

# A SMART INVESTMENT *in our* COASTAL ECONOMY



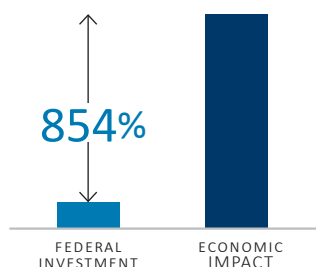
A Sea Grant Extension Specialist checks the temperature on freshly cooked shrimp at a culinary event focused on aquaculture-raised shrimp in Virginia. The event was the culmination of work by Sea Grant-supported researchers and agriculturists to bring this sustainable product to chefs and consumers.

**20,770 jobs** created or retained annually by Sea Grant

**2,903** businesses created or sustained annually by Sea Grant

NOAA Sea Grant is a federal-private partnership that turns science into action to ensure our coastal communities remain engines of economic growth in a rapidly changing world. Our nation's economic health is inextricably linked to the stability and prosperity of our coastal communities.

For every two federal dollars, Sea Grant leverages another dollar from state and local entities. In 2015, the Sea Grant program, which was funded at \$67.3 million, delivered:



**\$575 million** in economic impact, a 854 percent return on federal investment of \$67.3 million in 2015

# Sea Grant 50 YEARS

50 years of putting science to work for America's coastal communities

**33**

University-based Sea Grant programs in every coastal and Great Lakes state, plus Puerto Rico and Guam

**2,457**

scientists, engineers, educators, students and outreach experts work on Sea Grant projects

**509**

Sea Grant extension agents live and work in coastal communities to provide local and subject matter expertise

**1,100**

Graduate students have participated in the John A Knauss Marine Policy Fellowship Program since 1979

**489**

Peer-reviewed scientific journal articles published annually

Metrics reported in 2016 for work done in 2015

JANUARY 2017

# FIVE DECADES *of* MEANINGFUL IMPACTS

In 2016, Sea Grant celebrated 50 years of using research, outreach and education to positively impact coastal communities. Sea Grant's work encompasses diverse issues relevant to local, regional and national priorities, including healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies and environmental literacy and workforce development.

## JOB-BASED TRAINING

### FOR ENVIRONMENTAL LITERACY AND WORKFORCE DEVELOPMENT

Alaska's fishing industry produces \$5.9 billion in economic activity annually and employs over 70,000 workers. Despite this, the industry faces challenges of finding a local, skilled workforce. Alaska Sea Grant facilitated a university-industry collaboration that resulted in creation of a fisheries-seafood-maritime industry workforce development plan for Alaska, a new organization to implement the plan, and more maritime skills courses. The plan has been adopted by the state's Workforce Development Board. Through the program, University of Alaska now offers maritime skills courses such as vessel maintenance, marine transportation, and fisheries technology, and tailors academic programs to address future needs.

## INNOVATIVE RESEARCH

### FOR HEALTHY COASTAL ECOSYSTEMS

Wisconsin Sea Grant research demonstrated cultivation of natural algal communities in wastewater can help with nutrient removal prior to effluent release to Great Lakes waters. The high concentrations of nutrients in wastewater require a large surface area for the algae to be effective in removing nutrients. This is significant work because a 2012 Wisconsin Department of Natural Resources study determined that the extrapolated total cost of phosphorus removal at publicly owned treatment works in the state is in the range of \$860 million to \$953 million. As an additional bonus, WI Sea Grant found that the algal biomass produced through the removal process can then be used for biofuels.

## MEETING COMMUNITY NEEDS

### FOR SUSTAINABLE FISHERIES AND AQUACULTURE

The Gulf of Mexico oyster industry has suffered a number of setbacks, both natural and man-made, that have challenged the industry built around inexpensive, plentiful oysters. In response, scientists funded by Mississippi-Alabama Sea Grant Consortium tested four methods of off-bottom aquaculture for oysters. To overcome permitting and legal barriers associated with developing the industry, the MS-AL Sea Grant legal program drafted three documents outlining a framework for such an industry. As a result of Sea Grant's efforts, there are now 13 commercial oyster farms in Alabama, and two private oyster nurseries. More than 800,000 oysters went to market in 2015, with a wholesale value of more than \$400,000.

## NEW SOLUTIONS

### FOR RESILIENT COASTAL COMMUNITIES AND ECONOMIES

America's first offshore wind farm began producing energy in December 2016. Rhode Island Sea Grant's local leadership to guide the planning and community engagement process was vital to the project's success. Rhode Island Sea Grant brought stakeholders, experts, and community members together with developers and used the Rhode Island Ocean Special Area Management Plan (SAMP) as a tool to guide the process. The five turbines will provide electricity for 17,000 homes and has already created 300 local jobs. The newly generated power will eliminate Block Island's reliance on diesel generators and send additional power to the national grid via an underwater cable.



NOAA Sea Grant  
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