

Tamara Spikes, MS

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Objective

- Conduct mixed-methods research focused in the area(s) of Water, Sanitation and Hygiene and Exposure Science to assess cross-media environmental exposures and its impact on public health outcomes amongst African American and low socioeconomic communities.

Education

PH.D. STUDENT | ANTICIPATED COMPLETION: SPRING 2026 | ROLLINS SCHOOL OF PUBLIC HEALTH, EMORY UNIVERSITY

- Major: Environmental Health Science
- Research Areas: Water, Sanitation and Hygiene, Climate Change, Exposure Science, Environmental Justice Water Science
- GPA: 3.45

MASTERS OF SCIENCE DEGREE | COMPLETION DATE: MAY 10, 2019 | GEORGIA STATE UNIVERSITY

- Major: Geosciences
- Minor: Water Science
- GPA: 3.79

BACHELORS OF SCIENCE DEGREE | COMPLETION DATE: MAY 21, 2017 | SPELMAN COLLEGE

- Major: Environmental Science
- GPA: 3.49

Doctoral Training

PRE-CANDIDACY RESEARCH

Fall 2021: Increased Flood Waters, Combined Sewer Overflows, and the Continued Fight for Environmental Justice in Atlanta's Historic West End Communities

Rollins School of Public Health Emory University, Research Advisor: Dr. Matthew Freeman

- Collaborated with the HERCULES Exposome Research Center to discuss Community Based Participatory Research and provide feedback on existing mixed methods research study which analyzed West Atlanta's contaminated surface waters.
- Developed a research plan aimed at conducting enteropathogenic analysis on contaminated water samples collected from Proctor Creek and Utoy Creeks (West Atlanta).
- Collaborated with Dr. Na'Taki Osborne Jelks and Dr. Melanie Pearson to discuss innovative qualitative methods that can be applied in future mixed methods research.

Spring 2022: Extreme Temperature Trends and Its Impact on Schizophrenic Mental Health Outcomes

Rollins School of Public Health Emory University, Research Advisor: Dr. Stefanie Ebelt

- Conducted an extensive literature review on the association between pediatric schizophrenic outcomes and temperature.
- Performed a logistic regression analysis to analyze the exposure outcome relationship amongst pediatric patients living in Los Angeles, California.
- Developed time series plots to assess seasonality trends and its relation to adolescent schizophrenic outcomes.

Summer 2022: CBPR Methods, Capacity Building, and Addressing EJ/Climate Justice in Metropolitan Atlanta Communities

Rollins School of Public Health Emory University, Research Advisor: Dr. Christine Ekenga

- Completed data cleaning by conducting a thematic analysis of survey questions posed to community members during the execution of the following research project: “Extreme Weather Events and Health Impacts in Nigeria”.
- Assisted with the following research project: “Neighborhood Characteristics and Residential Hazards in Metro Atlanta” by conducting a literature review on existing redlining and Environmental Health research and analyze community complaints to establish common environmental justice themes amongst the data.
- Worked toward the publication of master’s thesis entitled “Diversifying Environmental Advocacy in Atlanta: A Case Study of Atlanta’s African American-Led Community-Based Groups Working Against Environmental Injustices”

Summer 2022: Playground Soil PFAS Concentration Disparities in DeKalb County, Georgia

Rollins School of Public Health Emory University, Research Advisor: Dr. Ryan Barry and Dr. Parinya Panuwet

- Conducted field sampling by collecting soil samples in DeKalb County playgrounds
- Conducted PFAS extraction and analysis on collected soil samples
- Target PFAS compounds, including PFOA, PFOS, PFHxS, PFNA, PFDA, MePFOSAA, and EtPFOSAA were measured in pre-extracted soil samples using on-line solid phase extraction coupled with liquid chromatography tandem mass spectrometry

RESEARCH TRAINING PROGRAMS

Morehouse School of Medicine, Atlanta, Georgia

- Summer 2022 Frontiers in Environmental Science and Health (FrESH) Program , Program Participant

TEACHING AND SERVICE

Rollins School of Public Health, Emory University, Atlanta, Georgia

- Spring 2022 EH 572-1- Environmental Justice, Teaching Assistant

SERVICE

Rollins School of Public Health, Emory University, Atlanta, Georgia

- Fall 2021- Spring 2022 IMSD Undergraduate Mentor, Emory University

Spelman College, Atlanta, Georgia

- Summer 2022 Spelman Pathways- Quality Enhancement Plan Team
 Spelman College + Braven Alumnae Mentoring Opportunity

Rollins School of Public Health, Emory University, Atlanta, Georgia

- Fall 2022- Spring 2023 2022-2023 PhDs-EHS Board, Outreach Coordinator Board Member

