



AUTUMN 2017

Leaves are turning color and there's a slight crisp in the air at New Jersey Sea Grant Consortium (NJSGC). Fall means a bustling season of programs, events, field trips, and more!



NJSGC desktop calendar (November 2017) available for download [here](#)

In this edition of the **COASTodian**, learn more about ongoing projects, current advances in aquaculture education, the importance of understanding storm surge, and why three members of the NJSGC staff recently traveled to Astoria, Oregon. We've also dedicated a section to mark the fifth anniversary of Hurricane Sandy, including details on Monmouth County's High Water Mark Initiative.

NJSGC strives to inform the public about coastal and environmental concerns in new and exciting ways – please take a look!

We're also working hard to provide fresh and entertaining content on NJSGC's official [Facebook](#), [Instagram](#), and [Twitter](#) pages. Be sure to check out what's new and get involved by tagging us on social media! Please visit njseagrant.org for further information and updates.



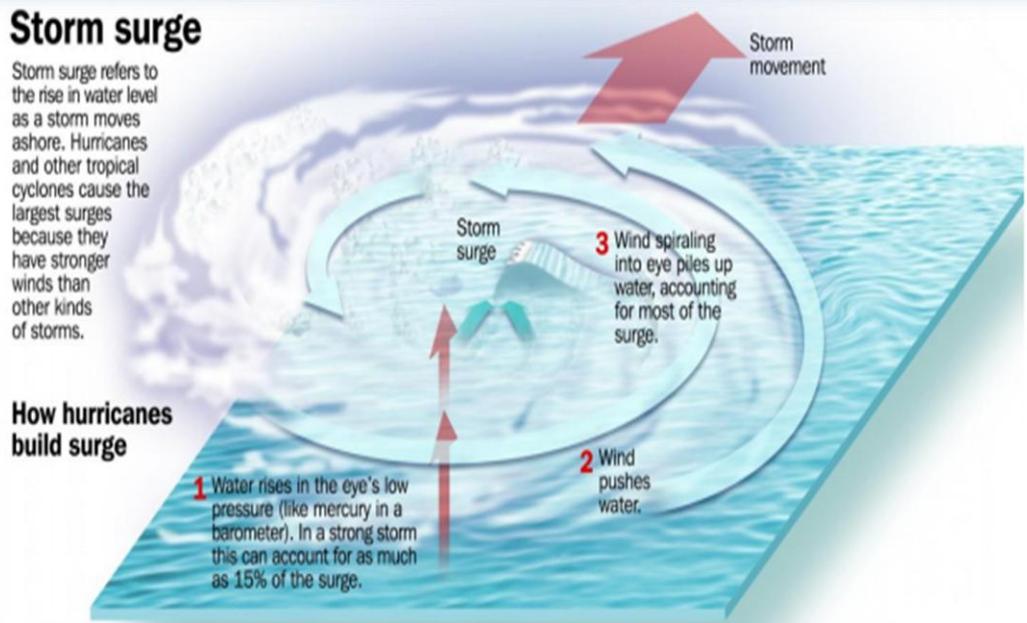


Attention Educators!



'Storm Surge' Curriculum Module Updated

Since Hurricane Sandy, providing information on storm awareness and safety has been a priority at NJSGC. Education Specialist [Mindy Voss](#) recently updated NJSGC's [storm surge](#) curriculum module to include up-to-date information and activities.



