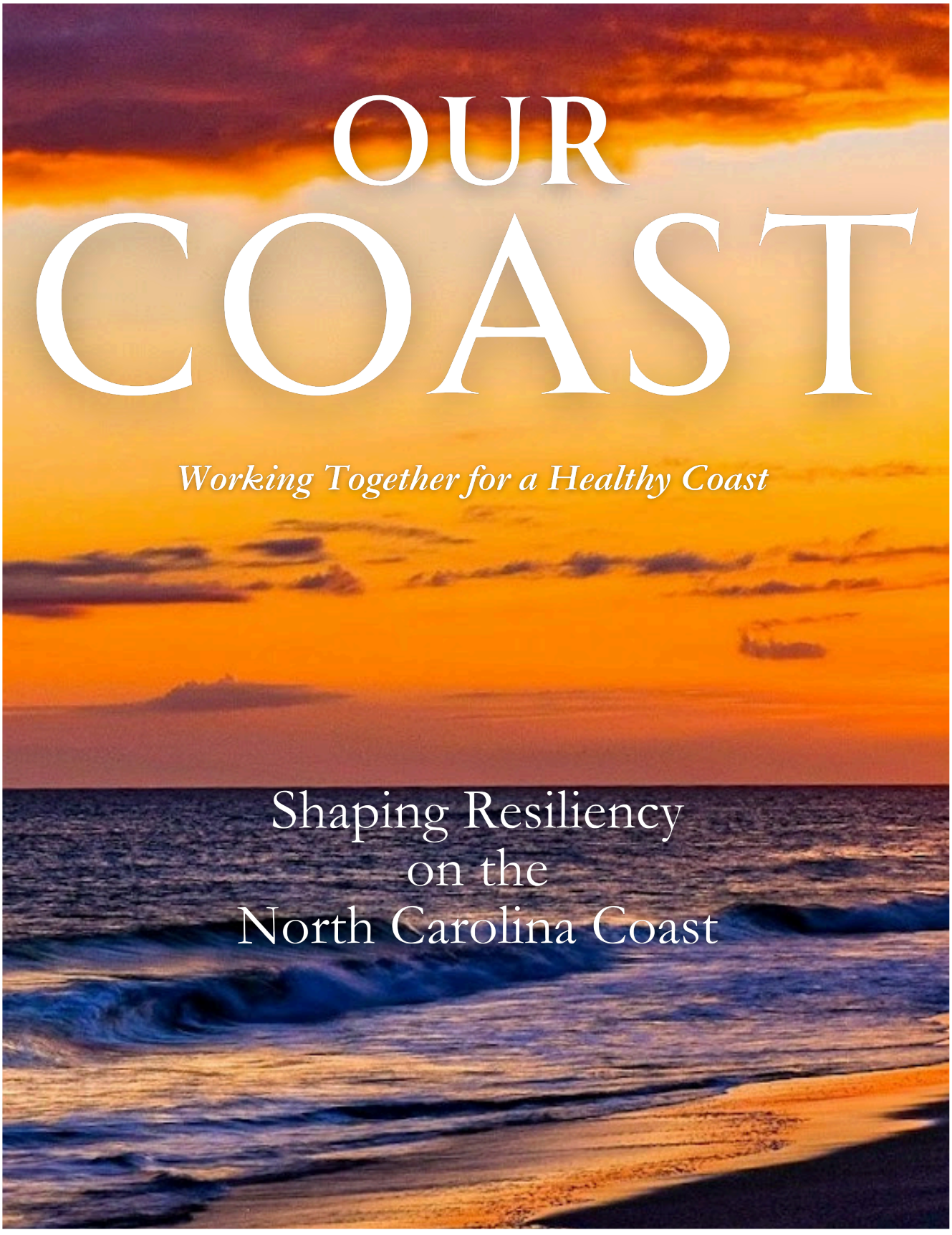
2025 Edition 3



OUR COAST

Working Together for a Healthy Coast

Shaping Resiliency on the North Carolina Coast

NCCOAST.ORG

Executive Director Letter

As we approach the long days of summer, I invite you to take a break from the daily hustle and reconnect with some special natural areas you've helped us protect and restore along the coast. Over the years, the Coastal Federation has proudly led efforts to preserve and restore tens of thousands of acres of sensitive coastal lands, many once threatened by development or degraded by past land practices.

