

# Jenna E. Schueler

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## **WORK EXPERIENCE**

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

Science and Agricultural Policy Advisor

Annapolis, MD, Fall 2018-present

- Led development of internal Agricultural Theory of Change to guide CBF's strategic involvement in the agricultural space.
- Served as mentor and manager for three Chesapeake Conservation Corps placements and two Science Fellows from 2022-2025; assigned projects, conducted weekly 1-on-1 meetings, and mentored members in capstone development, grant writing process, technical writing and presentation skills, and career mapping.
- Managed the "Mountains to Bay Grazing Alliance", a multi-organizational partnership promoting rotational grazing and soil health practices; organized quarterly steering committee meetings, subcommittee calls, and yearly multi-day face-to-face meetings, coordinated continued funding acquisition and grant writing, submitted grant reporting, and organized yearly regional grazing conference.
- Managed "Carbon Reduction Fund", a collaborative fund from donors restricted for projects with carbon sequestration and climate resiliency benefits; reviewed and approved projects, conducted financial and deliverable tracking, prepared status reports and met with donors to give yearly updates.
- Designed and conducted transect field survey 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, t-test data analysis, and report writing for Soil Health Pilot field study for USDA MD Conservation Innovation Grant; examined the impact of different soil amendments on biological uplift in soil and subsequent impacts on feed quality and soil chemistry, culminated in the report "Promoting Rotational Grazing in the Chesapeake Bay Watershed and Quantifying the Environmental and Economic Benefits".
- Formed and led a team to overhaul all agricultural content pages on the CBF website to update with the latest science and project information.
- Published economic analysis report on the financial benefits of agricultural best management practices in the Chesapeake Bay Watershed culminating in the "Clean Water and Climate Smart Investments Report".
- Used linear regression and predictive analysis to analyze pollution and habitat indicator data to write the 2020/2022 "State of the Bay" reports which inform the public and policy makers on the progress of the Bay cleanup.
- Modeled management scenarios and analyzed data from the Chesapeake Assessment Scenario Tool (CAST) to inform state and watershed-wide progress towards Chesapeake 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. culminating in the "Farm Forward Report", published in 2022.
- Utilized literature reviews and data analysis to co-draft Farm Bill priorities, federal comment letters, fact sheets, action alerts, media statements, and online content.
- Engaged with elected officials and USDA/NRCS staff to promote CBF's Farm Bill priorities and encourage updates to agricultural cost share programs (EQIP, CSP, RCPP, CREP) to aid farmers in implementing the most cost effective nutrient reducing practices.
- 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.
- Engaged students and stakeholders around the watershed about environmental conservation, regenerative agriculture, the Chesapeake Bay Watershed, and climate change through CBF's Bay Advocacy Institute, Clean Water Captains retreats, and general inquiry and interview requests.
- Presented at the 2024 Choose Clean Water Coalition Conference on atmospheric deposition of nitrogen in the Chesapeake Bay Watershed.
- Served on the internal Strategic Planning Team during the development of the CBF 2026 five year strategic plan.

**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 New York, Pennsylvania, and Maryland.
- Managed two year field study and conducted field sample collection and shipment every six weeks at six farms in PA and MD.
- Analyzed samples for total and volatile solids, nitrate, and phosphate, 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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**SKILLS:** R programming, Data Analysis, Geographical Information Systems (GIS), Technical Writing, Grant Writing, Grant Management, Project Management, Mentorship, Field sampling

## **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.