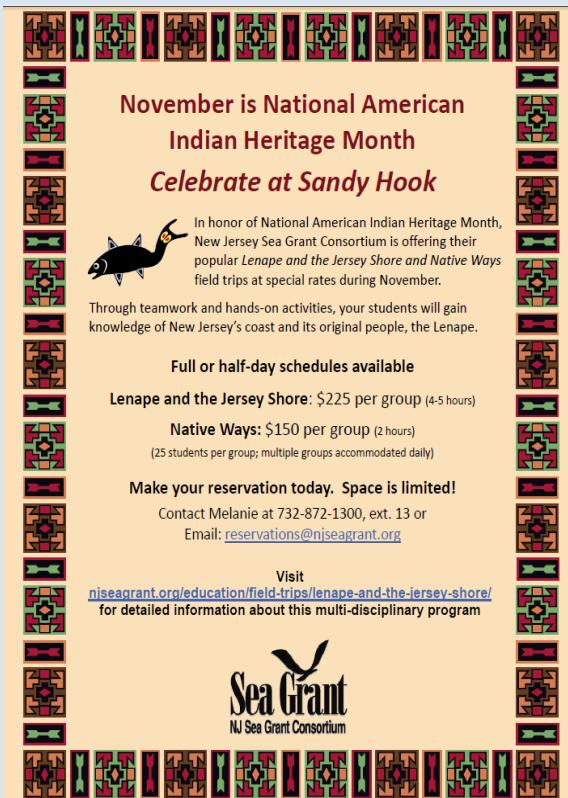
[Understanding Storm Surge](#) allows educators to instruct students on:

- *Storm surge and the factors that influence it*
- *How temperature affects air density and the formation of high and low pressure systems*
- *The effect of gravity in the atmosphere*
- *The role of Earth's rotation on global and localized wind patterns*
- *The effect air pressure has on storm surge levels*
- *How storm surge affects coastal communities*
- *The impact of shoreline shape and beach slope on storm surge*

The updated module also includes a section on [storm surge watches and warnings](#).

NJSGC offers a diverse database of marine science curriculum materials for grades preK-12. Please visit our [website](#) for the complete list.

Fall & Winter Activities Abound at NJSGC!



November is National American Indian Heritage Month

Celebrate at Sandy Hook

In honor of National American Indian Heritage Month, New Jersey Sea Grant Consortium is offering their popular *Lenape and the Jersey Shore and Native Ways* field trips at special rates during November.

Through teamwork and hands-on activities, your students will gain knowledge of New Jersey's coast and its original people, the Lenape.

Full or half-day schedules available

Lenape and the Jersey Shore: \$225 per group (4-5 hours)
Native Ways: \$150 per group (2 hours)
(25 students per group; multiple groups accommodated daily)

Make your reservation today. Space is limited!
Contact Melanie at 732-872-1300, ext. 13 or Email: reservations@njseagrant.org

Visit njseagrant.org/education/field-trips/lenape-and-the-jersey-shore/ for detailed information about this multi-disciplinary program

Sea Grant
NJ Sea Grant Consortium

School field trip season is back in full swing! To learn more about NJSGC's preK-12 programs, please visit our [website](#).

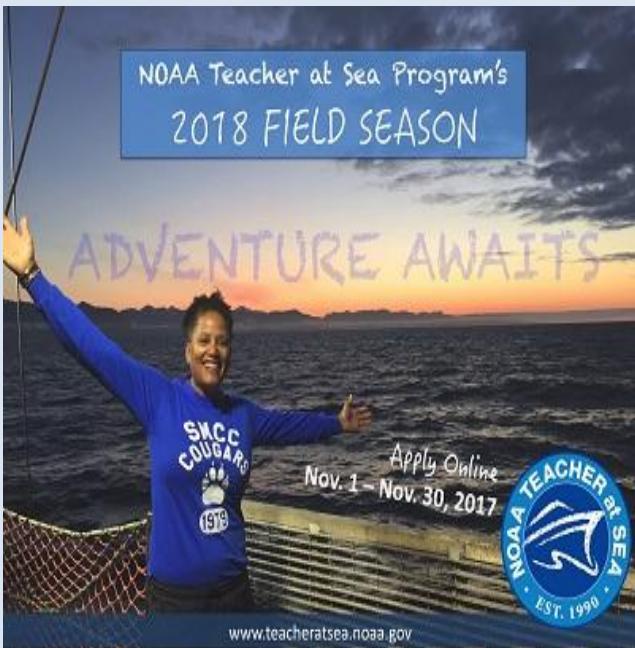
As a reminder, there is still time to make a reservation for November bookings of "Lenape and the Jersey Shore" at special pricing.

