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# THE GEORGIA SEA GRANT COLLEGE PROGRAM

Impacts & Accomplishments



Public Service & Outreach  
**THE UNIVERSITY OF GEORGIA**



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## FROM THE DIRECTOR

As the National Sea Grant College Program celebrates its 50th anniversary this year, it is important to take stock in what has been accomplished with this long-term partnership between the National Oceanic and Atmospheric Administration and the various states bordering significant water bodies around the country. Throughout the nation, these partnerships have yielded significant advances in knowledge, products and services that have helped coastal communities and constituents.

The Georgia Sea Grant College program is no exception. Through its partnerships with researchers at the University of Georgia and all other higher education institutions in Georgia, its engagement with coastal stakeholders and its emphasis on extension and education, Georgia Sea Grant has had profound impacts on the economic and ecological well-being of our coastal communities. This report highlights some of these impacts.

From transforming Georgia's shrimping industry with the use of Turtle Exclusion Devices that reduce by-catch to working with local governments in coastal communities to respond to sea level rise and nuisance flooding, Georgia Sea Grant has continued to make a difference. We have trained seafood business employees in proper seafood handling and storage and protected consumers in the process. We are educating youth and preparing a responsible and skilled workforce while also engaging new scholars and seasoned researchers to help coastal leaders and managers solve critical issues.



Perhaps most importantly, we engage with our constituents. We work with them to identify the critical issues, investigate whether existing resources or solutions exist within our higher education or national networks, and, sponsor research to develop new solutions. In the 36 years since its inception, the Georgia Sea Grant College Program continues to make a difference in the lives of Georgians by serving the state of Georgia and the Nation.

### FOR MORE INFORMATION

Contact **Dr. Mark Risse**  
Director, UGA Marine Extension  
and Georgia Sea Grant  
at [mrisse@uga.edu](mailto:mrisse@uga.edu)  
706-542-5956

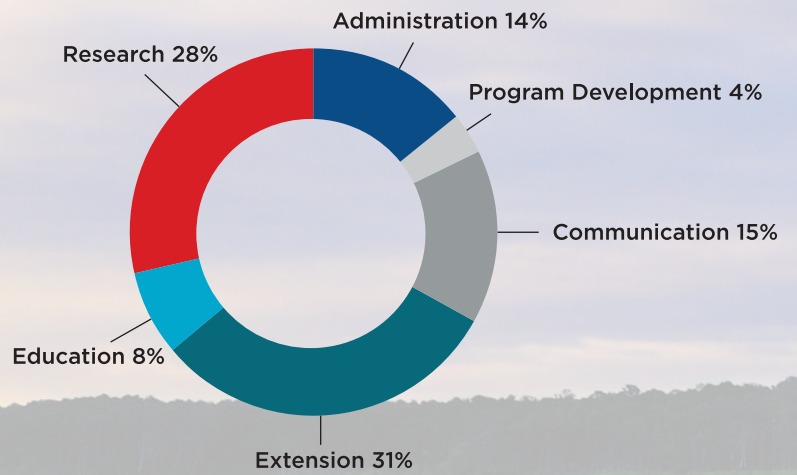
Or **Dr. Mona Behl**  
Associate Director,  
Georgia Sea Grant  
at [mbehl@uga.edu](mailto:mbehl@uga.edu)  
706-542-6621

## THE GEORGIA SEA GRANT COLLEGE PROGRAM

The Georgia Sea Grant College Program is a unique partnership that unites the resources of the federal government, the state of Georgia and universities across the state to create knowledge, tools, products and services that benefit the economy, the environment and the citizens of Georgia. It is administered through the National Oceanic and Atmospheric Administration (NOAA) and is one of 33 university-based Sea Grant Programs around the country.

