

# Jenna E. Schueler

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## **WORK EXPERIENCE**

### **Chesapeake Bay Foundation (CBF)**

Science and Agricultural Policy Advisor

Annapolis, MD, Fall 2018-present

- Managed the “Mountains to Bay Grazing Alliance”, a multi-organizational partnership promoting rotational grazing and soil health practices.
- Managed “Carbon Reduction Fund”, a collaborative fund from donors restricted for projects with carbon sequestration benefits.
- Designed and conducted field study utilizing GIS (geographic information system) and tree identification to examine species diversity and tree mortality at past riparian planting sites.
- Designed and executed field sampling, GIS mapping, data analysis, and report writing for Soil Health Pilot field study for USDA MD Conservation Innovation Grant to promote grazing and soil health, culminating in the Farm Forward Report.
- Published economic analysis on the financial benefits of agricultural best management practices in the Chesapeake Bay Watershed culminating in the Clean Water and Climate Smart Investments Report.
- Co-developed strategic planning priorities for the Chesapeake Bay Partnership beyond the 2025 Chesapeake Clean Water Blueprint deadline.
- Managed data analysis and indicator write-ups for pollution and habitat indicators of the 2020/2022 State of the Bay report to inform the public and policy makers on the progress of the Bay cleanup.
- Modeled scenarios and analyzed data from the Chesapeake Assessment Scenario Tool (CAST) to inform progress towards Clean Water Blueprint as part of the yearly State of the Blueprint report and to support policy changes to agricultural cost share programs and restoration efforts at the state and federal level.
- Modeled farm conservation management scenarios using COMET-Farm, A-microscale, and the Chesapeake Bay Nutrient Trading tool to assess impacts on pollution, methane, and CO2 emissions.
- Conducted literature reviews and analysis to support federal comment letters, fact sheets, and online content regarding agricultural cost share programs (EQIP, CSP, RCPP, CREP) and develop CBF’s Farm Bill priorities.
- 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.
- Served as mentor and manager for 2022/23 and 2023/34 Chesapeake Conservation Corps placement.
- Engaged students and stakeholders around the watershed through presentations and interviews about environmental conservation, regenerative agriculture, the Chesapeake Bay Watershed, and climate change.

### **University of Maryland Department of Environmental Science and Technology**

Graduate Research Assistant

College Park, MD, Spring 2016 – December 2018

- Collaborated on an interdisciplinary USDA grant with four Universities to model the transport of antibiotics and nutrients through different manure management technologies utilized on dairy farms in NY, PA, and MD.
- Managed two year field study and conducted sample collection every six weeks at NY and MD farms.
- Analyzed samples in the lab 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
- Created research poster for a farmer extension and outreach event in November 2017.
- Designed, 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

*Bachelor of Science: Mechanical Engineering*

University of Maryland Honors Program

Degree Received: May 2016

GPA 3.58

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## **PEER REVIEWED 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. *Journal of Environmental Quality* (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.

## **EXTRACURRICULAR/COMMUNITY SERVICE**

### **Chesapeake Bay Foundation**

Volunteer

Annapolis, MD, Fall 2014-present

- Engaged in community fall and spring restoration events planting riparian buffers along local streams.

### **Maryland Master Naturalist**

Trained and Certified Master Naturalist at Department of Natural Resources (DNR) 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 and facilitate social justice, reflection, and leadership training and advise the 2018 cohort of program experience leaders.
  - Managed program communication, community development and advised ten 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.
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