



PFAST Network (Per- and Polyfluoroalkyl Substance Testing Network)

Meet Team 5a: Novel inputs of PFAS into the environment- landfill leachates

Morton Barlaz, Ph.D., project lead, is Professor and Head of the Department of Civil, Construction, and Environmental Engineering at NC State University. Dr. Barlaz's research focuses on issues related to solid waste including biological refuse decomposition, methane production, and the biodegradation of hazardous wastes in landfills. He also investigates alternative strategies for solid waste management using life cycle analysis to evaluate environmental emissions.

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Team Objective: Estimate the total quantity of PFAS present in leachate that is subsequently discharged to either Publicly Owned Treatment Works (POTWs) or to surface water after on-site treatment at municipal solid waste (MSW) landfills and landfills that receive construction and debris (C&D) waste. Specific aims include:

- Estimate the mass of PFASs that are discharged to POTWs by characterizing the PFAS fingerprint of MSW landfill leachates using non-targeted analysis
- Estimate the mass of PFASs entering POTWs in NC via municipal wastewater and assess the relative importance of MSW landfills as a source of PFASs to POTWs
- Estimate the release of PFASs to surface water downstream of POTWs using published information on attenuation during treatment
- Estimate the release of PFASs from landfills that receive C&D waste and document C&D landfill location