2016–2017 NOAA Sea Grant Research Investments in Maine

Maine Sea Grant	$149,953	Reconciling multiple stakeholders in rockweed habitats: science to help achieve the intersecting goals of a fishery and coastal wildlife	University of Maine, Maine Maritime Academy, Schoodic Institute
	$149,980	The return of Maine's kelp forests: patterns, drivers, and implications for industry	Bigelow Lab, University of Maine
	$149,943	Understanding climate impacts on the Maine coastal fish and invertebrate community through synthesis of the ME-NH Inshore Trawl Survey data	Gulf of Maine Research Institute
	$149,971	From paleoceanography to policy: applying historical coastal pH baselines from long-lived shells and skeletons to contemporary shellfish aquaculture	Bowdoin College, Claremont Colleges, Iowa State University, University of Maine
	$200,000	Genetic and phenotypic response of larval American lo bster to ocean warming and acidification across New England's steep thermal gradient (funded through Northeast Sea Grant Consortium)	University of Maine, Bigelow Lab, University of Prince Edward Island
NOAA Sea Grant	$249,238	Large-scale culture methods for blue mussel seed production in Maine and the Northeast: experimental laboratory & field trials	Downeast Institute for Applied Marine Research, University of Maine Machias
	$908,015	Sustainable post-harvest processing and value-addition of cultured seaweed	University of Maine
	$227,208	Aquaculture site prospecting: Developing remote sensing capabilities for the aquaculture community of Maine	University of Maine
	$227,434	Arctic surf clam: A new candidate species to diversify and advance sustainable domestic aquaculture in Maine and the Northeast U.S.	Downeast Institute for Applied Marine Research
Maine Sea Grant Program Development	$2,000	Bagaduce Watershed Monitoring	Town of Penobscot
	$5,000	Midcoast Coastal Observing Alliance	Damariscotta River Association
	$635	Developing monitoring protocols for the Northeast coastal field station alliance	Schoodic Institute
	$4,300	Studying temperature sensitivity of early stage crustaceans	Bigelow Laboratory
	$3,500	Studying transmission of green crab parasites	University of Maine
	$2,260	Measuring persistent toxics in Penobscot Bay	Maine Maritime Academy
	$3,580	Estimating nitrogen loads in Casco Bay, Maine	University of Maine
	$2,433,017— total NOAA Sea Grant investment		

Marine Science for Maine People:
Maine Sea Grant Community Impact Highlights, 2016-2017

This winter, live, whole, **Maine-grown scallops are being served in restaurants for the first time**, thanks to many years of work by marine extension associate Dana Morse and fishermen Marsden and Robert Brewer of Stonington. They collaborated with Maine DMR and Bigelow Laboratory to analyze biotoxin data to ensure product safety. Preliminary market sales show great promise.

Maine Sea Grant co-founded and coordinates the **Alliance for Maine's Marine Economy**, securing more than $14 million in public and private funds for infrastructure investment and capital equipment grants. Industry partners to date include Cape Seafood, Maine Fair Trade Lobster, Cooke Aquaculture, Ready Seafood, Pemaquid Mussel Farm, Springtide Seaweed, Shucks Maine Lobster, Mook Sea Farm, Community Shellfish, and Blue Hill Bay Mussels.

Marine extension associate Chris Bartlett coordinated efforts to improve fish passage and monitor river herring in the Pennamaquan River in Washington County. **The alewife population rebounded from 70,000 in 2014 to 245,000** in 2016. As a result, the Department of Marine Resources reinstated recreational fishing and the community continues to work toward a commercial harvest.

The stories, memories, and perspectives of local fishermen and their families, local marine businesses, and their neighbors are part of the multimedia Mapping Ocean Stories project. Marine extension associate Natalie Springuel worked with College of the Atlantic, the Island Institute, and Winter Harbor Historical Society to **capture local knowledge of community connections to the sea**.

Maine Sea Grant created and coordinates the Southern Maine Volunteer Beach Profile Monitoring Program, in which hundreds of volunteers monitor beaches from York to Scarborough to measure seasonal and annual sand accretion and erosion. **Data are used by municipalities and state and federal agencies, including the National Weather Service**, to evaluate storm damage and inform decisions about development proposals and beach management. The program has been replicated in NH, MA, CA, and Mexico.

Maine Sea Grant extension professor Esperanza Stancioff helps coordinate regional and statewide networks (Northeast Coastal Acidification Network and Maine Ocean and Coastal Acidification Partnership) to synthesize and share data and information on nearshore ocean chemistry. Partners are working toward goals established by a legislative committee to **help the shellfish industry, farmed and wild, which is most vulnerable to ocean acidification**.

Through fellowship and scholarship support, Maine Sea Grant supported **77 undergraduate and graduate students** in 2016. In the last year, at least eight of these students are now employed in marine science-related positions at Alaska Department of Fish and Game, Bigelow Lab, Herring Gut Learning Center, Maine DMR, Pacific Coast Federation of Fishermen's Associations, National Marine Fisheries Service, the Transportation Institute, and the U.S. Navy.

Sea Grant Maine at the University of Maine

NOAA