Thanks to your continued support and to our many partners, these places are now protected and open for public enjoyment, and there's no better time than this summer and fall to explore them. Whether you're seeking solitude, scenic hikes, or a family-friendly outdoor adventure, these sites are a testament to what we can accomplish together.

Here are just a few places we hope you'll visit:

Morris Landing

Acquired and restored by the Coastal Federation, this 52-acre site on Stump Sound includes a public dock for kayaking and fishing. Since 2005, the Federation has restored critical habitats and shellfish areas by installing living shorelines, oyster reefs, and removing marine debris.

Hammocks Beach State Park & Bear Island

The Coastal Federation has worked for decades with the State Park to demonstrate water quality protection, expand park lands, and create living shorelines and demonstration sites. Bear Island, an undeveloped barrier island, offers 4 miles of unspoiled beaches. Visit by kayak or canoe and explore Huggins and Jones Islands, added to the park through the Federation's efforts.

Patsy Pond Nature Trail

Managed by the Coastal Federation with the Croatan National Forest, the trail winds through Longleaf Pine Flat Woods, home to longleaf pines, low-growing shrubs, and tranquil ponds. Visitors may spot the endangered red-cockaded woodpecker and other species.

Emerald Isle Woods Park

Partnering with the Town of Emerald Isle, the Coastal Federation helped acquire this 40-acre site in 2002. Funding from state agencies supported the purchase of the once-threatened property. The park's wetlands and buffers help filter pollutants and reduce flooding. It's one of the few remaining places to hike in a rare maritime forest.

Hoop Hole Creek

This 32-acre Atlantic Beach site offers quiet trails, scenic views, and educational programming. Slated for development in the 1990s, the property was purchased by the Coastal Federation and became the first land acquisition under the state's new Clean Water Management Trust Fund (now NC Land and Water Fund).

North River Wetlands Preserve

The Coastal Federation has spent over a decade protecting and restoring this 6,800-acre preserve. It's one of the largest wetland restoration efforts in North Carolina and nationally. The goal: return farmland to forested, freshwater, and tidal wetlands, improve water quality, and reopen waters to shellfishing.

Lake Mattamuskeet

This 40,000-acre lake is North Carolina's largest natural lake and a key site on the Atlantic Flyway. A plan led by the Coastal Federation and local stakeholders has guided over $20 million in investments to help restore and protect the lake from pollution and rising seas. Visit the Outfall Canal visitor center and enjoy the refuge's trails.

These places are more than scenic—they're thriving ecosystems, living classrooms, and natural filters that improve water quality. We're proud to share them and hope you'll take time this season to unwind, explore, and celebrate what we've accomplished together.

Thank you for being part of this journey. Visit our website for updates on additional places to explore.

-Braxton Davis

What's Inside

Check out the back cover for exciting upcoming events!

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Working Together We've ...

Filtered **Billions of gallons** of water

Restored **15,000 acres** of wetlands

Recycled **33,131 Bushels** of oyster shells

Removed **4.3 million pounds** of marine debris

WATER QUALITY

Salt Marsh Nursery Grows Restoration Potential

Enhancing coastal water quality can take many forms. This year, the Federation collaborated with Backwater Environmental to establish a sustainable salt marsh nursery that's the first of its kind.

The nursery marsh was created at North River Wetlands Preserve to support ongoing restoration efforts and serve as a reliable source of hard-to-find native marsh plants used for coastal restoration projects.

"The Preserve serves as a giant sponge for stormwater runoff before it reaches the North River and Jarrett Bay. This 1-acre addition provides a salt marsh buffer along Ward Creek, filtering outflow from Open Grounds Farms and providing valuable habitat for the abundance of wildlife we have at the Preserve," explained water quality program director Bree Charron.

Charron led the effort on behalf of the Federation, creating the plans and working with the landowner and construction partner, Backwater Environmental.

"We were excited to continue our longstanding partnership with Backwater Environmental. They have been involved at the Preserve since the first restoration project on site 20 years ago, restoring habitat from farm fields," said Charron.

Robert Osborne, President of Backwater Environmental, notes that the transition to work with Federation on the salt marsh nursery was a natural one.

"For us, it just makes sense; we greatly value the restoration of coastal habitats and the resiliency that the plants grown in this new marsh will provide to our neighboring communities. Having the opportunity to build a first-of-its-kind project is very exciting for our team," explained Osborne.