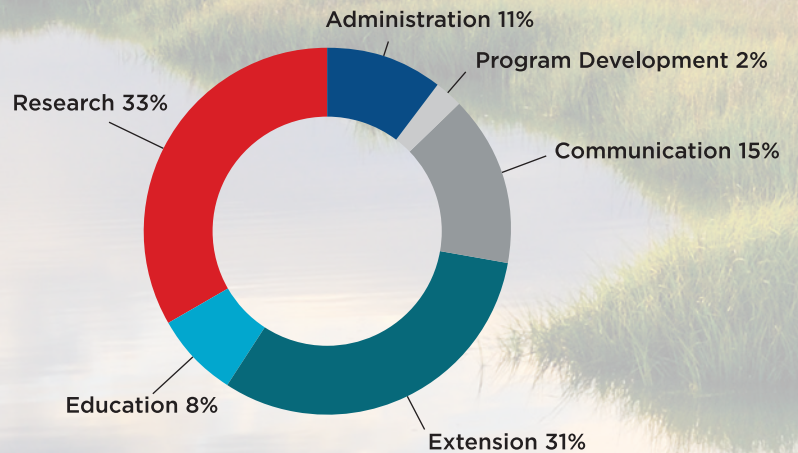
Sea Grant activities began in Georgia as early as 1971 focused on salt marsh ecology and under the leadership of Edward Chin. Due to demonstrated excellence in research, education and extension services, the Department of Commerce, under section 207 of the National Sea Grant Program Act, designated the University of Georgia as the nation's 15th "Sea Grant College Program" in 1980. Today, Georgia Sea Grant, along with its education and outreach partner, the University of Georgia Marine Extension, works to improve public resource policy, encourage far-sighted economic and fisheries decisions, anticipate vulnerabilities to change and educate citizens to be wise stewards of the coastal environment.

### Funding Distribution 2014-16

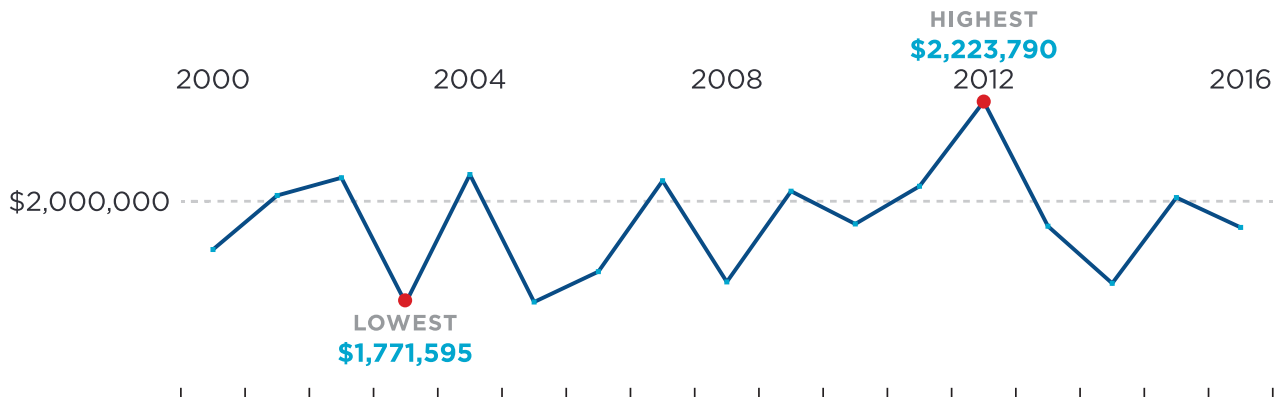


Total Funding: **\$2,491,012**

### Funding Distribution 2016-18



Total Funding: **\$2,466,186**



# HISTORY *of* FUNDING

2000 - 2016



**\$112.6 million**

in **economic impact**  
each year from  
education & outreach

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## ECONOMIC DEVELOPMENT

The Georgia Sea Grant College Program boosts annual economic impact on the state by fueling discoveries through research, training students and developing workforce through education programs, and engaging with stakeholders through marine extension program. For every two Sea Grant dollars invested in research, the state of Georgia or local sources provide a dollar in matching funds. Service to the state of Georgia is an integral part of Georgia Sea Grant's mission. Investments in education and outreach programs generate nearly \$112.6 million in economic impact each year.



Additional Leveraged Funding  
2009-2015:

**\$1,189,478**







## THE TYBEE ISLAND SEA LEVEL RISE ADAPTATION PLAN

enabling **SAVINGS** of  
**\$3 MILLION** in flood control benefits

*This includes a **discount of \$725,639**  
in flood insurance for property owners on the island.*

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## HIGHLIGHTED PROGRAMS

### TYBEE ISLAND SEA LEVEL RISE ADAPTATION PLAN

Georgia Sea Grant is working with the City of Tybee Island to develop one of the first sea level rise plans in Georgia. The low-lying barrier island has already experienced approximately 10 inches of sea-level rise since 1935, and this trend is expected to accelerate in the future. Recipient of Sea Grant's 2014 National Superior Outreach Programming Award, the project pairs local knowledge with academic expertise, analyzing how the island's roads, water supply systems and stormwater drainage might be affected by sea-level rise over the next 50 years. A model for other communities, this initial effort has grown to include cities and counties throughout the United States' Southeast coast.

