris Commission data and review of monitoring strategies. Science of the Total Environment, 1997, 194-195, 39-58.	8.0	56
61	Patterns in nutrient concentrations and biological quality indices across the upper Thames river basin, UK. Science of the Total Environment, 2002, 282-283, 263-294.	8.0	55
62	The water quality of the LOCAR Pang and Lambourn catchments. Hydrology and Earth System Sciences, 2004, 8, 614-635.	4.9	55
63	Phosphorus dynamics and productivity in a sewage-impacted lowland chalk stream. Journal of Hydrology, 2008, 351, 87-97.	5.4	55
64	On modelling the impacts of phosphorus stripping at sewage works on in-stream phosphorus and macrophyte/epiphyte dynamics: a case study for the River Kennet. Science of the Total Environment, 2002, 282-283, 395-415.	8.0	53
65	Trace element concentrations in the major rivers entering the Humber estuary, NE England. Journal of Hydrology, 1996, 182, 37-64.	5.4	51
66	Predicting phosphorus concentrations in British rivers resulting from the introduction of improved phosphorus removal from sewage effluent. Science of the Total Environment, 2010, 408, 4239-4250.	8.0	51
67	Phosphorus Retention and Remobilization along Hydrological Pathways in Karst Terrain. Environmental Science & Technology, 2014, 48, 4860-4868.	10.0	51
68	Nitrate concentrations in river waters of the upper Thames and its tributaries. Science of the Total Environment, 2006, 365, 15-32.	8.0	50
69	The Water Quality of the River Enborne, UK: Observations from High-Frequency Monitoring in a Rural, Lowland River System. Water (Switzerland), 2014, 6, 150-180.	2.7	50
70	Phosphorus footprint in China over the 1961â€"2050 period: Historical perspective and future prospect. Science of the Total Environment, 2019, 650, 687-695.	8.0	50
71	Exploring the linkages between river water chemistry and watershed characteristics using GIS-based catchment and locality analyses. Regional Environmental Change, 2002, 3, 36-50.	2.9	49
72	Changes in point and diffuse source phosphorus inputs to the River Frome (Dorset, UK) from 1966 to 2006. Science of the Total Environment, 2009, 407, 1954-1966.	8.0	48

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73	Celebrating the 350th Anniversary of Phosphorus Discovery: A Conundrum of Deficiency and Excess. Journal of Environmental Quality, 2018, 47, 774-777.	2.0	48
74	Nutrient water quality of the Wye catchment, UK: exploring patterns and fluxes using the Environment Agency data archives. Hydrology and Earth System Sciences, 2003, 7, 722-743.	4.9	47
75	Stream water chemistry and quality along an uplandâ€"lowland rural land-use continuum, south west England. Journal of Hydrology, 2008, 350, 215-231.	5.4	47
76	Water quality along a river continuum subject to point and diffuse sources. Journal of Hydrology, 2008, 350, 154-165.	5.4	46
77	Use of continuous water quality records for hydrograph separation and to assess short-term variability and extremes in acidity and dissolved carbon dioxide for the River Dee, Scotland. Science of the Total Environment, 2001, 265, 85-98.	8.0	43
78	Towards resolving the phosphorus chaos created by food systems. Ambio, 2020, 49, 1076-1089.	5.5	41
79	Whatâ€™s More Important for Managing Phosphorus: Loads, Concentrations or Both?. Environmental Science & Technology, 2014, 48, 23-24.	10.0	40
80	The water quality of the River Wear, north-east England. Science of the Total Environment, 2000, 251-252, 153-172.	8.0	39
81	The water quality of the Great Ouse. Science of the Total Environment, 2000, 251-252, 423-440.	8.0	39
82	One size does not fit all: Toward regional conservation practice guidance to reduce phosphorus loss risk in the Lake Erie watershed. Journal of Environmental Quality, 2021, 50, 529-546.	2.0	38
83	Modelling phosphorus dynamics in multi-branch river systems: A study of the Black River, Lake Simcoe, Ontario, Canada. Science of the Total Environment, 2011, 412-413, 315-323.	8.0	37
84	Phosphorus concentrations in the River Dun, the Kennet and Avon Canal and the River Kennet, southern England. Science of the Total Environment, 2005, 344, 107-128.	8.0	35
85	Quantifying Phosphorus Retention and Release in Rivers and Watersheds Using Extended Endâ€Member Mixing Analysis (Eâ€EMMA). Journal of Environmental Quality, 2011, 40, 492-504.	2.0	35
86	Climate change and coupling of macronutrient cycles along the atmospheric, terrestrial, freshwater and estuarine continuum. Science of the Total Environment, 2012, 434, 252-258.	8.0	35
87	River water quality in the Humber catchment: an introduction using GIS-based mapping and analysis. Science of the Total Environment, 2000, 251-252, 9-26.	8.0	34
