

NCCOAST.ORG | Working Together for a Healthy Coast | SPRING 2023

OUR COAST

**AUGUST 5, 2023
THE PELICAN AWARDS
& TASTE OF
THE COAST CELEBRATION**

**PROJECT UPDATES
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North Carolina
Coastal Federation
Working Together for a Healthy Coast

THIS EDITION OF *OUR COAST* CONTAINS QR CODES.
SCAN THESE WITH YOUR PHONE'S CAMERA TO ACCESS THE LINKS!

LETTER FROM THE DIRECTOR

Change is Always in the Wind

There wasn't much cold weather this winter along the North Carolina coast. Then just as March roared in like a lion, pine green pollen blanketed everything.

Many people thought the pollen was heavier than ever – just like they see tides getting higher, and more extreme droughts and floods.

No doubt change is in the wind—but that's always the case along our ever-dynamic coastline.

In the context of this ever-changing world, the North Carolina Coastal Federation seeks to keep our coast healthy and productive in ways that address its economic, social, and quality of life challenges. This is a tough assignment. Not only is the climate changing, but rapid population growth and land use changes endanger our natural coastal environment.

Many land uses negatively impact the health and productivity of our fragile coast. It's a misperception to conclude that our flat coastal landscape limits the amount of sediment and pollution that flow downstream. Take a trip with me on many of our tidal creeks and rivers, and you'll see deep deposits of mucky silt and sediment. Research by UNC scientist Dr. Antonio Rodriguez shows that over the past half century, nearly as much sediment and silt accumulated in the coastal creeks he studied as settled in these waterways during the previous 200 years.

This type of environmental degradation is hard to prevent and even harder to fix. That's why at the Federation we focus a lot of resources on protecting and restoring working lands and natural areas. These properties offer large-scale opportunities to enhance the health

and productivity of our coast.

We just completed a 23-year project that restored and permanently protected nearly 6,000 acres of wetlands in the headwaters of North River in Carteret County. Water quality and fisheries are better off because of this massive project. Now we're attempting to add 800 more acres to this Preserve to provide even more water quality benefits. Nearby, in partnership with the North Carolina Coastal Land Trust, we have plans and funding to restore hydrology on 1,400 acres along the Newport River. Similar efforts in other nearby counties engage private landowners, local governments and federal and state governmental agencies to enhance tens of thousands of acres of previously drained and modified land. These projects improve water quality and reduce flooding.

Our work combines oyster restoration, living shorelines, and stormwater retrofit and even marine debris removal to make coastal communities and their surrounding natural ecosystems healthier and more resilient to weather extremes. These real world restoration projects also help to shape and improve our environmental laws, policies and rules, and encourage even more funding from state lawmakers and government agencies to expand this work.

And, it's very encouraging that landowners now routinely contact the Federation to explore donating



conservation easements on their lands. Many of these folks are property rich and cash poor. They are motivated to do something to maintain our coast's natural heritage simply because they love our coast. They are environmental heroes in my book.

You might notice that often fences around fields are pushed outwards by cows putting their heads through the wires seeking greener pastures. Despite what we've done to protect and restore the coast over the past four decades, here at the Federation we feel much like one of these cows as we seek out the next opportunity to advance our work. Given the pace of land use changes, there is real urgency to do as much as we can as fast as possible.

It's a privilege to work with so many caring and dedicated people who help us do our jobs. Thank you for your support. We depend upon you to protect and restore our coast.

A handwritten signature in black ink that reads "Todd Miller".



**North Carolina
Coastal Federation**
Working Together for a Healthy Coast

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COASTAL HAPPENINGS

Spring Break Students Lend a Hand

In March the Federation hosted students from the East Carolina University's Alternative Spring Break program at our offices in Carteret County. The group spent their week off from classes bagging oyster shells for restoration projects along with local business leaders, and weeding and maintaining school rain gardens.

They also helped clean a state park beach of debris, and set up the Federation fence at its community garden.