Professional Teaching Experience

ADJUNCT INSTRUCTOR| KENNESAW STATE UNIVERSITY | MAY 2020 – AUGUST 2021

DEPARTMENT OF GEOGRAPHY AND ANTHROPOLOGY

- Instruct General Education online courses in Physical Geography including Introduction to Landforms and Introduction to Weather and Climate
- Prepare online sessions and assignments in accordance to define course standards and outcomes set forth by the Department of Geography and Anthropology
- Assess grades for students based on participation, performance in class, assignments and examinations
- Report student learning outcomes, class reviews, and analyze student data based on academic performance

ADJUNCT INSTRUCTOR | GEORGIA STATE UNIVERSITY | AUGUST 2019 – MAY 2020

DEPARTMENT OF GEOSCIENCES

- Developed and instructed the course curriculum for the Introduction to Weather and Climate lecture course
- Prepared weekly lectures, in-class discussions, and assignments focused on subject content related to Physical Geography
- Assisted the Department of Geosciences in implementing effective science instruction using qualitative and quantitative research-based strategies
- Delivered training to Graduate Teaching Assistants (GTAs) in providing feedback to students to further improve instruction and delivery

Professional Environmental Health Experience

INDUSTRIAL HYGIENIST | NORTHSIDE HOSPITAL | AUGUST 2019-AUGUST 2021

DEPARTMENT OF INFECTION PREVENTION

- Served as the primary oversight/liason for construction, renovation, demolition, and general maintenance projects
- Reviewed and made recommendations for healthcare construction design and renovation
- Provided input on industry developments for improved hospital designs as it relates to indoor air quality and water quality initiatives
- Performed various environmental monitoring, which included air, water, and surface contamination, to identify potential exposure risks (e.g., particle count monitoring, microbial sampling, indoor air quality monitoring, and system wide water sample collection on potable and non-potable water sources)
- Developed and maintained monthly and quarterly environmental monitoring schedule for Northside Hospital legacy campuses
- Identified areas where there was a potential exposure to hazardous substances, and communicated findings via written and verbal reports
- Assessed and evaluated technologies aimed at microbial reduction of the environment
- Prepared/initiated proactive Infection Control Risk Assessments (ICRA), in conjunction with Infection Prevention and the facilities planning and construction teams.
- Conducted pre-construction and post-construction walkthroughs at inpatient and outpatient healthcare facilities
- Conducted weekly rounding and pressure monitoring on all healthcare construction projects, as well as attended construction meetings facilitated by the contractor
- Developed and maintained campus specific air handling unit (AHU) tracking document which includes information about the AHU location, AHU supply, size, quantity, and efficiency for pre-filters and final filters located within the hospital

Pre-Doctoral Scientific Research

- Louis Stokes Alliance for Minority Participation Research Program (2016-2017)
- University of California HBCU Initiative: Summer Research Internship Program (2016-2017)
- Howard Hughes Medical Institute Research Associates Program (2014-2015)

Awards and Recognitions

Scholarship Awards

- Georgia Local Section of the American Industrial Hygiene Association (AIHA) Local Section Scholarship Award (2022-2023)
- National Institutes of Health Initiative to Maximize Student Development (IMSD) Recruitment Award (2021-2023)

- Georgia State University Department of Geosciences Graduate Assistantship (2017-2019)
- Louis Stokes Alliance for Minority Participation (LSAMP) Scholars Award (2016-2017)
- Howard Hughes Medical Institute Research Associates Program Award (2014-2015)

Recognition

- 1st Place- 2016 WICERS Big Ideas and Smart Solutions Student Entrepreneur's Pitch Competition (2017)
- 1st Place- Spelman College Annual Research Day (2017)

Publications and Presentations

- Master's Thesis Defense, 2018-2019
Title: Diversifying Environmental Advocacy in Atlanta: A Case Study of Atlanta's African American-Led Community-Based Groups Working Against Environmental Injustices
- Poster Presentation, American Association of Geographers Conference, 2017-2018
Title: Diversifying Environmental Advocacy in Atlanta Watersheds
- Poster Presentation, Spelman College Annual Research Day, 2016-2017
Title: Analyzing Water Quality Discharge Points Along the Proctor Creek Watershed Basin
- Poster Presentation, Howard Hughes Medical Institute Research Associates Program, 2014-2015
Title: Food Nutritional Analysis: Density-Rich Quality of Nutrients in Locally-Sold Food Options

Relevant Professional Skills

- Software: Microsoft Office Suite, Geographic Information Systems (GIS), Statistical Analysis Programming (SAS), SharePoint Server

Affiliations and Memberships

- Air & Waste Management Association- **Local Member**
- Delta Sigma Theta Sorority, Incorporated- **National and Local Member**
- Georgia Local Section of the American Industrial Hygiene Association (GLS AIHA)- **Local Member**
- Georgia Environmental Professionals (GAEP)- **Local Member**
- National Alumnae Association of Spelman College (NAASC) Atlanta Chapter- **National and Local Member**