### UGA OYSTER HATCHERY

Due to too much spat in the water and not enough substrate, Georgia oysters typically grow in clumps, resulting in low-value products for market. Georgia Sea Grant and UGA Marine Extension are helping the state establish a competitive aquaculture industry by creating Georgia's first oyster seed hatchery. Located on Skidaway Island, the UGA Oyster Hatchery is expected to produce between 5 million and 6 million spat, or baby oysters, per year by 2018.



The **UGA Oyster Hatchery** is expected to produce

*oysters worth an estimated*

**\$1.6 million**

when harvested by 2018.

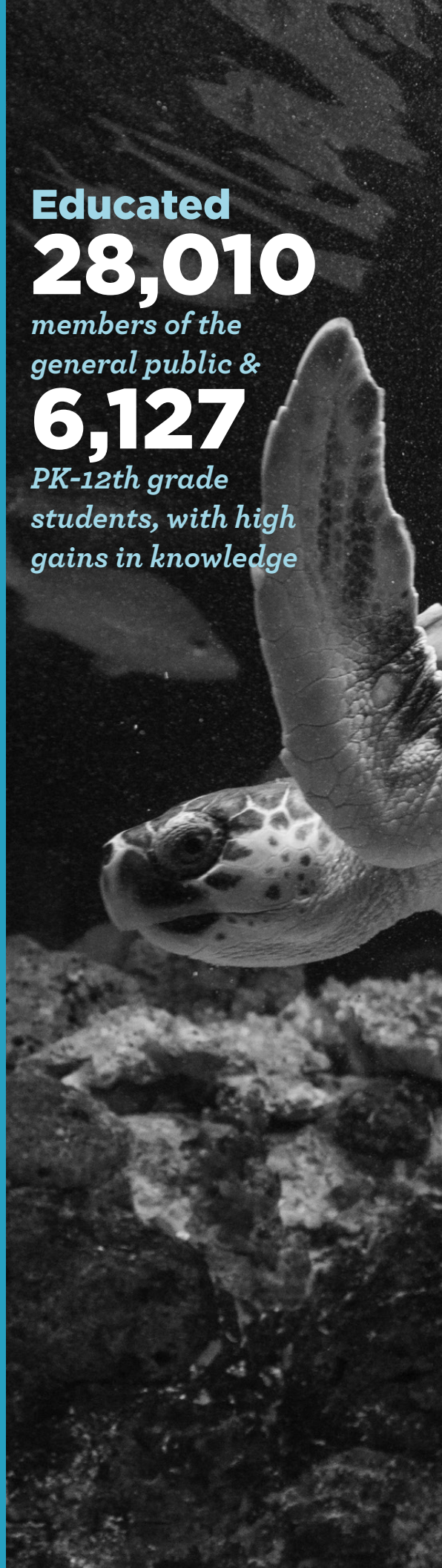
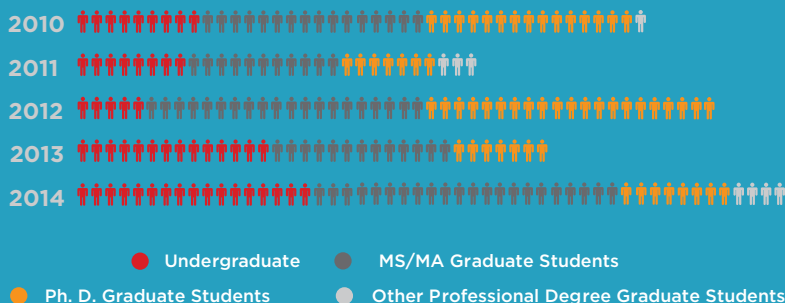


**Educated**  
**28,010**  
*members of the  
 general public &*  
**6,127**  
*PK-12th grade  
 students, with high  
 gains in knowledge*

## EDUCATION

Georgia Sea Grant advances environmental literacy and workforce development by nurturing the next cadre of young investigators in research, scholarship and creative learning activities in marine related fields. The Marine Education Center and Aquarium in Savannah leads educational programming in marine sciences and provides marine environmental training to K-12, collegiate and adult groups. Georgia Sea Grant Marine Education Interns teach year-round at the Center, engaging students in “real-world experiences” by engaging them in Georgia’s unique coastal environment through field trips, summer camps, workshops, public programs and more.