Oyster Roasts Celebrate our Coast

The Wanchese office brought back the Hatteras Island Oyster Roast in February after a 2 year hiatus. The event sold out with around 400 people even on a cold, windy day. It was a wonderful roast featuring wild caught NC oysters, other great food, and live music. The shells from the roast will now go back into the water to restore oyster reefs.

In March, over 200 guests joined the Federation for A Roast for the Coast at Waterman's Brewing Company in Wilmington. Participants enjoyed live music, an auction, great eats, and of course lots of oysters. This event's proceeds will support local oyster restoration projects in the Lower Cape Fear River.

Coastal Specialist and Resiliency Planner and Manager Advancing Federation Programs



Victoria Blakey is the Federation's Northeast Region's Coastal Specialist. She holds a Bachelor of Science in Environmental Science with a specialization in Environmental Education and Interpretation from Bowling Green State University. Victoria is a Michigan native but fell in love with the North Carolina coast while working as a part-time park ranger at Hammocks Beach State Park. Victoria has become an integral part of the Federation's team leading our oyster shell recycling efforts in the northeast coast, helping organize the 2023 Oyster Summit among many other things.



April Hall joined the Federation this year as Coastal Resiliency Planner and Manager. She works on coastal restoration projects such as living shorelines, large-scale marine debris cleanups, and conservation monitoring in the Central Region. April holds a master's of Science in Environmental Science from California State University at Fullerton, and a Bachelor of Science in Environmental Studies from the University of North Carolina at Wilmington.

Creating Coastal Stewards

The Landfall Foundation supported, Creating Coastal Stewards program has reached almost 500 K- 12 students across New Hanover and Brunswick County. Through hands-on, interactive activities and service work, students, teachers, and parents learn how to protect and restore our coast through stormwater prevention, estuarine shoreline restoration, oyster shell recycling and marine debris prevention and removal. During one program, Brunswick County students helped maintain the living shoreline at Veterans Park in Oak Island. They also removed over 400 pounds of marine debris from the shoreline there.

Two Events, One Day

Join us Saturday Aug. 5 for the Pelican Awards or the Taste of the Coast Celebration.

Even better, come to both!

See back cover for more information.

Federation makes National News

National Public Radio recently aired a WUNC segment on the Federation's completed project at North River Wetlands Preserve.

The 6,000-acre restoration project is among the largest of its kind in the nation.

Listen Here

This edition includes QR Codes. Scan this code with your phone's camera to access the link.





Agencies Join in Support for Increase Water Quality Funding

The North Carolina Soil and Water Conservation Commission joined the N.C. Environmental Management, Coastal Resources and Marine Fisheries Commissions in adopting resolutions calling for increased funding to expand the state's cost-share programs to help landowners reduce nutrient runoff from rains and storms. Excessive amounts of nitrogen and phosphorus entering the State's coastal waters are significantly contributing to costly water quality problems, according to the resolutions.

The Coastal Habitat Protection Plan Amendment approved in 2021 calls for voluntary measures to reduce nutrients, but the funding for many cost share programs has decreased. The resolution emphasizes the importance of these programs for landowners in both rural and urban areas, especially those near coastal waters and waterways that flow into them. Thus, urging for

an increase in available funding for these programs.

Carolina Beach State Park Marsh Restoration Underway

The Federation and the N.C. Division of Parks and Recreation are partnering to restore 10 acres of valuable wetlands in a highly disturbed area of Carolina Beach State Park. The area has been taken over by invasive *Phragmites australis*, which outcompetes native marsh plants. The project involves removing the invasive plant, regrading the site, and planting native grasses to restore natural wetlands.

"This project will restore valuable brackish marsh habitat and serve as a case study in the removal of the highly invasive *Phragmites* for other areas along the coast," Explains Bree Charron, Federation Water Quality Program Director, and Coastal Engineer.

