

Jenna E. Schueler

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WORK EXPERIENCE

Chesapeake Bay Foundation

Water Quality Research Assistant (40 hours/week)

Annapolis, MD, Fall 2018-present

- Managed data gathering, analysis, and write-ups for nitrogen, phosphorus, dissolved oxygen, submerged aquatic vegetation, and wetland habitat indicators of the 2020 State of the Bay report.
- Modeled scenarios and analyzed data from the Chesapeake Assessment Scenario Tool (CAST) to inform progress towards Clean Water Blueprint goals as part of the CBF's State of the Blueprint report and to support policy and restoration efforts at the state level.
- Modeled farm conservation management scenarios using COMET-Farm, A-microscale, and the Chesapeake Bay Nutrient Trading tool for NRCS Conservation Innovation Grant and created reports, articles, and presented at the 2019 Chesapeake Watershed Forum to educate the public on dual benefits of regenerative agriculture on water quality and greenhouse gas emission reduction.
- Conceptualized field study, coordinated with landowners, and executed field sampling, GIS mapping, data analysis, and drafted reports for Soil Health Pilot field study for USDA MD Conservation Innovation Grant to promote grazing and soil health.
- Conducted literature reviews and analysis to assist in comment letters and online content and regarding EQIP, CSP, RCPP, CREP, and other aspects of the Farm Bill.
- Managed soil sampling, data analysis, and Field Doc metrics tracking for NFWF Mountains to Bay Grazing Alliance grant.
- Procured data and drafted preliminary report for the first organizational carbon footprint, to inform decisions on organizational practices to reduce greenhouse gas emissions. Presented results in organization-wide webinar.

University of Maryland Department of Environmental Science and Technology

Graduate Research Assistant (20 hours/week)

College Park, MD, Spring 2016 – December 2018

- Collaborated on an interdisciplinary USDA grant with four other Universities modeling the fate and transport of antibiotics and nutrients utilized on dairy farms in NY, PA, and MD.
- Organized field study and conducted sample collection every six weeks on farms from June 2016-Fall 2017.
- Analyzed samples in the lab for total solids, volatile solids, nutrients, and volatile fatty acids using lab machinery including a muffle furnace, gas chromatograph, and lyophilizer.
- Trained undergraduate and high school students on lab standard operating procedures and field safety protocols.
- Disseminated research results at the 2017 and 2018 American Ecological Engineering Society Annual Meeting in Athens, Georgia and Houston, Texas.
- Collaborated on research poster creation for a farmer extension and outreach event in November 2017.
- Conceptualized, coordinated, and conducted a field-scale composting study to examine antibiotic degradation in windrow composting over time.

EDUCATION

University of Maryland, College Park, MD

Master of Science: Environmental Science and Technology

Degree Received: December 2018

GPA 3.85

University of Maryland, College Park, MD

Bachelor of Science: Mechanical Engineering

University of Maryland Honors Program

Degree Received: May 2016

GPA 3.58

EXTRACURRICULAR/COMMUNITY SERVICE

Maryland Master Naturalist

Trained and Certified Master Naturalist at Department of Natural Resources Host Site

Annapolis, MD, Spring 2020-present

- Participated in the spring 2020 cohort of the Maryland Master Naturalist training, covering a variety of wildlife and plant topics such as fish ecology, naturalist interpretation, botany, geology, and mammals.

Assisted DNR in winter invasive species clearing at Soldier's Delight to protect critical serpentine barren habitat.

Friends of the National Zoo

Snore and Roar Host

Washington D.C., Summer 2016 – Fall 2019

- Led overnight camping and wildlife conservation educational experiences for families at the National Zoo and educated participants on endangered and threatened species and conservation efforts.

UMD Alternative Breaks

Experience Leader & Program Intern Adviser

College Park, MD, Fall 2014 -Spring 2018

- Collaborated with the program leadership team to develop social justice, reflection, and leadership training.
- Managed program communication, community development and advised the environmental experience leaders.
- Organized and facilitated environmental conservation focused educational service experiences in Maryland, Florida, and the Bahamas which included riparian buffer maintenance, trail maintenance, invasive species removal, and assistance with prescribed burns.

PUBLICATIONS

- Schueler, J., Lansing, S., Crossette, E., Naas, K., Hurst, J., Raskin, L., ... & Aga, D. S. (2021). *Tetracycline, sulfadimethoxine, and antibiotic resistance gene dynamics during anaerobic digestion of dairy manure* (Vol. 50, No. 3, pp. 694-705).
- Schueler, J., Naas, K., Hurst, J., Aga, D., & Lansing, S. (2021). Effects of On-Farm Dairy Manure Composting on Tetracycline Content and Nutrient Composition. *Antibiotics*, 10(4), 443.
- Oliver, J. P., Gooch, C. A., Lansing, S., Schueler, J., Hurst, J. J., Sassoubre, L., ... & Aga, D. S. (2020). Invited review: Fate of antibiotic residues, antibiotic-resistant bacteria, and antibiotic resistance genes in US dairy manure management systems. *Journal of dairy science*, 103(2), 1051-1071.
- Lansing, S., Hülsemann, B., Choudhury, A., Schueler, J., Lisboa, M. S., & Oechsner, H. (2019). Food waste co-digestion in Germany and the United States: From lab to full-scale systems. *Resources, Conservation and Recycling*, 148, 104-113.
- Hurst, J. J., Oliver, J. P., Schueler, J., Gooch, C., Lansing, S., Crossette, E., ... & Sassoubre, L. M. (2019). Trends in antimicrobial resistance genes in manure blend pits and long-term storage across dairy farms with comparisons to antimicrobial usage and residual concentrations. *Environmental science & technology*, 53(5), 2405-2415.
- Schueler, J. E. (2018). *Fate and Transport of Nutrients and Antimicrobials in Dairy Manure Management Systems* (Masters dissertation, University of Maryland, College Park).
- Oliver, J. P., Schueler, J. E., Gooch, C. A., Lansing, S., & Aga, D. S. (2018). Performance quantification of manure management systems at 11 northeastern US dairy farms. *Applied Engineering in Agriculture*, 34(6), 973-1000.