# Water Quality Program

**Katy Smith**

*Water Resources Specialist*

Marine Extension and Georgia Sea Grant
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Sea Grant

# EMPHASIS AREAS


- **Water Quality**
- **Wetlands Education**
- **Marine Debris / Microplastics**
- **Contaminants of Concern**

# WATER SHAPES OUR PLANET AND OUR LIVES


SECOORA
SOUTHEAST COASTAL OCEAN OBSERVING REGIONAL ASSOCIATION

# WETLANDS EDUCATION & OUTREACH

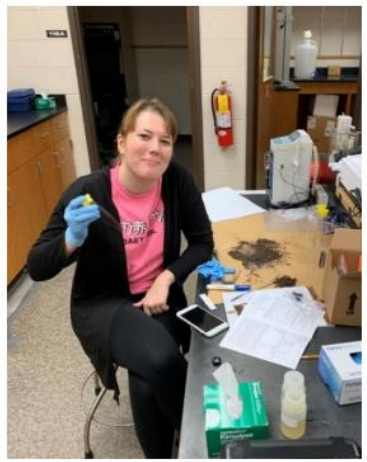
GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

## Water Level / Chemistry Surveys




## Soil Moisture / Texture Surveys



## Wetland Walks

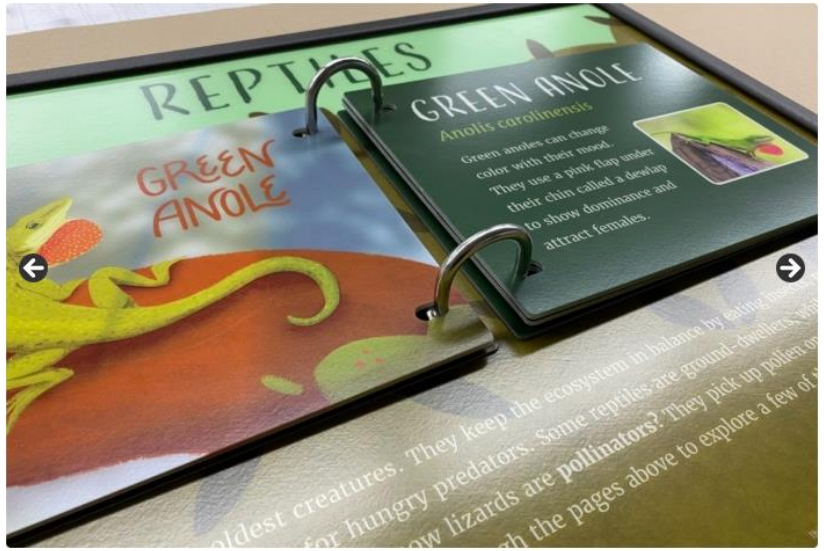



# WETLANDS EDUCATION

## Freshwater Wetland Investigations

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION






# Virtual Exploration of Georgia's Coastal Wetlands

SECOORA
SOUTHEAST
COASTAL OCEAN OBSERVING
REGIONAL ASSOCIATION

## Coastal Schools

"We [my classroom] have been able to dive into our "back-yard" and make the connection using cutting edge technology, an immediate win for both the students and teachers involved. I look forward to harnessing this curriculum for years to come!" **— Alexia Branch, Georgia Educator, Glynn County**

## Inland Schools

"Students were submerged and engaged in their exploration. It was nice to see them taking on various roles including data collection, collaboration and supporting each other by telling each other what to expect." **— Dr. Christina Hylton, Georgia educator, Athens-Clarke County**

## Salt Marsh Ecology

This lesson introduces students to the biology and ecology of the salt marsh. Students will learn to identify some of the plants and animals found in the salt marsh, what a keystone species is, and how wetlands support biodiversity.

- Salt Marsh Ecology Narrated PowerPoint Presentation
- Sketch a Wetland Model
- Sketch a Wetland Model Discussion Questions (Student Version)
- Salt Marsh Ecology Worksheet (Student Version)

## Understanding Data Collection and Coastal Monitoring

This lesson introduces students to the concepts of resilience, ecosystem services and what it means to be a resilient coastal community. This lesson prepares students to have a stronger understanding of scientific monitoring and how data can be used to measure long-term coastal change.

- Understanding Data Collection and Coastal Monitoring Narrated PowerPoint Presentation
- Data Collection Practice Activity
- Virtual Site Activity Sheet (Student Version)
- Wrap Up Activity Open Ended Questions (Student Version)
- [Optional] End of Activity Report (Student Version)

# MARINE DEBRIS EDUCATION & OUTREACH

PLANET STEWARDS

MARINE DEBRIS IS NOT FOR ME!

GLYNN MIDDLE SCHOOL
ECO-CLUB
2023 - 2024

# CONTAMINANTS OF EMERGING CONCERN

Sea Grant
S.C. SEA GRANT CONSORTIUM

## Supported Research Projects

**Till J.J. Hanebuth, Ph.D., Professor, Coastal Carolina University**

Proposal Name: *Rising water tables and increasing river flooding changing the transport pattern and fate of PFAS in the lower Winyah watershed (WinyahFlu)*

**Leslie Hart, Ph.D., Associate Professor, College of Charleston**

Proposal Name: *Climate factor influences, spatiotemporal variability, and bottlenose dolphin health related to phthalate exposure measured over 30 years in Sarasota Bay, Florida (1993-2023)*

**Ching-Hua Huang, Ph.D., Turnipseed Family Chair and Professor, Georgia Institute of Technology**

Proposal Name: *Impact of Drinking Water Treatment on the Fate of Per- and Polyfluorinated Alkyl Substances (PFAS) and Precursors in Wastewater Reuse Application*

**Xiaoyu Xu, Ph.D., Assistant Research Scientist, University of Georgia**

Proposal Name: *Develop a Community-Based Participatory Approach to Evaluate the Dietary Exposure of Per- and Polyfluoroalkyl Substances (PFAS) in an Underrepresented Community*

## Contaminants of Emerging Concern

These include but are not limited to: perfluoroalkyl and polyfluoroalkyl substances (PFAS) and other persistent organic pollutants (POPs), pharmaceuticals and personal care products (PPCPs), and nanomaterials. CECs are being detected at increasing levels in the environment, and are receiving attention as their total toxicity to humans and wildlife is not fully understood.

## Project Team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