National Sea Grant College Program

Science Serving America's Coasts

What Does the National Sea Grant College Program Do for the Nation?

Mississippi-Alabama & Louisiana Sea Grants worked with the Gulf of Mexico Alliance to develop the Coastal Community Resilience Index, a tool to assess communities' susceptibility to hazards. Photo Credit: Mississippi-Alabama Sea Grant

NOAA's National Sea Grant College Program enhances the practical use and conservation of coastal, marine, and Great Lakes resources to create a sustainable economy and environment. Sea Grant is a national network of 33 university-based programs dedicated to serving citizens in coastal communities. Sea Grant helps citizens understand, conserve, and better utilize America's coastal, ocean, and Great Lakes resources.

With extension experts located in every coastal and Great Lakes state, Sea Grant translates scientific information into tools, products, and services that benefit coastal residents and their communities every day. Sea Grant agents live and work in the communities they serve fostering trusted relationships. This extensive local network can be especially helpful in the aftermath of coastal disasters like Deep Water Horizon or Hurricane Sandy. Sea Grant makes an impact at local, regional, and national levels by drawing on the experience of more than 3,000 scientists, engineers, extension and public outreach experts, educators, and students from more than 300 institutions.

Research Highlights

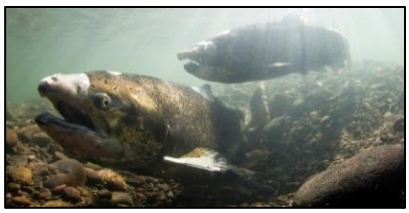
Sustainable Coastal Development: NOAA Sea Grant and partners developed resource to help our nation's "Working Waterfronts" flourish

The National Working Waterfront Network, including six Sea Grant programs and the Sea Grant Law Center, researched and developed a new information resource with funding from the U.S. Department of Commerce to help secure the future of our nation's working waterfronts and waterways. The *Sustainable Working Waterfront Toolkit* is a web-based portal that includes legal, policy, and financing tools along with a growing collection of applied case studies. These success stories can help empower communities to learn what is possible.

A new University of Hawai'i Sea Grant climate study published in *Nature* found that most of the earth will routinely experience a climate unlike anything on record by 2047. Photo Credit: Keoki Stender

Healthy Coastal Ecosystems: Sea Grant Programs lead research and outreach to control invasive lionfish

Where lionfish populations reach high densities nearly all other reef fish are eliminated, severely affecting reef ecosystems along the Atlantic coast, in the Caribbean, and now in the Gulf of Mexico. Florida Sea Grant is partnering with Sea Grant programs in North Carolina, South Carolina, Georgia and Puerto Rico to address this issue. Three research projects are underway to identify optimal methods for the local control of lionfish. At the same time Florida Sea Grant is leading a team of outreach specialists to work with fishing and diving industries on lionfish identification and safety. The objective is to develop consistent and readily understood information for people who may come into contact with lionfish while in South Atlantic and Caribbean coastal waters.



Oregon Sea Grant research found that magnetic fields play a role in salmon spawning, which may help create models to aid in management. Photo Credit: Jeff Basinger

Hazard Resilience in Coastal Communities: Coastal Storm Awareness Program (CSAP) research addressing coastal hazard community response

Connecticut, New Jersey, and New York Sea Grant Programs have awarded $1.4 million to support ten social science research projects that will improve community understanding and response to coastal storm hazard information. The projects will research community response to disasters by closely examining the coastal storm warning systems and the factors that affect whether recipients of this information decide to act. Sea Grant's CSAP is a part of the Disaster Relief Appropriations Act of 2013.

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More Research Highlights

Safe and Sustainable Seafood Supply: Alaska King Crab Rehabilitation Program Reaches Major Milestone

Researchers from NOAA Fisheries and Sea Grant achieved the first experimental release of hatchery-reared red king crabs in Alaska on September 25, 2013, to assess the importance of stock density on survival. The juvenile crabs were reared at the Alutiiq Pride Shellfish Hatchery and transported to the NOAA Kodiak Laboratory. The release site, at Cozy Cove near the village of Old Harbor on Kodiak Island, was selected because it is well sheltered with plenty of red king crab habitat.

Research Partnerships

Partnerships at all levels—local, state, regional, and national—are key to achieving NOAA and Sea Grant's mission with academia, government, non-profit, and private sectors. In 2014, two NOAA Sea Grant Programs were awarded prestigious Department of Interior *Partners in Conservation* awards for their work. Rhode Island Sea Grant helped develop national environmental monitoring tools for offshore renewable energy development. These tools and techniques were delivered to the U.S. Bureau of Ocean Energy Management in late 2012, and are helping to inform national standards development for this emerging industry. Michigan Sea Grant led a multi-partner project to construct fish spawning habitat in the Detroit River. This collaborative effort led to the creation of the Huron Erie Corridor Initiative. The partners developed a plan to increase habitat for lake whitefish, lake sturgeon, walleye and other native fish populations which provided, based on research suggesting that water flow, depth and temperature are an immediate response by more than 14 native fish species, including spawning by the commercially important lake whitefish, and spawning by lake sturgeon.

Budget

The Fiscal Year (FY) 2015 President's budget request for Sea Grant through NOAA's Office of Oceanic and Atmospheric Research (OAR) is $63.4. The FY 2014 omnibus funding for Sea Grant is $67.3M and the FY 2013 actual budget was $57.3M. The National Sea Grant Office is located in Silver Spring, MD.

What's Next for NOAA's Sea Grant?

Sea Grant will continue to support our nation's ocean, coastal, and Great Lakes resources through university-based research, communications, education, extension, and legal programs. The 2014-2017 national strategic plan identifies four focus areas:

- Healthy Coastal Ecosystems
- Sustainable Fisheries and Aquaculture
- Resilient Communities and Economies
- Environmental Literacy and Workforce Development

NOAA Sea Grant has partnered with local, state, and federal agencies in California, Georgia, Illinois, New Jersey and North Carolina to prepare for the current and predicted impacts of climate variability and change on America's coastal communities through the Community Climate Adaptation Initiative. Photo Credit: Illinois Indiana Sea Grant

Did You Know?

Sea Grant invests heavily in graduate student support in addition to overall investment in environmental literacy. More than 50% of the Sea Grant research projects depend on graduate students, leading a total of 1,044 graduate students supported by Sea Grant in 2013. Graduate students supported by Sea Grant's education investment are a crucial part of the success of Sea Grant research. Sea Grant also coordinates two prestigious graduate fellowships, the Sea Grant Knauss Fellowship, and the Sea Grant/NMFS Fellowship. In 2014, NOAA Sea Grant placed its 1000th Knauss Fellow.

seagrant.noaa.gov

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