88	Assessing Changes in Phosphorus Concentrations in Relation to In-Stream Plant Ecology in Lowland Permeable Catchments: Bringing Ecosystem Functioning Into Water Quality Monitoring. Water, Air and Soil Pollution, 2004, 4, 641-655.	0.8	34
89	Small-Angle Neutron Scattering Study of Natural Aquatic Nanocolloids. Environmental Science & Technology, 2007, 41, 2868-2873.	10.0	33
90	Decreasing boron concentrations in UK rivers: Insights into reductions in detergent formulations since the 1990s and within-catchment storage issues. Science of the Total Environment, 2010, 408, 1374-1385.	8.0	33

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91	Conclusions to the special volume of science of the total environment concerning UK fluxes to the North Sea, land ocean interaction study river basins research, the first two years. Science of the Total Environment, 1997, 194-195, 467-477.	8.0	32
92	Modelling nitrogen dynamics and distributions in the River Tweed, Scotland: an application of the INCA model. Hydrology and Earth System Sciences, 2002, 6, 433-454.	4.9	32
93	Distant Views and Local Realities: The Limits of Global Assessments to Restore the Fragmented Phosphorus Cycle. Agricultural and Environmental Letters, 2016, 1, 160024.	1.2	32
94	Inorganic carbon dominates total dissolved carbon concentrations and fluxes in British rivers: Application of the THINCARB model â€" Thermodynamic modelling of inorganic carbon in freshwaters. Science of the Total Environment, 2017, 575, 496-512.	8.0	32
95	Coupling High-Frequency Stream Metabolism and Nutrient Monitoring to Explore Biogeochemical Controls on Downstream Nitrate Delivery. Environmental Science & Technology, 2018, 52, 13708-13717.	10.0	32
96	Riverine inputs of major ions and trace elements to the tidal reaches of the River Tweed, UK. Science of the Total Environment, 2000, 251-252, 55-81.	8.0	31
97	Lowland river water quality: a new UK data resource for process and environmental management analysis. Hydrological Processes, 2012, 26, 949-960.	2.6	31
98	Water quality functioning of lowland permeable catchments: inferences from an intensive study of the River Kennet and upper River Thames. Science of the Total Environment, 2002, 282-283, 471-490.	8.0	30
99	Exploring How Organic Matter Controls Structural Transformations in Natural Aquatic Nanocolloidal Dispersions. Environmental Science & Technology, 2012, 46, 6959-6967.	10.0	30
100	Guiding phosphorus stewardship for multiple ecosystem services. Ecosystem Health and Sustainability, 2016, 2, .	3.1	30
101	Role of riverine colloids in macronutrient and metal partitioning and transport, along an uplandâ€"lowland land-use continuum, under low-flow conditions. Science of the Total Environment, 2012, 434, 171-185.	8.0	26
102	Weekly water quality monitoring data for the River Thames (UK) and its major tributaries (2009â€"2013): the Thames Initiative research platform. Earth System Science Data, 2018, 10, 1637-1653.	9.9	25
103	The water quality of the River Dun and the Kennet and Avon Canal. Journal of Hydrology, 2006, 330, 155-170.	5.4	24
104	Understanding Phosphorus Mobility and Bioavailability in the Hyporheic Zone of a Chalk Stream. Water, Air, and Soil Pollution, 2011, 218, 213-226.	2.4	24
105	Biogeochemical and climate drivers of wetland phosphorus and nitrogen release: Implications for nutrient legacies and eutrophication risk. Journal of Environmental Quality, 2020, 49, 1703-1716.	2.0	24
106	Sediment phosphorus buffering in streams at baseflow: A metaâ€analysis. Journal of Environmental Quality, 2021, 50, 287-311.	2.0	24
107	Just scratching the surface? New techniques show how surface functionality of nanoparticles influences their environmental fate. Nano Today, 2010, 5, 248-250.	11.9	21
108	Forty-year trends in the flux and concentration of phosphorus in British rivers. Journal of Hydrology, 2018, 558, 314-327.	5.4	21

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109	Mains water leakage: Implications for phosphorus source apportionment and policy responses in catchments. Science of the Total Environment, 2017, 579, 702-708.	8.0	20
110	Acid-available particulate trace metals associated with suspended sediment in the Humber rivers: a regional assessment. Hydrological Processes, 1999, 13, 1117-1136.	2.6	19
111	High-frequency phosphorus monitoring of the River Kennet, UK: are ecological problems due to intermittent sewage treatment works failures?. Journal of Environmental Monitoring, 2012, 14, 3137.	2.1	18
112	The water quality of the River Trent: from the lower non-tidal reaches to the freshwater tidal zone. Science of the Total Environment, 2000, 251-252, 335-367.	8.0	17
