

Matthew Stocker
matthew.stocker@ars.usda.gov
Researcher

Environmental Microbial and Food Safety Laboratory
USDA, ARS, BA, BARC, EMFSL
10300 Baltimore Avenue
Building 177C BARC-East, Room 111
Beltsville, MD 20705-2350

Education

- 2017 (anticipated) M.S. Environmental Science and Technology, University of Maryland
- 2012 B.S. Environmental Science and Policy, University of Maryland

Research Interests

- Chemical and microbial water quality
- Fate and transport of chemicals and bacteria
- Microbial food safety

Research Experience

- Smart tracer for the measurement of microbial activity in a first-order stream
- Fate and transport of indicator organisms eluted after manure application and rainfall
- Hyporheic exchange of microbes between sediments and water columns.
- Spatial and temporal variation of indicator organisms in streams
- Evaluation of model performance in estimating inactivation of indicators in various water types
- Algae-*E. coli* association in surface waters

Publications

- Spatial and temporal variation of fecal indicator organisms in two creeks in Beltsville, Maryland. Stocker, M.D., Rodriguez-Valentin, J.G., Pachepsky, Y.A., Shelton, D.R. Water Quality Research Journal of Canada. (Awaiting Volume Assignment).
- Irrigation waters and pipe-based biofilms as sources for antibiotic-resistant bacteria. Blaustein, A.R., Shelton, D.R., Van Kessel, J.S., Karns, J.S., Stocker, M.D., Pachepsky, Y.A. Environmental Monitoring and Assessment. 188(1): 1-12.
- Depth-dependent inactivation of *Escherichia coli* and *Enterococcus faecalis* in soil after manure application and simulated rainfall. Stocker, M.D., Pachepsky, Y.A., Hill, R., Shelton, D.R. 2015. Applied and Environmental Microbiology. 81(14):4801-4808.
- Performance of Weibull and linear semi-logarithmic models in simulating *Escherichia coli* inactivation in waters. Stocker, M.D., Pachepsky, Y.A., Shelton, D.R. 2014. Journal of Environmental Quality. 43(5):1559-1565.