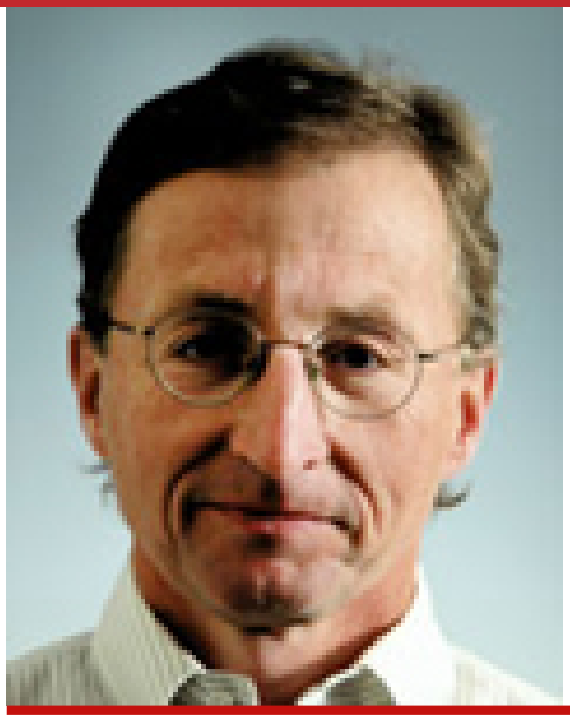

Dr. Richard Johnson

- Professor, School of Public Health, Oregon Health & Science University
- Associate Dean for Academic Affairs, Oregon Health & Science University
- rick.johnson.phd@gmail.com

Dr. Richard Johnson is a Professor and Associate Dean of Academic Affairs in the OHSU-PSU School of Public Health (SPH) at the Oregon Health & Science University (OHSU) in Portland Oregon.

He received his BS degree in Chemistry from the University of Washington and his MS and PhD degrees from the Oregon Graduate Institute (now part of OHSU). Dr. Johnson has been a faculty member at OHSU since 1985. He teaches in the areas of public health relating to climate change, drinking water availability, chemical and transport and fate in the environment and restoration of sites contaminated by industrial and other sources. His research interests involve forecasting of water quality in rivers to protect drinking water sources, development of diagnostic tool for groundwater restoration, and vulnerability of groundwater sources of drinking water.

Research Interests:

- Physical and chemical behavior of organic contaminants in the air, soil, and water
- Analytical organic chemistry
- Groundwater transport, fate, and modeling of contaminants in porous and fractured porous media

Selected Papers

Kocur, C. M. D.; Fan, D.; Tratnyek, P. G.; Johnson, R. L. Predicting abiotic reduction rates using cryogenically collected soil cores and mediated reduction potential measurements, *Environ. Sci. Technol. Lett.* 2020, 7, 1, 20–26.

Richards, P. M.; Liang, Y.; Johnson, R. L.; Mattes, T. E. Cryogenic soil coring reveals coexistence of aerobic and anaerobic vinyl chloride degrading bacteria in a chlorinated ethene contaminated aquifer. Water Res. 2019, 157, 281-291.

Qin, H., X. Guan, J. Z. Bandstra, R. L. Johnson and P. G. Tratnyek. Modeling the kinetics of hydrogen formation by zerovalent iron: Effects of sulfidation on micro- and nano-scale particles. Environ. Sci. Technol., 2018, 52, 13887-13896 [DOI 10.1021/acs.est.8b04436].

Capel, P.D., McCarthy, K.A., Coupe, R.H., Grey, K.M., Amenumey, S.E., Baker, N.T., and Johnson, R.L., 2018, Agriculture — A River runs through it — The connections between agriculture and water quality: U.S. Geological Survey Circular 1433, 201 p., https://doi.org/10.3133/cir1433.

Mather, A.L. and R.L. Johnson (2016) "Forecasting Turbidity during Streamflow Events for Two Mid-Atlantic U.S. Streams", *Water Resources Management*, 30: 4899. doi:10.1007/s11269-016-1460-1

Fan, D., M. Bradley, A. Hinkle, R.L. Johnson and P.G. Tratnyek, (2016), "Chemical Reactivity Probes for Assessing Abiotic Natural Attenuation by Reducing Iron Minerals, *Environ. Sci. Technol.* 50, 1868−1876

Kiaalhosseini, S., R.L. Johnson, R.C. Rogers, M. Irriani-Renno, M.R. Olson, M. Lyverse, and T.C. Sale (2016), "Cryogenic Core Collection (C_3) from Unconsolidated Subsurface Media" *Groundwater Monitoring and Remediation*, 36: 41–49. doi:10.1111/gwmr.12186

Dimin Fan, Graham O'Brien Johnson, P G. Tratnyek[1],and Richard L. Johnson (2016), "Sulfidation of Nano Zerovalent Iron (nZVI) for Improved Selectivity during In-Situ Chemical Reduction (ISCR)", *Environ. Sci. Technol.*, 2016, 50 (17), pp 9558–9565.

Mather, A.L. and R.L. Johnson, (2015) "Event-based stream turbidity prediction using regression and classification approaches", *J. Hydrology,* 530, p. 751-761.

Richard L. Johnson; James T. Nurmi; Graham S. O'Brien Johnson; Dimin Fan; Reid L. O'Brien Johnson; Zhenqing Shi; Alexandra J. Salter-Blanc; Paul G. Tratnyek; Gregory V. Lowry. Field-scale transport and transformation of carboxymethylcellulose- stabilized nano zero-valent iron. Environmental Science and Technology. 2013;47(3):1573-1580.

Richard L. Johnson; Christina N. Brow; Reid O'Brien Johnson; Holly M. Simon. Cryogenic core collection and preservation of subsurface samples for biomolecular analysis. Groundwater Monitoring and Remediation. 2013; 33(2):38-43.

Dean P. Moberg; Richard L. Johnson; Dan M. Sullivan. Comparison of Disturbed and Undisturbed Soil Core Methods to Estimate Nitrogen-Mineralization Rates in Manured Agricultural Soils. Communications in Soil Science and Plant Analysis. 2013;44(11):1722-1732.

Christina N. Brow; Reid O'Brien Johnson; Richard L. Johnson; Holly M. Simon. Assessment of anaerobic toluene biodegradation activity by bssA transcript/gene ratios Applied and Environmental. Microbiology. 2013;79(17):5338-5334.

Magdalena M. Krol; Kevin G. Mumford; Richard L. Johnson; Brent E. Sleep. Modeling discrete gas bubble formation and mobilization during subsurface heating of contaminated zones. Advances in Water Resources. 2011;34(4):537-549.

R.L. Johnson; B.R. Clark; M.K. Landon; L.J. Kauffman; S.M. Eberts. Modeling the potential impact of seasonal and inactive Multi-Aquifer wells on contaminant movement to public Water-Supply wells. Journal of the American Water Resources Association. 2011;47(3):588-596.

M.M. Krol; B.E. Sleep; R.L. Johnson. Impact of low-temperature electrical resistance heating on subsurface flow and transport. Water Resources Research. 2011;47(5):[W05546].

Vaishnavi Sarathy; Alexandra J. Salter; James T. Nurmi; Graham O'Brien Johnson; Richard L. Johnson; Paul G. Tratnyek. Degradation of 1,2,3-Trichloropropane (TCP): Hydrolysis, elimination, and reduction by iron and zinc. Environmental Science and Technology. 2010;44(2):787-793.