

William James Blanford Ph.D., P.G.
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EXPERIENCE

Queens College, CUNY 2013-Present

Assistant Professor

School of Earth and Environmental Sciences

Instructed courses, advised students and performed research in the area of groundwater contaminant transport and remediation. Specifically, performed field and lab characterization studies of hydraulic and solute transport parameters through rock and unconsolidated sediments. Application of these parameters in numerical flow models to simulate extraction of organic, metal and microbial contaminants from aquifers.

United States Geological Survey 2010 - 2011

Lawrence, Kansas US

Hydrologist

Analyzed Geochemical and Soil Composition Data from an Aquifer Recharge project for the City of Wichita, Kansas. Installed groundwater monitoring wells.

Louisiana State University 2002 - 2010; 2011-2012

Baton Rouge, LA US

Assistant Professor

Taught courses and performed research related to contaminant transport and fate in groundwater systems and groundwater modeling.

EDUCATION

University of Arizona

Tucson, Arizona

Ph.D. Hydrology 2000

Minor: Soil Water and Environmental Science

University of Notre Dame

Notre Dame, Indiana

B.Sc. Geology 1992

Licensed Professional Geologist

State of Texas 2003 to present

JOB RELATED TRAINING & SKILLS

Groundwater modeling: modflow, GMS, Hydrus, Geochemical modeling

Field Hydrogeology: Well installation and design, water and soil sampling, stream gaging

Analytical Chemistry: GCMS, HPLC, UV, Fluorescence

Analytical Microbial: Real-time PCR

OSHA: Hazardous Waste Operations 40-Hour Training; Site Supervisor; Confined Space

PROFESSIONAL PUBLICATIONS

Publications in Press

1. Blanford, W. J. 2013. Model of phase distribution of hydrophobic organic chemicals in cyclodextrin–water–air–solid sorbent systems as a function of salinity, temperature, and the presence of multiple CDs. *Journal of Inclusion Phenomena and Macrocyclic Chemistry*. Published on line and awaiting publication in print.
2. Blanford, W. J., H. Gao, M. Dutta, E. B. Ledesma. 2013 Solubility enhancement and QSPR correlations for polycyclic aromatic hydrocarbons complexation with α β and γ cyclodextrins. *Journal of Inclusion Phenomena and Macrocyclic Chemistry*. Published on line and awaiting publication in print.
3. Gao, H., W. J. Blanford, and A. Gao. 2013. Solubility Enhancement Effect of Cyclodextrin on Groundwater Pollutants. *Ground Water*. Vol. 51, Is. 2, pages 268-275.
4. Blanford, W. J., H. Gao. 2012. Dynamic interactions between cyclodextrin, an organic pollutant, and granular activated carbon in column studies. *Journal of Environmental Monitoring*. Vol. 14, pages 3024-3028.
5. Santamaría J., M. L. Brusseau, J. Araujo, P. Orosz-Coghlan, W. J. Blanford, and C. P. Gerba. 2012. Transport and Retention of *Cryptosporidium Parvum* Oocysts in Soil. *Journal of Environmental Quality*. Vol. 41, Is. 4, pages 1246-1252.
6. Gao, H. and W. J. Blanford. 2012. Partitioning Behavior of Trichloroethylene in Cyclodextrin-Water-Granular-Activated Carbon Systems. *Environmental Engineering Science*. Vol. 29, Is. 6, pages 533-539.
7. Hoffman DR, Anderson PP, Schubert CM, Gault MB, Blanford WJ, Sandrin TR. 2010. Carboxymethyl-beta-cyclodextrin Mitigates Toxicity of Cadmium, Cobalt, and Copper during Naphthalene Biodegradation. *Bioresource Technology*. Vol. 101, Is. 8, pages 2672-2677.
8. Blanford W., T. Boving, Z. Al-Ghazawi, M. Shawaqfah, J. Al-Rashdan, I. Saadoun, J. Schijven, and Q. Ababneh. 2010. River Bank Filtration for Protection of Jordanian Surface and Groundwater. *World Environmental & Water Resources Congress American Society of Chemical Engineers (ASCE)*.
9. Gao, H., W. J. Blanford, and J. E. Birdwell 2009. The Pseudophase Approach to Assessing Chemical Partitioning in Air-Water-Cyclodextrin Systems. *Environmental Science and Technology*. 43 (8), pp 2943–2949.
10. Cable, J.E., Smith, C.G. and Blanford, W.J., 2009. Dispersivity and distribution coefficients in marine sediments using tritium and radium-226. *Radioprotection*, 44(5): 185-190.
11. Boving, T.B., Cady, P., Choudri, B.S., Hawaldar, K., Blanford, W., 2009: Improving Water Quality by Riverbank Filtration – Experiences in India and Jordan . In: *Proceedings of the 2nd International Perspective on Current and Future State of Water Resources and the Environment*. American Society of Chemical Engineers (ASCE) / Association of

environmental and water resources engineers and scientists Conference (EWRI), Chennai, India.