The land is owned by the U.S. Department of Defense and managed by the Military Ocean Terminal Sunny Point, with Carolina Beach State Park leasing and

maintaining it for wildlife and visitor use. This restoration project is one of ten funded through the Natural Resource Damage and Restoration (NRDA) Plan for the nearby Kerr-McGee Chemical Corporation EPA Superfund Site in Navassa.

New Statewide Committees to Review Flood Reduction Frameworks and Policies

The Federation is collaborating with stakeholders to provide input for the North Carolina Flood Resiliency Blueprint, a statewide initiative to develop online decision-making tools and associated planning to address flooding for communities in North Carolina's River basins. The N.C. Division of Mitigation Services is leading the development of the Blueprint and have contracted with consultant AECOM to see the project through. Federation staff are serving on

several subcommittees working on the project.

The General Assembly appropriated \$20 million to develop the Blueprint, which is considered to be a first-of-its-kind program in North Carolina representing the largest statewide flood mitigation investment in state history. When complete, the Blueprint will, "lead to a set of projects and funding strategies that the State and other government entities can implement to reduce flooding, mitigate the impacts of flooding when it does occur, and recover afterward", according to the Division.

Establishing effective watershed management focusing on protecting, restoring or mimicking natural water systems to reduce flooding and improve water quality was a key recommendation in the Action Plan for Nature-Based Stormwater Strategies, which was developed by the Coastal Federation with the support of The Pew Charitable Trusts.





NCDOT Builds its first Living Shoreline for Coastal Resiliency

In the largest project of its kind, the North Carolina Department of Transportation (NCDOT) and the Federation are working together to install living shorelines at three locations to reduce shoreline erosion and protect N.C. Hwy 24 in Cedar Point and Swansboro. The project will also restore valuable salt marsh and oyster habitats.

Instead of using traditional shoreline stabilization methods, NCDOT recognized the viability of living shorelines as an alternative through the Federation's numerous successful projects. The agency's commitment to more resilient erosion control options led them to partner with the Federation and give living shorelines a try.

Since 2020, the Federation's Living Shoreline Program Director, Dr. Lexia Weaver, has worked with NCDOT and their contracted engineer, SWCA Environmental Consultants, to develop a plan for the three sites and to secure funding and permits. The three living shorelines will span 1,700 feet in total.

Native Shorelines, T.A. Loving Company, and Sandbar Oyster Company are all involved with the project. A wide range of materials are being used including Native Shoreline's patent-pending QuickReef material and Sandbar Oyster Company's patented Oyster Catcher™ substrate. These materials, along with salt marsh plants, will be installed landward of the sill following construction. The third 500-foot living shoreline section will be

constructed in the fall.

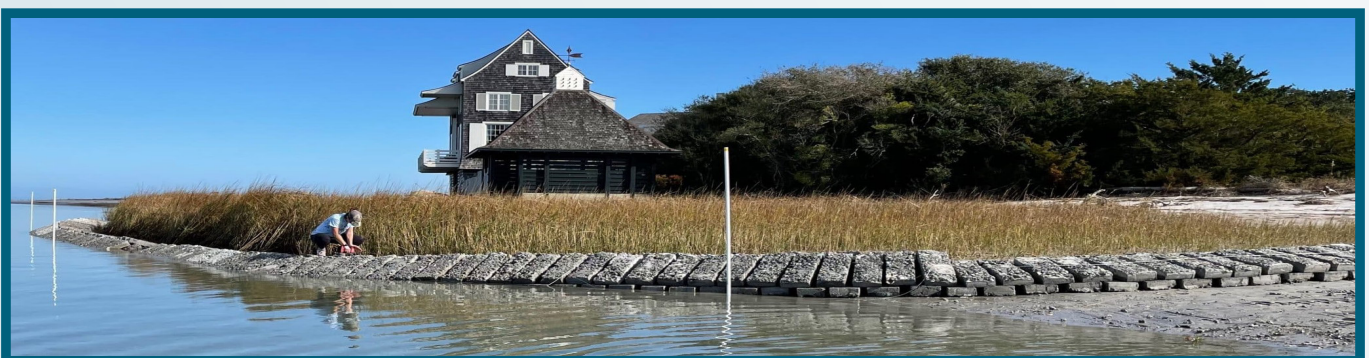
"Once complete, the living shorelines will stabilize, protect and maintain the bank along the highway while also restoring fisheries habitat with wetlands and marsh. Ultimately, we will have a more resilient system in place," said Federation Living Shoreline Program Director, Dr. Lexia Weaver. The National Fish and Wildlife Foundation awarded a \$1.7 million grant to the Federation to fund part of the project. The NC General Assembly through Session Law 2019-251 is supporting additional project costs matched with NCDOT Bridge Maintenance Funding.

