



A Newsletter from the New Jersey Sea Grant Consortium

Changes and Challenges

For the past eight years this newsletter for New Jersey leaders and lawmakers has helped them stay current about our organization's activities and the State's most pressing marine and coastal issues. It will continue to serve that purpose but will now also be shared with a broader audience.

This special issue of the *COASTodian* also marks its debut as a product of the newly named New Jersey Sea Grant Consortium (NJS GC). Originally founded in 1969 as the New Jersey Marine Sciences Consortium, the Sandy Hook-based affiliation of colleges, universities and other groups officially changed its name on October 1, 2010. Dedicated to advancing knowledge and stewardship of New Jersey's marine and coastal environment, the name may have changed but the work and mission remain the same.

The change recognizes the goals and objectives the Consortium has long shared with the National Sea Grant program, a nationwide network of 32 programs that support coastal resource conservation. The Consortium was awarded the federally-designated Sea Grant Program in 1976 and has managed it successfully ever since.

For over 40 years, the Consortium has served the state and region by developing programs designed to resolve coastal issues, develop marine technology, formulate science-based policy, and improve science literacy among its citizens. Through its Sea Grant program, the Consortium contributes leading research in the field of marine and environmental science addressing a wide range of New Jersey's most important coastal issues. The group's many outreach activities provide equal opportunity for all New Jersey citizens to better understand New Jersey's coastal environments. Through its extension specialists, the Consortium works with coastal residents and communities to apply marine research results, while nearly 30,000 students, families, teachers, and other public groups take part annually in the Consortium's education programs and special events.

Like so many non-profit organizations and state agencies, the Consortium has been affected by the recent economic downturn which includes reduced foundation funding opportunities and the loss of our state appropriation. But the changes and challenges it faces only make the organization stronger and more determined to broaden its efforts to succeed in meeting its mission.



NJSGC Matters to New Jersey

- Its longstanding partnerships with many state agencies including the NJDEP and the NJDOT assist these agencies to create and expand programs and initiatives that support New Jersey's substantial marine and coastal environments and economies.
- Its funded research projects provide the information necessary to solve New Jersey's most pressing marine and coastal issues including water quality, shoreline restoration, dune protection, erosion concerns, and recreational and commercial fisheries management.
- Its programs educate over 20,000 New Jersey schoolchildren each year, providing marine science learning experiences lacking in many schools and supporting New Jersey's Core Curriculum Content Standards (NJCCCS) for science in K-12 education.
- Its extension agents work side by side with New Jersey's coastal municipalities and marine-dependent industries to help develop communities and businesses that responsibly balance economic growth with environmental stewardship.

State Support Makes Dollars and Sense

- NJS GC's work directly supports New Jersey's \$80 billion dollar coastal economy including the tourism, ports commerce and fishing industries, sectors which sustain roughly 1.5 million New Jersey jobs.
- Through the Sea Grant program and other partnerships, grants and contracts, the NJS GC returned nearly \$8 to New Jersey's economy for each State appropriated dollar it received in 2009. We believe this sound investment of state dollars, recently lost due to significant budget cuts deserves reconsideration and reinstatement.



2010's Top 10 Accomplishments

This past year included many significant milestones for the NJS GC. While the organization's Annual Report for 2010 will provide a comprehensive overview of its activities and accomplishments for the year, we thought this special issue of the COASTodian was ideal for showcasing what we considered to be the Top 10 highlights for 2010.

#1: Awards and Accolades

Mid-Atlantic Sea Grant Region Marine Network Outstanding Achievement Award given to Mike Danko and Jessica Staats; States Organization for Boating Access Award for Outstanding Clean Vessel Act Program; APEX Award for Publication Excellence and a special new "Green" Award for Environmental Excellence awarded to NJS GC Communications for the *Natural NJ: Destinations* and *Natural NJ: Annual Events Pocket Companion Guides*; Monmouth County Historical Society Award given to NJS GC for the Restoration of Bldg. #22 at Fort Hancock in Sandy Hook, *Educator of the Year* from the American Society of Civil Engineers awarded to Dr. Jon Miller, NJS GC Extension Coastal Processes Specialist; and *Educator of the Year Award* given to long-time NJS GC educator, Lee Rossbach by the NJ Marine Educators Association.

