

GRACIE M. HORNSBY

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EDUCATION

North Carolina State University, Raleigh, North Carolina

3.94 GPA, *Goodnight Scholar*

Pursuing a B.S. in Civil Engineering, minor in Environmental Science

May, 2020

TECHNICAL EXPERIENCE

Undergraduate Research Assistant, Harris Lab

Spring, 2019

North Carolina State University

- Utilizing microbial source tracking as a tool to identify source-specific contamination in source and stored water samples to illuminate possible contamination pathways in rural Uganda in partnership with The Water Trust
- Applying three microbial source tracking assays to environmental water samples collected after Hurricane Florence to identify sources of fecal contamination and assess waste management practices of industrial agriculture operations
- Assisting with sample processing to enumerate *E. coli* in environmental soil samples from eastern North Carolina post-Hurricane Florence as part of a citizen science project aimed at increasing self-efficacy of locals after disasters
- Participating in a systematic literature review to collect the field of knowledge on multiple water source use in under-resourced settings and the developing world

WORK EXPERIENCE

Circle of Women for Social Action and Mutual Aid, Water and Sanitation Intern

Summer, 2018

Yaoundé and Elim, Cameroon

- Designed and constructed four gravity-fed spring boxes to protect spring sources from contamination via contact with surface water and living organisms in three rural villages
- Worked collaboratively with community members to organize construction logistics
- Facilitated discussions and workshops on basic sanitation practices such as handwashing, water storage, and pit latrine design

AECOM, Civil/Environmental Engineering Intern

Fall, 2017

Morrisville, North Carolina

- Supported engineers in the water resources group through back-checking autoCAD Civil 3D design sheets and completed preliminary submittals of project specs
- Researched and supplied additional data and documentation for a grant proposal to expand the NC network of stream and floodplain monitoring equipment

EXTRACURRICULARS & LEADERSHIP EXPERIENCE

Social Innovation Fellow

2017-Present

- Member of the inaugural class of fellows aiming to gain knowledge and skills in social innovation work relating to food and water security.
- Designed and created pictorial instructions for *Wine to Water* to mitigate implementation dilemmas with the Sawyer gravity-drip water filter.
- Senior Fellow for the Root Bioscience team seeking to mitigate biomass waste in the industrial hemp industry

Engineers Without Borders

2016-Present

- Data analysis committee member for the Guatemala Water Systems international team
- Analysis of water quality and rainfall data from assessment and implementation trips
- Member of December 2018 Implementation team

Goodnight Scholars Program

- Shack-a-thon Committee Co-Chair*: Shack Leader responsible for corporate sponsorship procurement, volunteer organization and communication, and meeting facilitation 2017-2019
- Ambassador*: responsible for community outreach to increase college access in North Carolina, new-student recruitment, and program facilitation 2018-Present
- Retreat Leader*: facilitated group activities for the first-year scholar retreat to aid in the transition to university life for entering freshmen 2017