

INSTITUTE FOR WATER AND HEALTH

RESEARCH PORTFOLIO

ABOUT US

The Institute for Water and Health brings research to action for a collective vision of safe water, a sustainable environment, and resilient communities and economies. IWH conducts cutting-edge research, applies innovative technologies, and engages diverse stakeholders to address critical needs for our most precious resource regionally and globally. Through partnerships with universities, industry, municipalities, and nonprofits, IWH supports sustainable growth in Georgia and beyond.

FUNDED GRANTS

SAFE WATER TOGETHER

Funding Agency: US Congress and National Oceanic and Atmospheric Administration



March 2025-February 2029

Safe Water Together (SWT) is a research and community education initiative designed to support the long-term sustainability of water resources across Coastal Georgia. In response to growing pressures from sea-level rise, economic growth, and aging water infrastructure, this program equips communities and decision-makers with real-time water quality data, source tracking tools, and regional monitoring networks. By integrating nature-based solutions and advanced monitoring technologies, SWT promotes cost-effective strategies to protect drinking water, reduce infrastructure burdens, and support continued economic development in sectors such as tourism, agriculture, and the ports. It aims to enhance regional workforce development through student training and applied research that aligns with Georgia's economic and environmental priorities.

CHARACTERIZATION OF BLACKWATER SYSTEMS IN GEORGIA

Funding Agency: Georgia Department of Natural Resources



April 2025-March 2027

This project focuses on understanding and protecting blackwater systems (BWS) in Georgia. The project aims to define scientifically defensible water quality criteria, especially for pH and dissolved oxygen (DO) to better reflect natural conditions and protect aquatic life. Key activities include compiling and analyzing existing water quality and biological data, conducting GIS-based watershed characterizations, performing targeted field sampling to address data gaps, and applying advanced statistical and machine learning techniques to understand ecological processes. The outcomes will inform new, protective standards for BWS ecosystems, ensuring regulatory alignment and improved non-point source pollution management across the state.

DEVELOPING PATHWAYS FOR NEXT GENERATION WATER STEWARDS IN MARION, AL

Funding Agency: Alabama Power & Partnership for Inclusive Innovation



Sept. 2024-August 2025

Nationwide, community water systems are managed by specialized professionals to ensure safe water every time we turn on the tap. However, about 50% of water operators working at these utilities will retire in the next decade, and only 10% are expected to be replaced. Training the next generation of water operators and developing leaders for rural water systems is a matter of national security. The IWH is committed to launching a regional program to equip future water managers with the necessary skills to ensure safe water. This pilot project will lay the foundation for this goal and aims to expand the program throughout the Southeastern United States.

\$6.4M

GRANT FUNDING

9

**RESEARCH
GRANTS**

31

**AFFILIATED
FACULTY**

65

**PARTNERING
ORGANIZATIONS**

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RAMP: MENTORING AND RESEARCH OPPORTUNITIES FOR CAREERS IN COASTAL SCIENCE



Funding Agency: National Science Foundation

August 2023-July 2027

The MROC2S program led by Dr. Colón-Gaud brings together a network of scientists, educators, and experts from various sectors to support participants from groups traditionally underrepresented in Science, Technology, Engineering, and Math. In addition, it trains individuals with limited research experience in a cohort setting to develop the next generation of natural resource professionals. The goal is to provide year-round mentoring, professional development, and multiple research training opportunities in natural resource science for postbaccalaureate participants. The IWH team in this project as a co-principal investigator, provides network partners contribute to a common scientific theme that centers on the restoration, conservation, and management of natural resources in the Atlantic Coastal Plain and Gulf Coast.

DEVELOPING SUSTAINABLE PRACTICES FOR CO-DIGESTION OF FOOD WASTE AND PAPER MILL SLUDGE LEVERAGING EXISTING ANAEROBIC DIGESTION INFRASTRUCTURE



Funding Agency: United States Environmental Protection Agency

August 2022-July 2024

This project is a feasibility study to advance the understanding of how existing anaerobic digestion (AD) capacity at pulp and paper mills can be sustainably leveraged to treat food waste from university campuses. In anaerobic digestion, microbes break down (digest) organic matter in waste from animals, food, and wastewater without oxygen. This occurs in a small, sealed container called a reactor, specifically designed for the type of waste used. The complex microbe community that lives in the reactor digests industrial waste and creates biogas that can be used for energy. Led by IWH affiliate Dr. Rowles at the College of Engineering, this project aims to reduce food waste going into landfills by feeding ADs with the food waste created at university campuses. IWH team provides laboratory and environmental microbiology expertise in this project to advance the AD systems. These advanced ADs will improve industrial wastewater treatment capacity, protecting our water environment.