#2: Building #22 Restoration

Federal and State leaders, including Congressman Frank Pallone (NJ 6th District) and Senator Sean Kean (NJ 11th District), attended a special ceremony to celebrate the first and only full exterior restoration of one of the key historical structures in Sandy Hook's Historic Fort Hancock District. The restoration of Barracks Building #22 by the NJS GC in partnership with the New Jersey Historic Trust Foundation and the National Park Service at Sandy Hook is considered a model for other non-Park System groups and organizations at the Historic Fort Hancock section of Sandy Hook.

#3: Climate Demonstration Project

As part of the National Sea Grant Coastal Communities Climate Adaptation Initiative (CCCAI), the New Jersey Sea Grant Consortium and its partners, Monmouth University Urban Coast Institute and the NJDEP Office of Coastal Management and Watershed Restoration conducted community-based, climate adaptation demonstration projects to provide the participating communities with an assessment of their vulnerabilities and recommendations on what can be done to adapt to these challenges.

#4: Funding Support for NJS GC/Rutgers Aquaculture Extension Agent

The New Jersey Sea Grant Consortium and Rutgers University's Haskin Shellfish Research Laboratory (HSRL) received funding from the National Oceanic and Atmospheric Administration's (NOAA) National Sea Grant Program to support shellfish aquaculture extension. The three-year, \$300,000 grant will fund a New Jersey Sea Grant extension agent to support ongoing studies in oyster aquaculture being conducted at the HSRL.

#5: Geosciences Partnership at Sandy Hook

Along with Rutgers University, Brookdale Community College, the Sandy Hook Foundation and Gateway National Recreation Area, NJS GC has been funded by the National Science Foundation Geoscience Division to develop curriculum materials and implement teacher training programs based on scientific research currently being conducted on Sandy Hook. Topics and concepts to be covered will include climate change, sea level rise, coastal erosion, sand migration and the use of remote sensing techniques along Sandy Hook's shores.

#6: Marine Industry Enhancement

Utilizing funds from the *I BOAT NJ* Program and the National Fish and Wildlife Foundation, NJS GC created the Marina Industry Enhancement (MIE) Program to provide technical assistance to marinas for vessel wash wastewater systems, funding for implementing best management practices (BMPs), producing media events and other activities. The program awarded over \$500,000 to marinas and provided an additional \$500,000 in matching funds for a total economic impact of one million dollars. Funds awarded by county were as follows: Atlantic County - \$28,000, Burlington County - \$28,000, Cape May County - \$20,000, Cumberland County - \$14,000, Middlesex County - \$32,000, Monmouth County - \$44,000, Ocean County - \$312,000 and Sussex County - \$38,000.

#7: Ocean Fun Days

NJS GC's annual spring open house on Sandy Hook expanded in 2010 into a park-wide event with the addition of Fort Hancock historical tours (provided by the Sandy Hook Foundation and the National Park Service) and the opening of the laboratories at the James J. Howard Laboratories (provided by NOAA/ National Marine Fisheries Service). Ocean Fun Days is sponsored by its founding partner, New Jersey Natural Gas.

#8: Public Access Website and Survey

A new website launched by NJS GC offers legal information and tools that address defined coastal access needs and issues and enables New Jersey waterfront users, coastal communities, and land owners to deal with those issues cooperatively and hopefully without litigation. The project was funded through a mini-grant from the

National Sea Grant Law Center (NSGLC). A companion survey was also initiated on-site and on line for beachgoers, fishermen, surfers and other waterfront users to determine their perception and needs of public access to New Jersey's ocean and bay shores.

#9: Sea Grant Funds Awarded to NJS GC

The NJS GC was awarded \$943,000 from the U.S. Department of Commerce/NOAA National Sea Grant College Program. One third of the funds awarded were invested in high-priority, stakeholder-driven research. Four research projects and additional education and extension activities supported by the federal grant will contribute to better understanding and stewardship of the marine and coastal environment, and ultimately help sustain the considerable revenue those resources contribute to the state's economy. This award marks the 36th consecutive year the Consortium has received funding to manage the state's Sea Grant Program.

