

# Ocean Acidification Research Projects (2018-2019)



**\$2.9 M**  
State investment  
in competitive OA  
research in 2018-2019\*

**28**  
OA research projects

**11**  
Sea Grant programs  
investing in OA  
research

The National Sea Grant College Program (Sea Grant) aims to enhance the practical use and conservation of coastal, marine and Great Lakes resources. In support of this mission, Sea Grant funds research, education, and extension projects that improve community understanding of emerging issues, including ocean and coastal acidification.

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Industries depending on living marine resources are increasingly concerned about impacts of ocean acidification (OA) on marine ecosystems and subsequent social and economic impacts. Sea Grant funded research projects are designed to respond to stakeholder research questions and evaluate local environmental impacts and societal dependence on impacted species, to facilitate adaptive management strategies. As part of a broader NOAA-wide ocean acidification initiative, Sea Grant provides resources to coordinate regional and state efforts and clearly communicate how OA is affecting U.S. waters and living marine resources.

**In 2018, the Mid Atlantic Sea Grant Programs and NOAA's Ocean Acidification Program (OAP) funded a new regional Ocean Acidification Graduate Research Fellowship Program, funding the following six fellowships:**

Fellow	State	Project Title
Zahorik	DE	Ocean acidification and microbially-mediated shell calcification in the Eastern oyster, <i>Crassostrea virginica</i>
Himes	VA	Influence of salinity history on future ocean acidification tolerance in larval Eastern oysters, <i>Crassostrea virginica</i> , in Chesapeake Bay
Schwaner	NY	Identifying molecular markers associated with resilience to ocean acidification in the Eastern oyster and the Northern quahog
Wright-Fairbanks	NJ	Assessing the susceptibility of Atlantic sea scallops and surf clams to ocean acidification using glider-based monitoring and larval transport models
Da	VA	Chesapeake Bay acidification: From daily forecasts to half-century projections
Schwemmer	NY	Physiology-based modeling of estuarine fishes and ecosystems under ocean acidification



**For more information about Sea Grant's work with OA visit [seagrant.noaa.gov/our-work/ocean-acidification](http://seagrant.noaa.gov/our-work/ocean-acidification)**

\*Federal plus match

**State Sea Grant Programs funded 22 competitive ocean acidification research projects through the 2018-2019 state biennial research competitions**

<b>Researcher</b>	<b>State</b>	<b>Project Title</b>
Tamone	AK	Metabolic and growth physiology of early life history stages of the northern spot shrimp, <i>Pandalus platyceros</i>
Kelley	AK	Potential for resilience- examining the effects of ocean acidification on native Alaskan bivalves
Hamilton	CA	Solving impediments to the co-culture of seaweeds and shellfish
Dam	CT	Will red tide blooms become more prevalent and intense in Long Island Sound?
Hopkinson	GA	Sensitivity of Gray's Reef invertebrates and algae to ocean acidification and implications for the ecosystem
Decarlo	HI	Coral reef CO <sub>2</sub> variations at the coastal ocean Hawaii acidification network (COHAMN): impact of basin scale oceanographic forcing
LaVigne	ME	From paleoceanography to policy: applying historical coastal pH baselines from long-lived shells and skeletons to contemporary shellfish aquaculture
Bastidas	MIT	Climate change adaptation initiative: promoting environmental literacy and hands-on opportunities for coastal populations
Chen	MIT	Making sense of the variability of coastal ocean acidification: potential long-term impacts on the oyster aquaculture industry
Fulweiler	MIT	Quantifying coastal ocean acidification impacts on estuarine nitrogen removal
Leonard	MIT	Towards a cost-effective monitoring system of coastal ocean acidification in the US North East
Swager	MIT	Sensors for measuring carbon dioxide, bicarbonate, and pH in the ocean
Wang	MIT	Developing a miniaturized in-situ sensor technology for simultaneous measurements of seawater dissolved inorganic carbon and pCO <sub>2</sub>
Ries	MIT	Measuring acid/base chemistry in the extrapallial fluids of New England's commercially important mollusks to explore their differential responses to ocean acidification
Peterson	NY	Seagrass OASIS (Ocean Acidification Sanctuaries and Subsidies)
Galloway	OR	Effects of ocean acidification on behavior, development, and nutritional value on newly recruited coastal dungeness crab
Waldbusser	OR	Informing management of Oregon's pink shrimp fishery through understanding early life-stage responses to ocean acidification and warming
Gayford	USC	Wave attenuation and chemical buffering: determining ecosystem services of giant kelp to southern California
Burge	WA	<i>Zostera marina</i> and <i>Crassostrea gigas</i> as potential partners in a changing ocean
Dittman	WA	Effects of ocean acidification on salmon olfactory function and magnetoreception
Keister	WA	Metagenomic fluctuations of zooplankton and ichthyoplankton communities in the Salish Sea: association with water chemistry
Donoghue	WA	Linking population structure and trait variation in native eelgrass <i>Zostera marina</i> ; baselines for coastal habitat restoration and management in Washington state