SUWANNEE WATERSHED ASSESSMENT AND MONITORING PROJECT TO GAIN UNDERSTANDING OF LOCAL FLOW (SWAMP 2 GULF)

NATIONAL ACADEMIES Sciences
Engineering
Medicine

Funding Agency: National Academies of Sciences, Engineering, and Medicine

August 2023-January 2026

Led by IWH affiliate Dr. Lacey Huffling from the College of Education, the SWAMP 2 GULF is an immersive experiential professional development (PD) for Florida middle school science teachers to monitor local watershed conditions and examine the health and resilience of local ecosystems along the Gulf through place-based research service learning. Teachers use integrated place-based citizen science projects and create inquiry-based lessons to increase students' understanding of local watersheds in the Gulf region to support Gulf Research Programming. IWH staff provides support for community engaged research activity development and implementation in this program.

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PROJECT WELL-AWARE

Funding Agency: Evans County CARES Foundation



August 2022-July 2026

The IWH is partnering with residents in Evans and Tattnall Counties to address a critical public health concern: cancer-causing contaminants in private drinking water wells. This research project evaluates how increasing awareness of water quality impacts can drive cancer screening as a proactive health measure. The project seeks to empower residents to make informed decisions about their health and well-being by educating communities on the significance of water test results and providing actionable resources for cancer prevention.

GEORGIA SMART COMMUNITIES: SAFE WATER TOGETHER AT GLYNN COUNTY

Funding Agency: Partnership for Inclusive Innovation



August 2023-December 2024

Glynn County, located on Georgia's southeastern coastline, includes the beach communities of Jekyll Island, St. Simons Island, and Sea Island, with the county seat in the City of Brunswick. This area is home to four Superfund sites. During the COVID-19 pandemic, County Commissioner Allen Booker approached the IWH with a concern: he had observed an increase in subsistence fishing in Terry Creek, a waterway known for its high levels of pollution. Despite posted fishing advisories and ongoing monitoring by the EPA many residents continued to fish in the area. In response, IWH partnered with the local nonprofit organization Rebuilding Glynn County to establish a community based research and educational program. Twelve local pastors underwent extensive training in water quality testing and became certified through Georgia's Adopt-A-Stream Volunteer Program. IWH staff oversaw establishing a new water quality laboratory owned by the community. Today, these community researchers continue to collaborate with the IWH on new projects, maintaining a strong and lasting partnership.

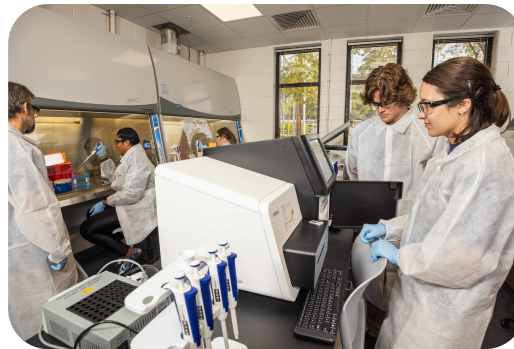
A PILOT WEB-BASED WATER DASHBOARD FOR COASTAL GEORGIA REGIONAL WATER PLANNING



Funding Agency: Georgia Environmental Protection Division

January 2020-September 2023

This interactive water resource data tool, presents a snapshot of historical and current hydrologic conditions including groundwater levels in Coastal Georgia. The dashboard developed by IWH staff and Environmental Protection Division and the Coastal Regional Water Planning Council contributed expertise and advised on the design of the dashboard. Our diverse set of stakeholders prioritized ease of use, agile data selection, and clear communication by targeting a regional approach and screening groundwater and surface water availability. IWH is currently in the process of evaluating the effectiveness of historical water policies, and assessing the potential challenges for broader-scale implementation.



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