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Can't make it to the Hook during the offseason? Let NJSGC come to your classroom with [*Oceans to Go!*](#) These popular "hands-on" marine science programs are designed to support New Jersey's content standards and stimulate your students' emerging science skills and natural curiosity about our water world. For more information please visit our [website](#).



NOAA Teacher at Sea Program 2018, Apply Until November 30th!



The mission of the National Oceanic and Atmospheric Administration's (NOAA) [Teacher at Sea Program](#) is to provide pre-kindergarten through college-level teachers a hands-on, real-world research experience working at sea with world-renowned NOAA scientists, thereby giving teachers unique insight into the oceanic and atmospheric research crucial to our nation.

Applications and references will be accepted through the [online application system](#) from November 1 to 30, 2017 until 5:00 pm ET.

Please visit the [FAQ page](#) to learn more about program eligibility and expectations.

NJSGC Nominee Receives NOAA Coastal Management Fellowship

Ms. Jackie Specht, a Rutgers University graduate student and NJSGC fellowship applicant, was recently matched with Maryland's Chesapeake and Coastal Service to continue studying the beneficial reuse of dredge material.

As Specht explains:

"I have joined the Chesapeake and Coastal Service at the Maryland Department of Natural Resources as the NOAA Coastal Management Fellow. During my two-year fellowship I will evaluate and identify potential practices for the beneficial reuse of dredge material. I will then take my finds to develop policies and decision-support tools to aid these practices in Maryland's Department of Natural Resources waters. Over the course of the fellowship, I will have the opportunity to participate in conferences, take advantage of professional development opportunities, and interact with other NOAA Coastal Management fellows at three annual events."



"I hope to continue working in state government, developing management practices and policies that improve coastal resilience, and to continue learning education and communication techniques to keep the public informed. NJSGC has played a huge role in helping me work towards this goal. Up until now, my work has focused on basic – not applied – science. NJSGC's support in obtaining the NOAA Coastal Management Fellowship has allowed me to redirect my career path to the applied work I am so passionate about."

According to NOAA:

The Coastal Management Fellowship was established in 1996 to provide on-the-job education and training opportunities in coastal resource management and policy for postgraduate students and to provide project assistance to state coastal zone management programs. The program matches postgraduate students with state coastal zone programs to work on projects proposed by the state and selected by the fellowship sponsor, the National Oceanic and Atmospheric Administration (NOAA) Office for Coastal Management. This two-year opportunity offers competitive salary, medical benefits, and travel and relocation expense reimbursement.

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For more information:



# ANNOUNCEMENTS

## NJSGC Staff Participate in Snacks with Scientists

*Snacks with Scientists* is an annual outreach event designed to encourage 5<sup>th</sup> and 6<sup>th</sup> grade girls to explore STEM (Science, Technology, Engineering, and Math) related fields.

Presented by [High Technology High School](#)'s National Honor Society on Friday, October 21<sup>st</sup>, students had the opportunity to meet with and talk to successful women with a wide variety of experiences in the academic and professional world, including NJSGC's K-12 Program Coordinator/Sea Grant Program Associate [Diana Burich](#) and Coastal Ecology Extension Agent [Dr. Amy Williams](#).



Read more about this event from [The Two River Times](#).

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## The Investors Foundation Supports NJSGC Homeowner's Handbook

NJSGC is pleased to acknowledge the [Investors Foundation](#) for their generous support of NJSGC's "Homeowner's Handbook to Prepare for Natural Hazards." This document will provide useful tips regarding readiness for natural hazards that may affect the Garden State, including hurricanes and flooding.

*The Investors Foundation assists organizations in New Jersey, New York City, and Long Island that invigorate their local communities with civic-minded initiatives focused on the arts, education, health and human services, youth programs, and more. The Foundation's already given more than \$16 million to hundreds of worthy causes.*

This project is modeled from a manual first published by the [University of Hawai'i Sea Grant](#). For future updates on this project in New Jersey, please visit [njseagrant.org](#).