#10: State of the Shore 2010

The 8th Annual pre-Memorial Day media event featured remarks from NJDEP Commissioner Bob Martin and drew a record amount of media coverage. In addition to the release of the *2010 State of the Shore Report* compiled by Dr. Jon Miller, NJS GC Coastal Processes Specialist, this year's agenda showcased NJS GC research projects that have a direct impact on the state of the shore and featured scientists Dr. Louise Wootton of Georgian Court University whose research is helping determine ways to eradicate invasive plant species that threaten the coastal dunes, and Dr. Josh Kohut from Rutgers University whose research is improving rip current forecasting.



RESEARCH

Science Serving New Jersey's Coast



New Jersey Sea Grant is a partnership between a consortium of colleges and universities and the federal government's National Oceanic and Atmospheric Administration (NOAA) that directs federal resources to pressing marine and coastal related problems in local communities.

Each year, Sea Grant supports research projects that serve as the core product of the program, investigating a wide variety of topics that address critical issues of local, regional and national importance.

The results of this research are shared with the public through Sea Grant's integrated outreach program, which brings together the collective expertise of extension agents, educators and communications specialists. The goal is to ensure that vital research results are shared with those who need them most and in ways that are timely, relevant and meaningful.

Past New Jersey Sea Grant-funded projects that have impacted the economy and the environment include utilizing horseshoe crab blood to develop cost-efficient medical diagnostic kits and drugs for cancer treatment, genetically creating disease-resistant oysters that helped revitalize the state's decimated oyster industry, sponsoring socio-economic studies that helped develop tools to help people participate effectively in fisheries management processes and determining the effect of dune development, plants and restoration on beaches.

Current research is addressing issues such as population growth and development in coastal communities; preparation and response to hurricanes and coastal storms; understanding our interactions with the marine environment; and fish and shellfish farming and seafood safety.

Current Sea Grant-Funded Research Projects

Meteorological Modulation of the Exchange Between Raritan Bay and the Coastal Ocean

*Dr. Robert Chant, Dr. Josh Kohut
Institute of Marine & Coastal Sciences
Rutgers, The State University of New Jersey*

Reducing Uncertainty in Stock-Recruitment Relationships and Fishery Reference Points Using Bayesian Meta-Analysis

*Dr. Olaf Jensen
Institute of Marine & Coastal Sciences
Rutgers, The State University of New Jersey*

Assessing Plant Performance of 'Cape' American Beachgrass, *Ammophila breviligulata*, Against Local Beachgrass Ecotypes

*Dr. Michael Peek
William Paterson University*

Collection of Sex-Ratio Data for Summer Flounder Landings: Commercial and Recreational

*Dr. Eric N. Powell
Haskin Shellfish Laboratory
Rutgers, The State University of New Jersey
Dr. Ken Able
Rutgers Marine Field Station
Rutgers, The State University of New Jersey*

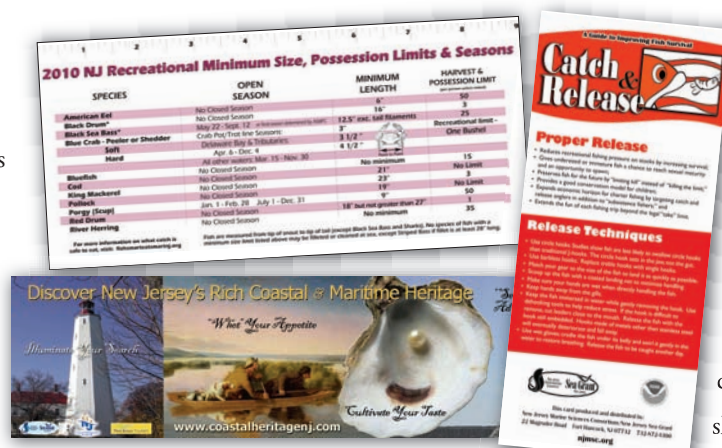




Reaching Out Through Extension

While research is a crucial component of Sea Grant, transferring information to the people who can benefit from it is just as important. A network of extension professionals takes Sea Grant scientific information out of the laboratory and into the field, working to enhance a coastal business, a fishery, or residents' safety and quality of life.

