

Heather Rose

Water and Food Sustainability

Profile

Heather Rose is a graduate student in Energy and Earth Resources at the University of Texas at Austin. She is a graduate research assistant in the Webber Energy Group. Her research focus is in energy for water treatment and sustainability. Her research projects include energy for recycling hydroponic wastewater, energy for off-grid treatment and delivery of harvested rainwater, and development of rooftop gardens. Heather is also the Chief Operations Officer of the Austin local nonprofit CleanTX. With CleanTX Heather partners with clean tech companies and thought leaders, coordinates and runs CleanTX events, manages member services and grant funding efforts. Heather is also a musician. She sings, plays guitar and plays out when she can in the local Austin music scene.

Employment

- University of Texas at Austin, Austin TX** Spring 2019
Teaching Assistant, Intro to Energy and Society
- Webber Energy Group, University of Texas at Austin** Sep. 2018 - present
Graduate Research Assistant
- Research Area Focus: Onsite water treatment for rainwater and hydroponic wastewater
 - Design and run hydroponic growing systems, and onsite water treatment systems
 - Water quality testing: Wetlab training in IC and TOC and ICP Analyzers
 - Relevant Courses: Water Resources Planning, Water and Wastewater Treatment, Fluid Dynamics, Physical Hydrology, Statistical Analysis
 - Experience working in Python and R for data analysis
- CleanTX, Austin TX** May 2017 - present
Chief Operations Officer, Interim Executive Director (Feb. - Apr. 2019)
- Responsible for running the non-profit organization
 - Supervise team members, lead communications with Board of Directors
 - Manage and abide by special budgets, maintain relationships with members, sponsors and partners
 - Content developer for website and social media, including video interviews
 - Event coordinator, including planning and running events for CleanTX
 - Lead grant applications and funding efforts
- Webber Energy Group, University of Texas at Austin** Jun. 2016 - Aug.2018
Undergraduate Research Assistant
- Built and designed a solar-powered rainwater drip irrigation system and rooftop garden for Green Roof on UT campus
 - Analyzing water usage data for modeling system size and energy requirements to treat and deliver harvested rainwater to a residence
 - Designing, building and running hydroponic systems
 - Designing and running an experiment for regrowing food waste hydroponically
- Applied Research Laboratories, Austin TX** Sep. 2014 - May 2018
- Webmaster for www.texasacoustics.org
 - Developed content, managed Wordpress, led website updates, and created research videos

heatherrose@utexas.edu

[LinkedIn](#)

[Website](#)

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Education

University of Texas at Austin , Austin TX Master's Program in Energy and Earth Resources, Jackson School of Geoscience	Sep. 2018 - May 2020
University of Texas at Austin , Austin TX Bachelor of Science in Physics	Graduated May 2018
Berklee College of Music , Boston MA Bachelors of Arts in Professional Music	Graduated May 2010

Water Sustainability Projects

Water Treatment for Hydroponic Systems , UT Austin <i>Project Designer and Lead</i>	Jun. 2018 - present
Rainwater Treatment and Delivery, Energy Requirements and Sizing Analysis , UT Austin <i>Project Co-Lead with Dr. Charlie Upshaw</i> -Research published in <i>Water</i> in August 2018, see Publications	Jun. 2017 - May 2018
ReGrow Project , UT Austin <i>Project Designer and Lead</i> for regrowing food scraps hydroponically	Sep. 2017 - Aug. 2018
Solar Water Energy and Thermal Lab Rooftop Garden , UT Austin <i>Designer and Co-Lead</i> for solar powered drip irrigation system and rooftop garden	Sep. 2016 - May 2018

For more info see [website](#).

Publications & Presentations

H.S. Rose, C.R. Upshaw, M.E. Webber, "Evaluating Energy and Cost Requirements for Different Configurations of Off-Grid Rainwater Harvesting Systems," *Water* 2018, 10(8), 1024 <https://doi.org/10.3390/w10081024>

American Society of Civil Engineers (ASCE) EWRI Congress, Minneapolis MN, Conference Presentation	June 2018
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American Society for Engineering Education Gulf-Southwest Section (ASEE-GSW) Annual Conference, Austin TX, Conference Presentation	April 2018
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Awards

Energy and Earth Resources Fellowship (2018), University of Texas at Austin Green Fee Grant (2017), Kent and Linda McCormack Scholarship in Physics (2017)

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