

# **Katy E. Mazer, P.E.**

(210) 315-0930 || katymazer@gmail.com

---

## **EDUCATION**

### **North Carolina State University, Raleigh, NC**

M.S. in Biological and Agricultural Engineering

*December 2018*

Thesis Title: Converting stormwater dry ponds to constructed wetlands for improved pollutant removal

B.S. in Biological and Agricultural Engineering, Environmental Concentration

*May 2013*

## **WORK EXPERIENCE**

### **Arequipa Nexus Institute, Purdue University Sustainable Water Manager** *2018-Present*

- Manages international team, including project planning, partner engagement, and spending
- Leads planning and execution of focus groups and surveys with Peruvian stakeholders
- Develops decision support tools on irrigation, crop management, and water quality
- Creates bilingual training materials, including factsheets and tutorial videos, for tool users

### **Purdue Hydrologic Impacts Group Drainage Water Recycling Project Manager** *2020-Present*

- Co-designs and builds drip irrigation system that uses agricultural drainage water
- Oversees field work, project budgets, and monitoring equipment installation and upkeep
- Supervises undergraduate field work and projects in water quality and hydrologic monitoring
- Co-authors grant proposals to continue research, including a successful USDA-NIFA proposal

### **Indiana Nutrient Reduction Science Assessment Research Associate** *September 2021-Present*

- Conducts literature reviews and data analysis of agricultural water quality in the Midwest
- Quantifies nutrient reduction in agricultural practices to project expected improvements
- Builds relationships with agencies, scientists, and non-profit groups to co-design products

### **NCSU Stormwater Engineering Team Graduate Research Assistant** *2016 – 2018*

- Managed and monitored 3 field sites, collecting water quality samples from storm events
- Designed and implemented changes to green infrastructure to improve water quality
- Adapted research results to inform crediting guidelines for state regulatory agency

### **Peace Corps Panama Water, Sanitation, and Hygiene Extension Specialist** *2014 – 2016*

- Designed and directed the overhaul of a 150-person aqueduct system to improve water access
- Trained 40 community leaders in water system management and strengthened government ties
- Organized and conducted seminars for 120 high schoolers on leadership and sex education

## **PROFESSIONAL ACTIVITIES**

Farmer to Farmer	Purdue University/USAID Volunteer	Summer 2022
Indiana Watershed Leadership Academy	Purdue University	Spring 2019
HEC-RAS for stream restoration workshop	NCSU BAE	May 2020
Natural channel design principles workshop	NCSU BAE	Fall 2018
Stormwater control measure design course	NCSU BAE	Spring 2017
San Antonio River Authority	Engineering Intern	2014
McKim & Creed	Engineering Intern	2012-2013

## **AWARDS AND SKILLS**

Best paper award – University Council on Water Resources (2021)

Advanced Intermediate fluency in Spanish

Proficient in GIS, AutoCAD Civil 3D, and HEC-RAS

## **SELECT PUBLICATIONS**

### ***Peer-reviewed journal articles***

- Mazer, K.E.**, A. Erwin, R. Popovici, E.F. Bocardo Delgado, L.C. Bowling, Z. Ma, L.S. Prokopy, and C.R. Zeballos-Velarde. 2020. Creating a Collaboration Framework to Evaluate International University-led Water Research Partnerships. *Journal of Contemporary Water Research and Education* 171: 9-26. <https://doi.org/10.1111/j.1936-704X.2020.3342.x>
- Mazer, K.E.**, A.A. Tomasek, F. Daneshvar, E.F. Bocardo Delgado, L.C. Bowling, J.R. Frankenberger, S.K. McMillan, H.M. Novoa, and C.R. Zeballos-Velarde. 2020. Integrated Hydrologic and Hydraulic Analysis of Torrential Flood Hazard in Arequipa, Peru. *Journal of Contemporary Water Research and Education* 171: 93-110. <https://doi.org/10.1111/j.1936-704X.2020.3347.x>
- Bowling, L.C., **K.E. Mazer**, E.F. Bocardo-Delgado, J.R. Frankenberger, J. Pinto, R. Popovici, and L.S. Prokopy. 2021. Addressing Water Resources and Environmental Quality Programming Needs in Arequipa, Peru. *Journal of Contemporary Water Research and Education* 173: 1-12. <https://doi.org/10.1111/j.1936-704X.2021.3354.x>
- Popovici, R., A.G.L. Moraes, Z. Ma, L. Zanotti, K.A. Cherkauer, A. Erwin, **K.E. Mazer**, E.F. Bocardo, L.C. Bowling, J. Pinto, P. Ranjan, and L. Prokopy. 2021. How do Indigenous and local knowledge systems respond to climate change? *Ecology and Society* 26(3): 27. <https://doi.org/10.5751/ES-12481-260327>

### ***Extension publications***

- Mazer, K.E.**, K. Bright, M. Casey, and L.C. Bowling. 2021. Management of water scarcity for agricultural use in Colca Valley (in English and Spanish). Factsheet from the Arequipa Nexus Institute.
- Mazer, K.E.**, K. Bright, E.J. Foster, and L.C. Bowling. 2021. The effects of salinity on crops in soil (in English and Spanish). Factsheet from the Arequipa Nexus Institute.
- Mazer, K.E.**, A.G.L. Moraes, K. Bright, R. Popovici, L.C. Bowling, and K.A. Cherkauer. 2021. Climate Change in communities in the Colca Valley, Peru (in English and Spanish). Factsheet from the Arequipa Nexus Institute.

## **CONFERENCE PRESENTATIONS**

- Mazer, K.E.**, L.C. Bowling, and A. Erwin. Building Resilience into International Water Resources Collaborations. Participatory session at the 2022 UCOWR/NIWR Annual Water Resources Conference, June 14-16, Greenville, SC.
- Mazer, K.E.**, J.R. Frankenberger, and L.C. Bowling. Using existing depressional storage for drainage water recycling. Poster presented at the 2022 ASABE Annual International Meeting, July 17-20, Houston, TX.
- Mazer, K.E.** and J.R. Frankenberger. Quantifying Conservation Practice Effectiveness Statewide: Balancing Variability with Usability. Oral presentation at the 2022 UCOWR/NIWR Annual Water Resources Conference, June 14-16, Greenville, SC.
- Mazer, K.E.**, A.A. Tomasek, F. Daneshvar, L.C. Bowling, J.R. Frankenberger, S.K. McMillan, H.M. Novoa, and C.R. Zeballos-Velarde. (2020). Supporting stakeholder decisions using hazard maps related to flash floods. Abstract presented at the 2020 Fall AGU Meeting, December 1-7, virtual conference.
- Mazer, K.E.**, S.E. Waickowski, and W.F. Hunt, III. Converting Dry Detention Basins to Constructed Stormwater Wetlands for Enhanced Pollutant Removal. Oral presentation at the 18<sup>th</sup> Annual Meeting of the American Ecological Engineering Society, June 11-14, Houston, TX.
- Mazer, K.E.**, S.E. Waickowski, and W.F. Hunt, III. Converting Dry Detention Basins to constructed Stormwater Wetland for Enhance Pollutant Removal. Oral presentation at the 2018 EWRI Congress, June 3-7, 2018, Minneapolis, MN.
- Bowling, L.C., **K.E. Mazer**, S. Casteel, K.A. Cherkauer, and D. Quinn. Less is More: Eco-Intensification using Recycled Drainage Water for Fertigation. Oral presentation at the 2022 UCOWR/NIWR Annual Water Resources Conference, June 14-16, Greenville, SC.