## ***NOAA Aquaculture Grant Supports New Jersey Research***

NOAA recently announced 32 research grants totaling \$9.3 million for projects around the country to further develop the nation's marine and coastal aquaculture industry.

NJSGC has been awarded a portion of this funding to support *Establishing Shellfish Hatchery Biosecurity Certification Standards to Facilitate Interstate Transport of Shellfish Seed*. The goal of this project will be to establish and implement a shellfish hatchery biosecurity certification protocol to inform regulators reviewing requests for the transfer of shellfish larvae and seed. The researchers will accomplish this by developing and implementing a protocol that specifically assesses the biosecurity of selected products that have not yet been exposed to local waters that may contain pathogens. The researchers envision this as an initial step toward removing a significant impediment to shellfish aquaculture production and commerce which is the fear that any transfer of shellfish may lead to the spread of shellfish diseases.



*Oysters being grown using the rack and bag system on Delaware Bay.*

The principal investigator for this project is [Dr. David Bushek](#), Director and Associate Professor, Haskin Shellfish Research Laboratory, Rutgers University. His co-principal investigator is Ms. [Lisa Calvo](#), NJSGC's Shellfish Aquaculture Program Coordinator.

*"This country, with its abundant coastline, should not have to import billions of pounds of seafood each year. These grants will promote aquaculture projects that will help us reduce our trade deficit in this industry."*

*- Secretary of Commerce Wilbur Ross*

The National Sea Grant College Program invested \$11.5 million in aquaculture last year, resulting in \$90 million in economic impacts, including supporting 900 businesses and 1,800 jobs.

NOAA initially received 126 proposals requesting nearly \$58 million in federal funds, of which 32 projects were chosen. For a complete list, including short descriptions of each awarded grant project, please click [here](#).

# EXTENTION NEWS

## NJSGC Agents Contribute to Award-Winning “Building Ecological Solutions to Coastal Community Hazards” Guide

The [Building Ecological Solutions to Coastal Community Hazards](#) guide (BESCHH) was produced by the [National Wildlife Federation](#) in partnership with the [New Jersey Department of Environmental Protection](#) (Office of Coastal and Land Use Planning) with financial support from the [U.S. Department of the Interior](#) and administered by the [National Fish and Wildlife Foundation](#) as part of the Hurricane Sandy Coastal Resiliency Competitive Grant Program.



*It is our hope that by highlighting ecological solutions to NJ's coastal hazards, we can help communities prepare and adapt to ongoing and future changes, strengthening long-term coastal resilience for both people and wildlife.*

*This guide advances practices that can help coastal communities to become safer and more sustainable in ways that work with, rather than against, nature.*

NJSGC's Coastal Processes Specialist [Dr. Jon Miller](#) and Coastal Ecology Extension Agent [Dr. Amy Williams](#) worked closely on this project through the NFWF grant, and were recently acknowledged for their outstanding contribution.

Following the publication of this user-friendly guide, DEP and its partners were granted the prestigious planning award for “[Outstanding Community Engagement or Education](#)” award (nominated by the [American Planning Association New Jersey Chapter](#) and [Sustainable Jersey](#)). This honor recognizes that the BESCHH initiative resulted in significant advancement of community comprehension of planning issues and storm resiliency.

The guide has already produced successful results throughout Monmouth, Ocean, and Cape May Counties.

Please visit NWF's '[Coastal Solutions Guide](#)' website for more information.

More accolads for BESCHH – [Brigantine recieves “living shorelines” best-practice award](#).

## **Project PORTS Celebrating 10 Years of Education & Oyster Restoration**

Project PORTS (Promoting Oyster Restoration through Schools) gives pre-college students hands-on experience in environmental stewardship firsthand while helping to restore critical oyster habitat. According to NJSGC Shellfish Aquaculture Program Coordinator [Lisa Calvo](#), also of Rutgers University Haskin Shellfish Research Laboratory (HSRL):

“The program is founded on the belief that stewardship grows from an underlying appreciation and understanding of the environment.” (via [SEBS/NJAES Newsroom](#)).