12. Boving, T.; Blanford, W.; McCray, J.; Divine, C.; Brusseau, M. 2008. Comparison of line-drive and push-pull flushing schemes. *Groundwater Monitoring and Remediation*. 28 (1), pp. 75-86.

13. Boving, T. B., and S. M. Barnett, G. Perez, W. J. Blanford, and J. E. McCray. 2007. Remediation with Cyclodextrin: Recovery of the Remedial Agent by Membrane Filtration. *Remediation*. No. 2, p. 21-36.

14. Keim R. and W. J. Blanford. 2006. Hurricanes Create a Crossroads for Hydrological Management of the Mississippi River Delta. *Ground Water*. *Groundwater* Vol. 44, No. 2, p. 123-124. (invited contribution).

15. W. J. Blanford. 2005. Parasite Transport in Limestone Aquifers. Editor J. H. Lehr: *The Encyclopedia of Water*. Vol. 5. p. 365-370. John Wiley and Sons.

16. Blanford W. J., Boving T. B. 2006. Aquifer Monitoring Shows Complex-Sugar Flushing Increases Potential for Enhanced Biodegradation. In: *US EPA Technology News and Trends*. p. 2-4.

17. P. Rykwaldner and W. J. Blanford. 2005. Vadose Zone Monitoring. Editor J. H. Lehr: *The Encyclopedia of Water*. Vol. 1. p. 538-543. John Wiley and Sons.

18. Brusseau, M.L., J.K. Oleen, J. Santamaria, P. Orosz-Coglan, W.J. Blanford, P.Rykwaldner, and C.P. Gerba. 2005. Transport of Microsporidium Encephalitozoon Intestinales Spores in Porous Media. *Water Research*, Vol. 39, p. 3636-3642.

19. W. J. Blanford, J. Yeh, C. P. Gerba, R. W. Harvey, R. Bales, and M. L. Brusseau. 2005. Bacteriophage PRD-1 Transport in a Sandy Aquifer: Influence of Water Chemistry and Travel Distance on Viability. *Water Research*, Vol. 39, No. 11, p. 2345-2357.

20. W. J. Blanford. 2004. Parasite Fate and Transport in Karstic Aquifers. *IDS-Water Americas 2004*.

21. Divine, C. E., J. E. McCray, L. M. Wolf Martin, W. J. Blanford, D. J. Blitzer, M. L. Brusseau, T. B. Boving. 2004. Partitioning Tracer Tests as a Remediation Metric: Case Study at Naval Amphibious Base Little Creek, Virginia Beach, Virginia. *Remediation Journal*. Vol. 14, No. 2, p. 7-31.

22. S. K. Sandrin, M. L. Brusseau, J. J. Piatt, W. J. Blanford, N. T. Nelson, and A. A. Bodour. 2004. Characterizing Spatial Variability of In-Situ Microbial Activity Using Biotracer Tests. *Groundwater*. Vol. 42, No. 3, p. 374-383.

23. Divine, C.E., McCray, J.E., Wolf, L.M., Blanford, W.J., Blitzer, D.J., Boving, T.B., 2004: Partition tracer test, DNAPL characterization, remediation assessment, source zone investigation. *Remediation Journal*, 14(2), 7-31.
24. Cain, R. B., Johnson, G. R., McCray, J. E., Blanford, W. J., and Brusseau, M. L. 2000. Partitioning Tracer Tests for Evaluating Remediation Performance. *Ground Water*, Vol. 38, No. 5, p. 752-761.
25. W. J. Blanford, Barackman, M., Boving, T. B., Klingel, E., and Brusseau, M., 2000. Cyclodextrin-enhanced Vertical Flushing of a Trichloroethene Contaminated Aquifer. *Ground Water Monitoring and Remediation*. p. 58-66.
26. McCray, J., Bryan, K., Cain, R., Johnson, G., Blanford, W., and Brusseau, M., 1999. Field Test of Cyclodextrin for Enhanced Flushing of Multicomponent Immiscible Liquid Contamination: Comparison to Water Flushing. Eds.: Annable, J. S. Gierke, D. A. Sabatini Symposium Name: Field Testing of Innovative Subsurface Remediation Technologies.
27. W. J. Blanford, E. J. Klingel, G. R. Johnson, R. B. Cain, C. Enfield, and M. L. Brusseau. 1999. Performance Assessment of In-well Aeration for the Remediation of an Aquifer Contaminated by a Multi-component Immiscible Liquid. Eds.: M. L. Brusseau, M. D. Annable, J. S. Gierke, D. A. Sabatini Symposium Name: Field Testing of Innovative Subsurface Remediation Technologies.