113	The fluvial flux of total reactive and total phosphorus from the UK in the context of a national phosphorus budget: comparing UK river fluxes with phosphorus trade imports and exports. Biogeochemistry, 2016, 130, 31-51.	3.5	17
114	Enhanced nitrogen and phosphorus flows in a mixed land use basin: Drivers and consequences. Journal of Cleaner Production, 2018, 181, 416-425.	9.3	17
115	Nutrient monitoring, simulation and management within a major lowland UK river system: the Kennet. Mathematics and Computers in Simulation, 2004, 64, 307-317.	4.4	16
116	Patterns in trace element chemistry in the freshwater tidal reaches of the River Trent. Science of the Total Environment, 2000, 251-252, 317-333.	8.0	15
117	Pollution regimes and variability in river water quality across the Humber catchment: interrogation and mapping of an extensive and highly heterogeneous spatial dataset. Science of the Total Environment, 2000, 251-252, 27-43.	8.0	14
118	A novel index of susceptibility of rivers and their catchments to acidification in regions subject to a maritime influence. Applied Geochemistry, 1999, 14, 1093-1099.	3.0	13
119	Measuring in-stream productivity: the potential of continuous chlorophyll and dissolved oxygen monitoring for assessing the ecological status of surface waters. Water Science and Technology, 2003, 48, 191-198.	2.5	13
120	Future Phosphorus: Advancing New 2D Phosphorus Allotropes and Growing a Sustainable Bioeconomy. Journal of Environmental Quality, 2019, 48, 1145-1155.	2.0	13
121	<i>Phosphorus mirabilis</i>: Illuminating the Past and Future of Phosphorus Stewardship. Journal of Environmental Quality, 2019, 48, 1127-1132.	2.0	13
122	The biogeochemistry of arsenic in a remote UK upland site: trends in rainfall and runoff, and comparisons with urban rivers. Journal of Environmental Monitoring, 2011, 13, 1255.	2.1	11
123	Exploring controls on the fate of PVP-capped silver nanoparticles in primary wastewater treatment. Environmental Science: Nano, 2015, 2, 177-190.	4.3	11
124	Intense summer floods may induce prolonged increases in benthic respiration rates of more than one year leading to low river dissolved oxygen. Journal of Hydrology X, 2020, 8, 100056.	1.6	11
125	Aluminium in UK rivers: a need for integrated research related to kinetic factors, colloidal transport, carbon and habitat. Journal of Environmental Monitoring, 2011, 13, 2153.	2.1	10
126	Phosphorus fluxes to the environment from mains water leakage: Seasonality and future scenarios. Science of the Total Environment, 2018, 636, 1321-1332.	8.0	10

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127	Linking Soil Erosion to Instream Dissolved Phosphorus Cycling and Periphyton Growth. Journal of the American Water Resources Association, 2017, 53, 809-821.	2.4	9
128	The probability of breaching water quality standards â€“ A probabilistic model of river water nitrate concentrations. Journal of Hydrology, 2020, 583, 124562.	5.4	9
129	Measuring in-stream productivity: the potential of continuous chlorophyll and dissolved oxygen monitoring for assessing the ecological status of surface waters. Water Science and Technology, 2003, 48, 191-8.	2.5	9
130	Accounting for Ecosystem Services in Water Quality Standards Compliance. Environmental Science & Technology, 2014, 48, 14072-14074.	10.0	6
131	Managing the small stream network for improved water quality, biodiversity and ecosystem services protection (SSNet). Research Ideas and Outcomes, 0, 5, .	1.0	6
132	Reducing Unintended Consequences of Agricultural Phosphorus. , 2019, 103, 33-35.		5
133	Assessing Changes in Phosphorus Concentrations in Relation to In-Stream Plant Ecology in Lowland Permeable Catchments: Bringing Ecosystem Functioning into Water Quality Monitoring. , 2004, , 641-655.		5
134	Assemblage grouping of European benthic diatoms as indicators of trophic status of rivers. Fundamental and Applied Limnology, 2010, 176, 89-100.	0.7	4
135	The Role of Fieldâ€Scale Management on Soil and Surface Runoff C/N/P Stoichiometry. Journal of Environmental Quality, 2019, 48, 1543-1548.	2.0	2
136	A 50â€year record of nitrate concentrations in the Slapton Ley Catchment, Devon, United Kingdom. Hydrological Processes, 2021, 35, .	2.6	2
137	Analysis of River Water Quality in the Humber Catchment Using the LOIS Database and GIS. Journal of Geography (Chigaku Zasshi), 2002, 111, 410-415.	0.3	1
138	Contribution of bunker silo effluent discharged via a riparian zone to watershed phosphorus loads. Journal of Great Lakes Research, 2021, 47, 1296-1304.	1.9	1
139	Response to Letter to the Editor â€œAerobic phosphorus release from shallow lake sedimentsâ€• Science of the Total Environment, 2011, 409, 4642-4643.	8.0	0
140	Dedication of the special issue to Colin Neal. Science of the Total Environment, 2012, 434, 1-2.	8.0	0