*The oyster is a keystone estuarine organism recognized for its ecological role in improving water quality, creating complex structural habitat, and enhancing fisheries production. The oyster has also served as a principal fishery, shaping the economy and culture of communities along the Delaware Bay shore and other coastal areas.*

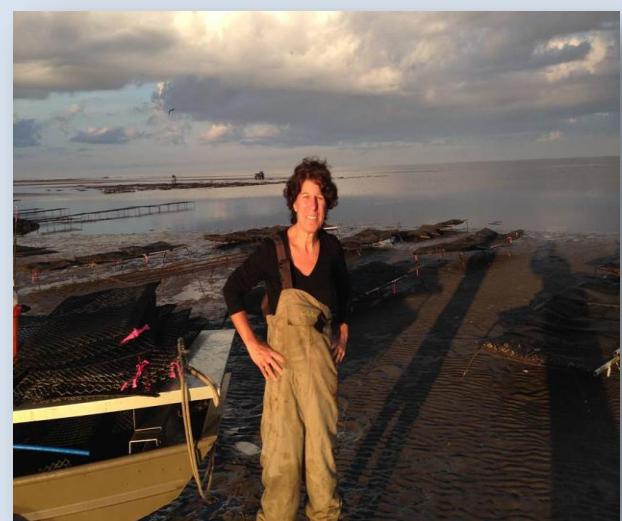
~ Project PORTS

So far, thousands of young participants from 30 partner schools have constructed over 29,000 shell bags that are now home for more than 30 million young oysters. As a direct result, students are more environmentally engaged and aware, especially in regards to ecosystem complexity.

To learn more about this program, please visit [Rutgers' Newsroom](#) (a product of the School of Environmental and Biological Sciences [SEBS] and New Jersey Agricultural Experiment Station School [NJAES] Office of Communications and Marketing).

Ms. Calvo was recently featured in the NOAA article entitled “Sea Grant Extension Agents Support Aquaculture Growth across America.”

Read the full story [here](#).



## ***Sea Grant Extension Assembly & Communicators Meeting 2017***

During the first week of October, NJSGC's Associate Director for Sea Grant Administration/Director of Research & Extension [Dr. Peter Rowe](#) and Communications Specialist [Danica Bellini](#) traveled to the West Coast to attend Sea Grant's biennial networking conference hosted by [Oregon Sea Grant](#). The three-day event was held in the picturesque city of Astoria, located on the Columbia River near the Pacific Ocean. Members from all 33 programs of the national network were in attendance.

Presentation topics and breakout discussions revolved around several informative sessions, including:

- ‘Planning for and Reacting to Crises: Lessons Learned from the Budget Situation’
- ‘Mindfulness and Stress Management’
- ‘Managing a Communications Program’
- ‘Future Scenario Planning: How Should Sea Grant Adapt?’



The conference concurrently took place with the 2017 [Sea Grant Academy](#), where K-12 Program Coordinator/Sea Grant Program Associate [Diana Burch](#) represented NJSGC.

Attendees also had the opportunity to explore the surrounding area, including several field trip options to local wonders like Cannon Beach and Washington's Cape Disappointment State Park.

To view more photos from the conference, please visit Oregon Sea Grant's official [Flickr](#).