Extension staff provide outreach and technology transfer for Sea Grant by linking university resources and expertise with local communities and user groups. In short, these extension professionals take complex information and show people how to use it to solve problems. They develop new information through original applied research; gather existing information for user needs; transmit information and skills through pamphlets, courses, workshops, lectures and meetings; provide technical reviews of research and policies and stimulate new research to meet perceived needs.

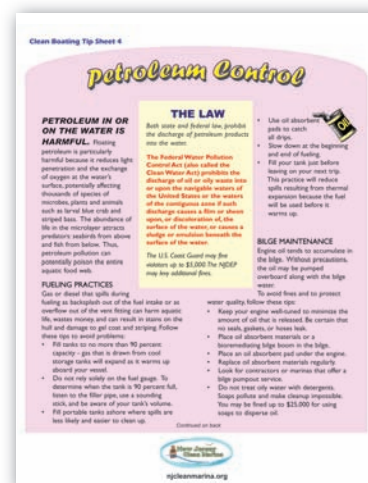


The New Jersey Sea Grant Consortium Extension Program staff works with communities in countless ways that make significant contributions to the state's economic and environmental well-being. Extension staff have reached out to help fish farmers develop environmentally-sound shellfish farming practices, explain the impacts of land use on water quality,

restore habitat and provide technical assistance to communities planning for and dealing with natural hazards including rip currents, and improve coastal tourism and ecotourism opportunities.

Spreading the Sea Grant Word

The Consortium's outreach team also includes a dedicated corps of communications specialists who build public understanding of marine and coastal issues being addressed by Sea Grant for informed decision-making. Through websites, publications, electronic communications, media relations, videos, community interaction and cooperative efforts with extension agents and other program components, the Consortium's communicators keep the public informed about current research and technology in marine science and promote the understanding of marine issues among industry, educators and marine resource users.



EDUCATION

Making Waves in Marine Education



Education at all levels is a cornerstone of Sea Grant programs and includes undergraduate and graduate education, teacher education, K-12 curriculum development, fellowships, informal education for the general public, special training programs for industry and much more. The NJSGC's education programs help people better understand and appreciate their own marine and coastal environment and make well-informed decisions regarding its use, management, and care.

The NJSGC focuses on providing active learning experiences for participants, especially children, outdoors on the beaches, bays and shorelines of New Jersey. It also serves as a science education resource and marine science specialist to New Jersey's K-12 schools, colleges and universities, informal education centers and after-school child care centers. Through the NJSGC the state has a proven source for compelling New Jersey-centered ocean and estuarine science education.



NJSGC's Education Department's accomplishments by the numbers:

- **20,000** schoolchildren from over **900** school districts statewide took part in guided field-trip programs.
- **139** undergraduate students from New Jersey's colleges and universities enrolled in summer marine-science coursework.
- **185** children in grades 3 through 8 attended marine science summer camp.
- **2,200** boy and girl scouts learned about marine science in Scout programs.
- **750** children and **75** teachers participated in *All Hands On Deck*, a program that provides estuarine and ports commerce education focused on sustaining New Jersey's ports and harbors.
- **3,000** students were instructed in marine science during in-school presentations.
- **9,000** visitors were educated about New Jersey's marine and coastal resources and issues at *Coast Day NJ* and *Ocean Fun Days*, two annual public outreach events covering the coast from Sandy Hook to Cape May.
- **275** educators received marine science training for a total of **2,980** contact hours.



Welcome to this special edition of the newly designed and newly defined COASTodian. The publication debuted in June 2002 to keep our state and federal legislators up to date about the marine and coastal issues impacting New Jersey as well as our organization's activities and accomplishments.

This new version of the COASTodian will continue to be published and sent to federal, state and local legislators. But because it has become one of our most popular and effective tools for delivering concise and current coastal news to stakeholders, it will now also be more widely distributed via email to our current subscriber list and by request. If you would like to be added to the email list for this quarterly publication, or sign up for other NJSGC publications and special announcements, visit njseagrant.org.