## STUDENTS SUPPORTED by Georgia Sea Grant







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## INTERNSHIPS & FELLOWSHIPS

*Georgia Sea Grant administers a number of fellowships and internships to students and recent graduates. Through federal and state partnerships, these opportunities provide real-world experience, learning opportunities, accelerate career development and increase available expertise related to these fields.*

### **DEAN JOHN A. KNAUSS MARINE POLICY FELLOWSHIP**

The prestigious Dean John A. Knauss Marine Policy Fellowship places highly-qualified graduate students from the nation's 33 regional Sea Grant offices in positions with federal government host offices in Washington D.C. that establish and implement national policies related to marine, coastal and Great Lakes resources.

### **GEORGIA SEA GRANT MARINE EDUCATION INTERNSHIP**

The Georgia Sea Grant Marine Education internships, maintained through a partnership with UGA Marine Extension, are designed for recent college graduates who would like teaching experience in marine science and coastal ecology. Interns work alongside scientists and educators at the UGA Marine Education Center and Aquarium on Skidaway Island to assist in educating the public about marine science.

### **GEORGIA SEA GRANT LEGAL PROGRAM**

The Georgia Sea Grant Legal Program engages selected law students in law and policy research. Students gain practical experience in collaborating with local policymakers, scientists and business communities and in performing expert analyses to inform decision-making.



## RESEARCH

Georgia Sea Grant is built on the fundamental idea that a prosperous Georgia coast requires the full spectrum of basic, problem-oriented, and applied research. The program makes strategic investments in interdisciplinary marine research outside the traditional academic fields of biological, physical and chemical oceanography, and geology and geophysics. These fields include (but are not limited to) engineering, fisheries, marine technology, economics, sociology, planning, law international affairs, and public administration. By serving as a sustained contact and source of federal funds between federal agencies with ocean responsibilities and universities in Georgia with marine research capabilities, Georgia Sea Grant orchestrates the right mix of skills and knowledge to develop the marine economy.



# 201

*undergraduate & graduate students*  
**supported through**  
**Sea Grant funded**  
**research over 5 years**





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## HIGHLIGHTED PROGRAMS



### **BLACK GILL PARASITE IN SHRIMP**

In the Southeast United States, an unidentified parasite is infecting shrimp and presenting new challenges for an already struggling industry. Georgia Sea Grant-funded research is investigating the resulting condition, known as Black Gill, to better understand this newest threat to the state's most valuable commercial fishery. Researchers, shrimpers, extension agents and fishery managers are working collaboratively to gather baseline data on where, when, and how frequently Black Gill is occurring, as well as partnering to determine its epidemiology, dispersal and possible intervention strategies.



### **CITY OF ST. MARYS IMPROVES FLOOD RESILIENCE**

The City of St. Mary's City is partnering with Georgia Sea Grant to improve its resiliency to flooding. Using results from research conducted by Georgia Sea Grant, the City has changed its requirements for new construction, adopting a base flood elevation of two-feet, which is twelve-inches higher than required by FEMA. Georgia Sea Grant also assisted St. Marys in joining FEMA's Community Rating System, earning property owners a 15 percent discount on flood insurance and saving residents a total of \$87,740.



### **PREPARING SAVANNAH FOR FUTURE PORT GROWTH**

Georgia Sea Grant-funded research is helping coastal communities prepare for the \$706 million Savannah Harbor Expansion Project, which is expected to bring changes in transportation infrastructure needs, land use and housing demands. In order to keep pace with the expansion, nearby communities will need to successfully adapt as larger, more densely packed ships and larger volumes of goods begin moving through coastal areas to inland markets. Researchers are analyzing the geographical coastal impacts of port competition and assessing the unique circumstances of the Greater Savannah Metropolitan Region in planning for the future growth of its port.



### **GEORGIA SEA GRANT LEGAL RESEARCH**

Georgia Sea Grant is one of the few Sea Grant programs in the nation to support explicit law and policy programming. In partnership with UGA's Carl Vinson Institute of Government, Georgia Sea Grant's Legal Program connects law students to legal and policy experts to address challenging environmental questions facing policymakers in coastal Georgia communities.