In other living shoreline news, The Federation is also continuing the successful living shoreline cost-share program and is working with its partners to install large-scale living shorelines at Sugarloaf Island and at Carolina Beach, Fort Macon, Jockey's Ridge, and Hammocks Beach state parks just to name a few.

Collaborating on New and Innovative Living Shoreline Construction Materials

The Federation and Albemarle-Pamlico National Estuary Partnership are leading

the Living Shoreline Steering Committee, collaborating with scientists, agency representatives, and organizations to advance living shoreline use in North Carolina. The committee, which meets quarterly, coordinates living shoreline education and outreach, implementation, and research on new methods and materials. Recently, the committee hosted presentations by several companies on their living shoreline construction products. The companies included Atlantic Reefmaker, Coastal Technologies Corp, EConcrete, Living Shoreline Solutions, Native Shorelines, Natrx, ReadyReef Inc., Sandbar Oyster Co., and SoxErosion. The Federation is working with its partners to test and study these alternative materials against traditional methods. A report on the various construction material options was highlighted in this CoastalReview.org article. Scan the QR code below to read more.





Resilient Coasts for Future Roasts convene Oyster Experts

On May 9- 10 the Coastal Federation and oyster lovers will convene at the North Carolina Oyster Summit in Raleigh. The Summit will celebrate and showcase recent oyster accomplishments and coalesce the partnerships that will accelerate future oyster work. For nearly 20 years, guided by the NC Oyster Blueprint, key stakeholders have partnered to restore, protect and grow our state's oyster resources and are excited to share their great work. This year's theme is Resilient Coasts for Future Roasts.

The Summit will celebrate North Carolina as a national leader in oyster restoration, protection and farming efforts. The agenda will include presentations and engaging conversations with key legislators, state, and national partners, researchers, managers, growers, harvesters, restaurants, restoration practitioners, and educators about reaching the 500-acre oyster sanctuary goal as well as

advancing living shoreline and water quality restoration efforts. They will also report on efforts to ramp up the state's aquaculture industry, increase wild harvest and cultch planting and discuss work to increase oyster shell recycling and recognition via the N.C. Oyster Trail. In addition, the evening Legislative Reception will feature an oyster shucking showdown with Jay Gallant, National Oyster Shucking Champion, and of course fresh N.C. oysters.

A special unveiling of a recent \$15 million grant awarded by the National Oceanic and Atmospheric Administration to the North Carolina Coastal Federation will take center stage during the summit.

\$15 Million Secured to Advance Oyster Work

The Federation was recently awarded a four-year, \$15 million grant from the National Oceanic and Atmospheric Administration (NOAA) to build additional oyster sanctuary reefs in partnership with North Carolina Division of Marine Fisheries. The grant will result in 120 acres of reef being added to the Senator Jean Preston Oyster Sanctuary Network, reaching the 500-acre goal for the sanctuary network.

In addition, the funding will support a new collaboration between N.C. State University, N.C. Central University and the Federation. Through this partnership, four students of color and/or underserved students, will be funded to seek their advanced degrees, masters or PhD., in marine biology or related fields. Undergraduate students from N.C. Central will also be given immersive experiences at the coast each fall during the grant period.

Two additional elements of the grant include, working with the Research Triangle Institute to evaluate the

economic benefits of the restoration work and working with the N.C. Aquarium on Roanoke Island to advance an oyster themed education display.

