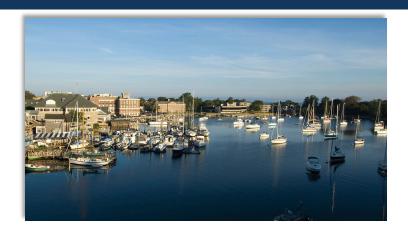
# A Smart Investment in Massachusetts' Coastal Economy





Woods Hole Sea Grant is one of 34 Sea Grant college programs and is based at the Woods Hole Oceanographic Institution. Highlights from Woods Hole Sea Grant's work in 2018\* are detailed below.

In 2018, a federal investment in Woods Hole Sea Grant of \$1.1 million resulted in:

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**Economic Benefit** 

100%

Return on Investment

Shellfish Propagation Program \$1,495,633 Discounts on Flood Insurance \$319,422

Coastal Erosion & Flooding Site
Assessments
\$289,560

Shellfish Aquaculture Training
Program
\$52,258

6,507

Acres of coastal habitat protected, enhanced, or restored

People engaged in Sea Grantsupported informal education programs

8,243

100,000 +

Marine water quality data points acquired at five key shellfish growing areas.







#### SEAGRANT. WHOI. EDU

#### NOTABLE PROGRAM ACCOMPLISHMENTS



### **Developing New Technology to Monitor for Harmful Algal Blooms**

The PhytO-ARM system uses next-generation robotic sensors to monitor coastal waters for disease-causing microalgae to improve our ability to detect harmful algal blooms (HABs) and the toxins they produce.



#### **Creating a Siting Tool for Aquaculture Growers and Regulators**

MA-ShellfAST is a GIS-based tool that assists prospective shellfish growers with the site selection and permitting process, providing key environmental and legal data to identify issues at the outset.



#### **Understanding How Mosquito Ditching in Salt Marshes Affects Carbon Sequestration**

Field measurements of marsh sediments and analysis of historical marsh aerial photos help predict the effects of marsh drainage management on carbon sequestration rates.



## Integrating Mussel and Kelp Longline Culture Structures and Management

Integrating kelp and mussel farming will increase efficiency resulting in significant cost savings over single species aquaculture.

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