

# REBECCA ERIN STANLEY

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## PUBLICATIONS

Stanley, R. E., Bilskie, M. V, Woodson, C. B., & Byers, J. E. (2023). *A Model for Understanding the Effects of Flow Conditions on Oyster Reef Development and Impacts to Wave Attenuation*. *Ecological Modelling*, 489 (September 2023), 110627.  
<https://doi.org/10.1016/j.ecolmodel.2024.110627>

## EDUCATION

**Doctor of Philosophy | Engineering – Resilient Infrastructure Systems Emphasis**  
*University of Georgia | Expected Graduation - December 2026 | GPA: 3.90*

**Master of Science | Civil & Environmental Engineering – Sustainable Coastal Engineering Emphasis**  
*University of Georgia | December 2022 | GPA: 3.77*

**Bachelor of Science | Environmental Engineering**  
*University of Georgia | May 2021 | GPA: 3.44*

## AWARDS & CERTIFICATIONS

**Excellence in Graduate Student Teaching Award** | University of Georgia | 2024  
Awarded annually to one graduate student within the College of Engineering for outstanding performance and dedication in graduate student teaching roles

**FAA Part 107 Drone Pilot License** | Issued January 19, 2024

**Georgia EIT License** | EIT028804 | Issued June 15, 2021

**Emerging Engineering Leaders Development Certification** | May 2021

## RESEARCH EXPERIENCE

**Graduate Teaching and Research Assistant**  
*University of Georgia | Athens, Georgia*

**January 2022 – Present**

- ♦ Conducting research towards Ph.D. dissertation with funding by the National Oceanic and Atmospheric Administration
- ♦ Utilizing high-performance computing to model salt marsh platform elevation response to sea level rise by advancing integration of hydrodynamic model ADCIRC and Marsh Equilibrium Model

- ♦ Developing unstructured, finite element mesh of South Atlantic Bight to be used in numerical computations
- ♦ Deployed and processed pressure data from RBR sensors throughout salt marsh at Skidaway Island, Georgia to capture tidal patterns at various marsh elevations to be used in model validation

**Graduate Research Assistant**

**June 2021 – December 2022**

*University of Georgia | Athens, Georgia*

- ♦ Conducted research towards master's thesis with funding by the U.S. Army Corps of Engineers Network for Engineering with Nature Initiative
- ♦ Developed model of oyster reef growth in response to spatially varied hydrodynamic conditions by linking harmonic analysis conducted via ADCIRC with biophysical oyster reef numerical model

**Undergraduate Research Assistant**

**January 2021 – May 2021**

*University of Georgia | Athens, Georgia*

- ♦ Conducted analysis of water samples from the Sewanee watershed to detect efficacy of contaminant removal via phytoremediation through conducting solid phase extraction and mass-spectroscopy analysis

**Undergraduate Research Assistant**

**August 2019 – March 2020**

*University of Georgia | Athens, Georgia*

- ♦ Studied relationships between abiotic factors and fluid flow patterns in the Baja California beach through data analysis conducted in MATLAB

## TEACHING EXPERIENCE

**Guest Lecturer for Hydrology and Hydraulics Course**

**January 2024**

*University of Georgia | Athens, Georgia*

- ♦ Delivered content on SCS unit hydrographs using prepared lecture materials to a class of undergraduate engineering students

**Laboratory Instructor**

**January 2023 – December 2023**

*University of Georgia | Athens, Georgia*

- ♦ Instructed the laboratory section of an undergraduate course *Natural Resources Engineering* as a Graduate Teaching and Research Assistant
- ♦ Created laboratory activities relevant to the course content learned in the associated lecture section, including topics related to water resources, hydrological processes, and basic water infrastructure design
- ♦ Periodically instructed the lecture course section
- ♦ Assisted in creating lecture and exam material
- ♦ Organized and led voluntary study and exam review sessions

## Teaching Assistant

August 2019 – December 2019

University of Georgia | Athens, Georgia

- ♦ Attended lectures in a ‘flipped classroom’ setting to assist students with in-class exercises
- ♦ Held weekly office hours for one-on-one tutoring
- ♦ Led voluntary exam review sessions