## **Rip Current Awareness Makes a Splash at Ocean City Green Fair**

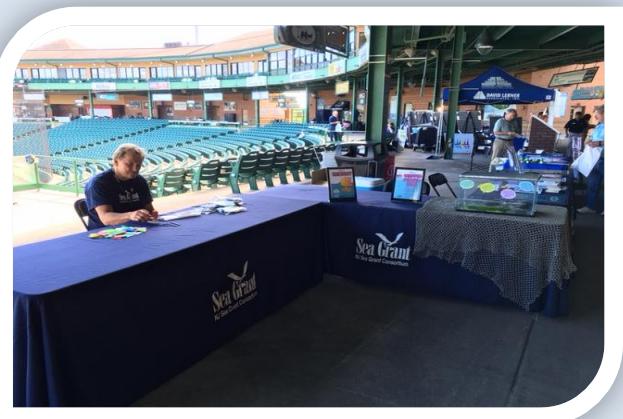
NJSGC Communications Specialist Danica Bellini presented Dr. Amy Williams' popular '[Ocean Hazards: Rip Currents vs. Sharks](#)' display to help the public prepare for "local summer" at the Jersey Shore back in August. The community-wide event, sponsored by the City of Ocean City and the Ocean City Environmental Commission, featured over 20 exhibitors with the intent of "educating and encouraging people of all ages to adopt a more sustainable lifestyle."

For more information on NJSGC's Rip Current Awareness program, please click [here](#).



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## **NJSGC Sightings**



A symposium, *Advancing Shellfish Aquaculture and Red Knot Conservation in Delaware Bay, New Jersey* was coordinated by NJSGC on September 27 and 28. Symposium presenters and attendees discussed the science and policy of intertidal oyster culture, horseshoe crabs, and the red knot, a threatened species.

NJSGC hosted "Kids Cove" at the 2017 [Jersey Shore Boat & Sale Expo](#) held at First Energy Park in Lakewood, New Jersey in late September. "Kids Cove" featured interactive marine science learning activities for youngsters attending the Expo.



# Hurricane Sandy – Five Years Later

Hurricane Sandy made landfall on New Jersey as an extratropical cyclone on October 29, 2012. Deemed the most intense storm of the 2012 Atlantic hurricane season, the devastating impacts of Hurricane Sandy were felt statewide, including at Sandy Hook.

*The park officially reopened six months later on May 1, 2013. Although swimming and sunbathing were not allowed, cars lined-up at the gates at 4:30 am.*

*NJSGC's headquarters were temporarily relocated to Monmouth University and Jersey Printing in Atlantic Highlands.\**

*Sandy caused more than \$35 million in damages just at Sandy Hook alone.*

*Despite such destruction, the country's oldest working lighthouse located at the tip of Sandy Hook remained intact.*

*A tidal surge of more than 13 feet hit the narrow peninsula, leaving the Hook covered in sand and debris.*

*Two pieces of ordnance left from the area's former Army ammunition testing ground surfaced during the storm and restoration, but thankfully no explosions occurred.*

\*Thanks to both hosts for their generosity and warm welcome!

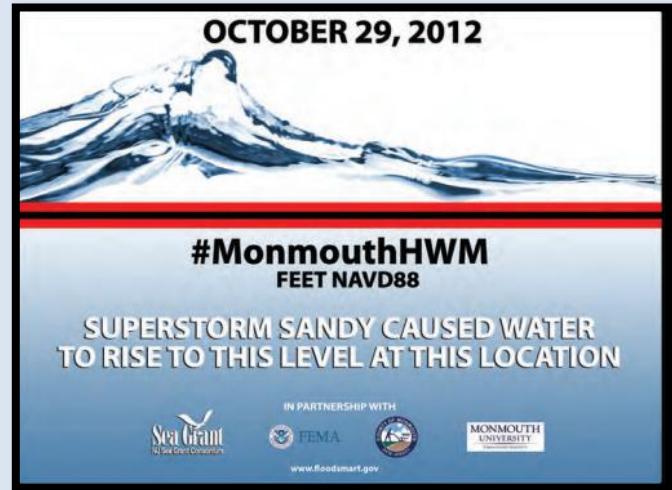
# Hurricane Sandy – Five Years Later

As part of NJSGC's ongoing mission to promote storm awareness and resilience, staff continue to work on projects that help keep people safe, informed, and prepared in the face of such disaster throughout the hurricane season.

Last year, in an effort to increase community awareness of flood risk following Hurricanes Irene and Sandy, the [High Water Mark Initiative](#) (HWM) was launched in Monmouth County as part of the National Flood Insurance Program. The Monmouth County High Water Mark [website](#) includes a detailed [story map](#) with more information and photos of ongoing resiliency efforts (please also visit [FEMA.gov](#)).