Oyster Kayak Adventures Held in Northeast Coast

This spring the Federation joined forces with Outer Banks Kayak Adventures to offer Oysters Uncovered: The Kayak Edition. The on-the-water trips took place on the beautiful shores of Broad Creek. Participants toured the Federation's demonstration oyster lease and living shoreline. As part of the excursion, paddlers explored the pristine coastal marsh and unique inhabitants of the creek and learned about oyster aquaculture techniques before dining at Blue Water Grill & Raw Bar for a sampling of a half-dozen North Carolina oysters and Blue Water's signature oyster shooter to complete a memorable day. Thank you to Outer Banks Kayak Adventures for donating the kayaks and guiding the trips. The Federation's Coastal Specialist, Victoria Blakey led the fun educational sessions as part of these signature events.





Need for More Ordinances Found in Phase I of Coastal Microplastics Study

The Federation released a report on citizen science field experiments conducted along the southeast coast. The study's finding reinforces the need for

additional bans on the use of unencapsulated polystyrene in floating docks. From May to October 2022, dozens of volunteers collected 295 samples from oceanfront beaches looking for tiny pieces of debris called microplastics. Their samples showed that nearly 85 percent of the tiny debris found were pea-sized foam beads, likely from unencapsulated polystyrene floats used for dock and pier construction. These tiny beads are nearly

impossible to remove and the material is non-biodegradable, meaning it never goes away, making the need to reduce the chance of them getting into the coastal system even more critical. Thirty-three percent of microplastics found in marine wildlife, including a number of commercially important seafood species, contain polystyrene beads.

That's why actions of local governments in the form of ordinances are so important. By taking action to ensure that all foam dock floats in their community are encapsulated, Towns are reducing the debris at the source. It's a win for property owners, as well, while the encapsulated floats may be slightly more expensive up front, they last many years longer than their traditional counterparts and keep the entire wooden structure in better shape for a long time to come.

Marine Debris Accomplishments Report Shows We're Not Just Talking Trash

The North Carolina Marine Debris Action Plan has shown its effectiveness through the recently released 2022 Marine Debris Accomplishment Report. The report highlighted significant achievements such as the removal of 1,983 lost crab pots by 48 fishers, preventing hazards to boaters, wildlife, and other fishermen. Additionally, 326.59 tons (652,180 pounds) of large-scale marine debris, including pressure-treated and creosote lumber, plastic and polystyrene floats, building materials, and household trash were removed. Volunteers also helped remove 1,200 pounds of small-scale debris. The N.C. Wildlife Resources Commission, N.C. Division of Coastal Management, and the Federation also removed 95 abandoned and derelict vessels from coastal waters and marshes.

Efforts to prevent future debris, included working with four coastal towns to develop ordinances prohibiting the use of unencapsulated polystyrene in dock and pier construction, to prevent pollution from free-floating foam fragments and beads. We applaud Topsail Beach, Surf City, North Topsail Beach and Wrightsville Beach who all took action in 2022 adopting new ordinances to ban the use of unencapsulated foam thereby reducing the introduction of new polystyrene into the coastal ecosystem. Lastly, The Federation educated 7,651 K-12 students and 2,560 educators about the impacts of marine debris and how to prevent and reduce it. As can be seen, the Action Plan is not just a document on a shelf. Read the full report through the QR code below.





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Make Plans to Join us Saturday August 5th for Two Special Events:

The 2023 Pelican Awards

Carteret Community College's Jocelyn Hall, Morehead City

Join us for this free afternoon program honoring those who have gone above and beyond for the coast this year.

The Taste of the Coast Celebration

Crystal Coast Civic Center, Morehead City

Get your tickets today for this fun evening celebration of all our coast has to offer, including great seafood, live music, a coastal auction, and more!

NEW in 2023:
Two Separate
Events!!

REGISTRATION FOR BOTH EVENTS OPENS MAY 1ST!



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