## CONFERENCE PRESENTATIONS

2026. “A Model for Predicting Salt Marsh Resilience and Vulnerability under Sea Level Rise along the South Atlantic Bight”, *Ocean Sciences*, Glasgow, Scotland. 26 February.
2025. “Optimal Model Resolution for Accurate Hydrodynamic and Marsh Biomass Predictions under Sea Level Rise”, *28th Biennial Coastal & Estuarine Research Federation (CERF) Conference*, Richmond, VA. 11 November.
2025. “Developing Hydrodynamic Models to Assess Salt Marsh Vulnerability to Sea Level Rise in the South Atlantic Bight,” *American Ecological Engineering Society*, Athens, GA. 29 May.
2024. “Developing Hydrodynamic Models to Assess Salt Marsh Vulnerability to Sea Level Rise in the South Atlantic Bight,” *American Geophysical Union (AGU) Fall Meeting 2024*, Washington D.C. 13 December.
2023. “Modeling Oyster Reef and Salt Marsh Resilience in Response to Spatially Varied Hydrodynamic Conditions,” *27th Biennial Coastal & Estuarine Research Federation (CERF) Conference*, Portland, OR. 13 November.
2023. “Modeling Oyster Reef and Salt Marsh Resilience as a Form of Nature-based Infrastructure in Response to Spatially Varied Hydrodynamic Conditions,” *3rd International Workshop on Waves, Storm Surges and Coastal Hazards*, South Bend, IN. 6 October.
2023. “Modeling Oyster Reef and Salt Marsh Resilience as a Form of Nature-based Infrastructure in Response to Spatially Varied Hydrodynamic Conditions,” *ADCIRC Users Group Meeting 2023*, Baton Rouge, LA. 8 June.
2022. “Modeling Oyster Reef Resilience as a Form of Nature-based Infrastructure in Response to Local Hydrodynamic Conditions,” *American Geophysical Union (AGU) Fall Meeting 2022*, Chicago, IL. 13 December.

## PROFESSIONAL EXPERIENCE

### Client Services Associate

February 2021 – June 2021

Rubicon Global | Remote

- ♦ Processed service requests of sustainable waste management for major national retailers
- ♦ Created a streamlined and efficient waste removal process with 95% of removals scheduled the following business day by optimizing efficient communication and coordination with contracted waste haulers and clients

### **Environmental Engineering Intern**

**June 2020 – August 2020**

*Freese and Nichols | Atlanta, Georgia*

- ♦ Drafted proposals for municipal Request for Qualifications
- ♦ Researched previous permits and rehabilitations for Florida water departments to be referenced in proposal drafts
- ♦ Drafted technical emergency response plans for boil-advisories and water contamination
- ♦ Managed infrastructure project timelines

## **LEADERSHIP EXPERIENCE**

### **Mentor**

**October 2021 – July 2022**

*Clean Water Science Network*

- ♦ Mentored Latin American students in pursuing graduate studies or careers related to water

### **Vice President**

**January 2021 – December 2021**

*Society of Environmental Engineers | University of Georgia | Athens, Georgia*

- ♦ Served as second in command for club
- ♦ Led organization and facilitation of club events and excursions
- ♦ Represented the environmental engineering program during ABET accreditation auditing and provided information on professional and extracurricular resources and quality of education provided to students

### **Treasurer**

**January 2020 – December 2020**

*Society of Environmental Engineers | University of Georgia | Athens, Georgia*

- ♦ Created club budget and ensured funds were delegated in accordance with College of Engineering student organization policies
- ♦ Managed all transactions
- ♦ Facilitated reimbursement process within strict deadlines
- ♦ Financed excursions for over fifty club members while staying under allotted budget

## **SKILLS**

ADCIRC | ArcGIS | AutoCAD | Bluebeam Revu | Delft3D | Flow-3D Hydro  
Flow-3D Post | HEC-HMS | HEC-RAS | Linux | MATLAB | Microsoft Office  
Python | R Studio | SMS | STWAVE