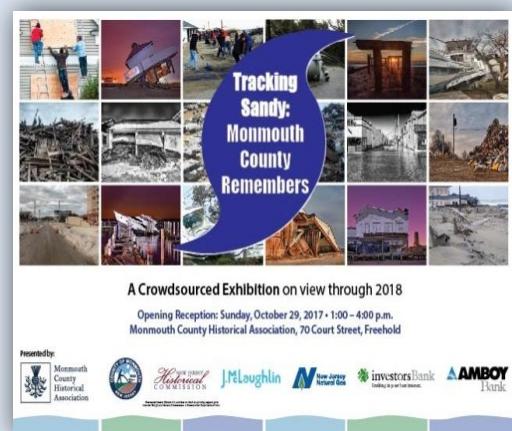
To help increase awareness of this initiative and to convey information about flood risk, safety, preparedness, and community resilience to students, NJSGC has worked with the county and its HWM partners to publish a [Teachers Guide to the Monmouth County High Water Mark Initiative](#).

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*Over the past year, MCHA has worked with Melissa Ziobro of Monmouth University to crowdsource this exhibition. Along with photographs and artifacts from the storm, stories of Monmouth County residents will be featured. Experience a Monmouth-Centric story of this natural disaster and remember our shared history on the fifth anniversary.*

The exhibit will run from October 29<sup>th</sup> (opening reception) through October 2018. NJSGC Education Associate Mindy Voss and Coastal Ecosystems Extension Agent Dr. Amy Williams both contributed to the exhibit.



# Web Wanderings

## National Sea Grant Office Launches New Website Design

The official [NOAA](#) website for the National Sea Grant College Program premiered a “[fresh look](#)” in September. Six months in the making, the site’s homepage now “focuses on impact stories and annual metrics to tell Sea Grant’s story.” Each of the 33 Sea Grant programs, including [NJSGC](#), also have easy-to-navigate main feature pages.

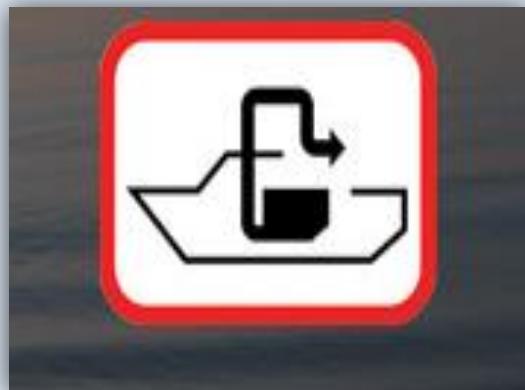


The URL address remains the same (<http://seagrant.noaa.gov>), so go check it out!

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## Boating Resource Updates

The New Jersey Clean Marina Program now supports over 40 certified local establishments! View the full list of all participating facilities [here](#).



The Earle Navy Pier Recreational Boating [fact sheet](#) is now available on [njboating.org](http://njboating.org), where boaters can also find more information regarding fishing and marine services.

# In the News

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So many creatures wander the trails of Sandy Hook, even during the colder offseason months. Check out this [Atlantic Highlands Herald](#) feature on the Yellow-Rumped Warbler! For more information on key species of the NY/NJ Harbor Estuary, please visit NJSGC's [All Hands on Deck](#) program.



*Found on social media...*

Dr. Amy Williams was interviewed as an expert scientist with second graders from [Tabernacle Elementary School](#) as part of the students' Global Climate Project. Check out her green screen "talk show" segment on [Facebook](#)!

Why should students come visit NJSGC? Just take a look at [njfamily.com](#)'s list of "best field trips in the area" – we're listed under "The Coastal Experience!"



# Stay Connected with NJSGC!

Follow us on [Facebook](#), [Instagram](#), and [Twitter](#) and be sure to get involved with these fun hashtags!

#SandyHookMemories

#LocalsSummer2017

#MonmouthHWM