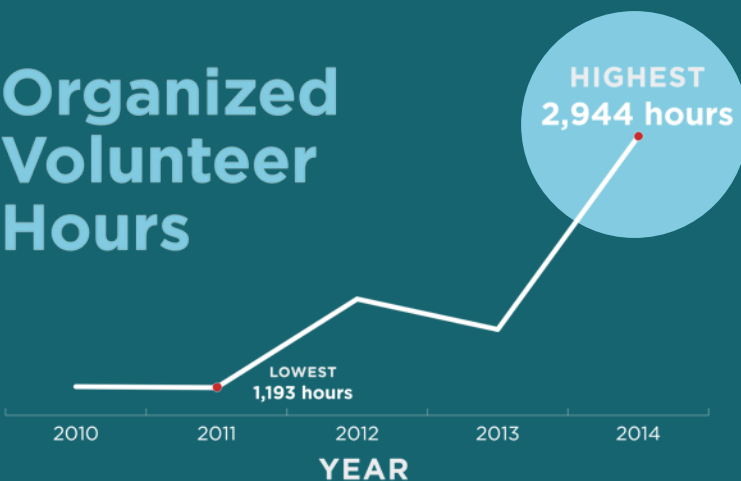


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## EXTENSION

Integral to Georgia Sea Grant's mission is the idea that knowledge should be co-produced, widely shared and used. Georgia Sea Grant addresses marine related problems and opportunities by acting as a bridge between scientists, government officials, industrial and commercial firms and civic groups. Extension specialists in Brunswick, Skidaway, Athens and Atlanta have long, trusted relationships with the communities that they serve. They connect university resources and knowledge with local needs by partnering with marine industries, local governments, students, teachers and other groups to sustain healthy ecosystems and marine resources and maximize the resilience and economic vitality of coastal communities.

## Organized Volunteer Hours



# 1,680

*acres of coastal habitat*

**protected,  
enhanced or  
restored**

*as a result of*

*Sea Grant activities*



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## HIGHLIGHTED PROGRAMS



### **AWARD-WINNING MARINE DEBRIS EDUCATION**

Chosen as the best cigarette litter prevention program in the country by Keep America Beautiful, Georgia Sea Grant reaches diverse audiences on the harmful effects of marine debris. From sponsoring beach cleanups to collecting data with students on the prevalence of beach litter, Georgia Sea Grant spreads awareness of this pervasive, yet preventable, source of pollution.



### **RAISING PROPERTY VALUES THROUGH SUSTAINABLE LANDSCAPING**

Georgia Sea Grant provides classes and workshops on nature preservation, sustainable landscaping and invasive species, encouraging more scenic and pristine landscapes. A study by the University of Georgia found that improved landscapes in the Savannah area have created a direct impact of \$2.4 million in increased property values.



### **REDUCING BYCATCH IN COMMERCIAL FISHING**

Since 1971, Georgia Sea Grant has collaborated with fishermen to protect coastal resources and sustain local livelihoods. One key success includes its long-term partnership with shrimpers in the development of bycatch reduction technology and in-water sea turtle research. All legal turtle excluder devices (TEDs) have been ocean-tested aboard the University of Georgia research vessel, the R/V Georgia Bulldog. These devices are designed to allow threatened and endangered sea turtles to safely escape shrimp fishermen's nets and have contributed to a rebound in sea turtle populations.



### **TRAINING GEORGIA'S SEAFOOD INDUSTRY**

The commercial seafood industry in Georgia generates nearly \$1.9 billion in economic impact. Georgia Sea Grant provides federally mandated Hazard Analysis Critical Control Point (HACCP) training to nearly 30 seafood companies each year. As a result of HACCP training, approximately 230 seafood dealers are licensed and 140 retailers are impacted statewide.



**UGA MARINE  
EXTENSION &  
GEORGIA SEA GRANT  
HEADQUARTERS**

1030 Chicopee Complex  
1180 E. Broad Street  
Athens, GA 30603-3636  
(P): 706-542-8849  
(F): 706-542-8838



**UGA BRUNSWICK  
STATION**

715 Bay Street  
Brunswick, GA 31520  
(P): 912-264-7268  
(F): 912-264-7312



**MARINE EDUCATION  
CENTER & AQUARIUM**

30 Ocean Science Circle  
Savannah, GA 31411  
(P): 912-598-2496  
(F): 912-598-2302



**SEAFOOD EDUCATION  
& MARKETING**

P.O. Box 2156  
Peachtree City, GA 30269  
(P): 770-460-2506  
(F): 770-460-2507



**SHELLFISH RESEARCH  
LABATORY**

30 Ocean Science Circle  
Savannah, GA 31411  
(P): 912-598-2348  
(F): 912-598-2399