Meghan Betcher

Project Environmental Scientist

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Profile

Ms. Betcher is an environmental scientist who focuses on interdisciplinary solutions designed to protect the environment and inform citizens and policy. She offers expertise in a range of scientific subjects, project design, field sampling, geospatial analysis, data analysis and management, and presentation of complex scientific findings to academics, students, and community groups. Her work products are often utilized in litigation, policy recommendations, and citizen education.

Skills and Experience

Extensive experience in designing field sampling strategies, and collection and analysis of field-based data.

Created a variety of reports designed to educate and engage the public in policy related to natural resources protection.

Experienced in preparing source water protection plans—wrote management plans, including public outreach strategies, and completed surveys of potential contaminant sources for more than ten communities across West Virginia.

Performed geospatial modelling to inform policymaking and planning related to coastal zone management in Barbados.

Researched and analyzed coal mining and quarry permits and associated NPDES permits, water quality databases, and mining impacts.

Experienced in spatial data analysis presentation and map creation utilizing GIS and online applications.

Analyzed the role of microbial communities in environmental processes through molecular-based methods, including lignocellulose degradation, forest regeneration following wildfires, and grasslands impacted by invasive plant species.

Presented complex scientific data to academics, professionals, students, and community groups.

Conducted trainings on geospatial models for students, citizens, government officials, and NGO staff.

Provided testimony related to water quality sampling in Federal Court.

Education

M.S., Environmental Science and Engineering-Environmental and Biomolecular Systems focus, Institute of Environmental Health, Oregon Health & Science University, Portland, 2011.

B.A., Microbiology, Microbial Ecology focus, University of Montana, Missoula, 2004.

Relevant Publications

Altamia M, Shipway JR, Betcher M, Stein D, Fung J, Jospin G, Eisen J, Haygood M, Distel D. 2020. Teredinibacter waterburyi sp. nov., a marine, cellulolytic endosymbiotic bacterium isolated from the gills of the wood-boring mollusc Bankia setacea (Bivalvia: Teredinidae), and emended description of the genus Teredinibacter. *International Journal of Systematic and Evolutionary Microbiology.*

Betcher M, Glass M. 2019. Still Wasting Away: Oil and Gas Liquid Waste in West Virginia. Earthworks.

Hansen E, Clingerman J, Betcher M. 2018. Threats to Water Quality from Mountain Valley Pipeline and Atlantic Coast Pipeline Water Crossings in Virginia. Natural Resources Defense Council.

Hansen E, Clingerman J, Betcher M. 2018. Impacts of Mountain Valley Pipeline Stream Crossings within the Jurisdiction of the Virginia Marine Resources Commission. Natural Resources Defense Council.