Following the construction of the marsh area, which required land clearing and leveling to allow for tidal flows, dozens of dedicated volunteers joined in on the project in late May, planting 20,000 plugs of salt marsh grasses.

The Federation will allow the plants to become well established before sustainably harvesting a portion for future restoration efforts along the coast. Charron said having these plants will help reduce our struggle to find plants for projects. "One of our biggest needs for a particular type of restoration is salt marsh plants. It can be difficult to source all the plants we need each year, so this project is set up to become a demonstration living nursery to generate salt marsh plant supplies," said Charron.

This year, the Federation is expected to install nearly 300,000 plugs of various types of salt marsh grasses at shoreline restoration sites.

Leave a Legacy for the Coast

Including the Federation in your will or estate plans is a simple way to ensure a healthy coast for the next generation. Visit *nccoast.org/give*.

SALT MARSH

Restoring Habitat and Stability on Black Duck Island

Living shorelines are effective nature-based solutions for erosion control that allow the natural movement of sediment and water, which is essential for maintaining healthy intertidal habitats. They utilize natural materials, such as salt marshes and oyster reefs, to create buffers that absorb wave energy, reduce erosion, and protect coastal areas and the ecosystems they support. This approach not only safeguards intertidal habitats but also preserves the beauty and ecological richness of our estuaries.

Black Duck Island is a remote 68-acre island near Oregon Inlet, known as "Island L" by the state of North Carolina. It got its name from a small group of Black Ducks that wintered on its northwest corner. Half of the island is privately owned and used for youth hunting and fishing trips organized by Cross Trail Outfitters (CTO), while the other half is owned by the North Carolina Wildlife Resources Commission and serves as a bird sanctuary.

Over the past 10 years, the island has experienced significant erosion due to storms and boat traffic, particularly on its southern and eastern shores.

The once gentle sandy beaches covered in native grasses have turned into steep cliffs with wax myrtle bushes falling into the water. This change has led to a decline in available nesting habitat for shorebirds and the disappearance of native salt marshes and shallow water pools.

To combat this erosion and restore the lost habitat, the island's owners have partnered with the Federation, utilizing North Carolina Land and Water Fund state-appropriated funding to construct a 2,535-foot granite living shoreline along the most severely eroded areas. The shoreline design includes breaks every 100 feet to allow for fish passage and water circulation, with a secondary short sill placed behind or in front of these breaks for added protection.

Construction of the granite offshore sill was completed by Coastal Wildlife Consultants, LLC, in August 2024, and in spring 2025, 16,500 marsh grass plants were planted landward of the sill to further stabilize the shoreline and create valuable habitat for wildlife. This living shoreline will evolve, gradually becoming more effective at stabilizing the shoreline and supporting plant and animal life.

OYSTERS

Supporting Half a Billion Oysters

In 2025, the Coastal Federation, the N.C. Division of Marine Fisheries and partners are set to complete construction on 40 additional acres of underwater oyster reefs as part of the Oyster Sanctuary Network in Pamlico Sound. Once that work is completed this summer, another major milestone will be met. The 17 sanctuaries that make up the network will collectively support more than half a billion oysters, which can filter millions of gallons of water every day and provide extensive fish habitats.

“The state of North Carolina is a leader in oyster restoration efforts. The collaboration and partnership that have helped us reach this milestone should be celebrated and cherished, explained Coastal Scientist and Oyster Program Director Erin Fleckinstein. “I’m proud to have played a small role in this work to restore half a billion oysters to the sound, helping to repopulate natural reefs, improve water clarity through the oyster’s filtering, and provide habitat for a myriad of other fish.”

The sanctuary system is carefully designed and adaptively managed based on extensive peer-reviewed research. This research shows that the sanctuary reefs now supply a significant quantity of oyster spat (baby oysters) that help maintain and grow productive and sustainable populations of wild oysters throughout the entire sound.

Based upon this research and ongoing monitoring of the constructed reefs by the N.C. Division of Marine Fisheries, new goals for sanctuary acreage beyond 500 acres are likely to emerge and be included in the next update of the N.C. Oyster Restoration Blueprint, a strategic plan focused on restoring and protecting oyster populations.

“With the conclusion of this project, we will reach the goals we set for ourselves…we will rely on the science provided by our research partners and input from our fishing community to set future goals to improve water clarity, fish habitat, and oyster spat production in the sound,” said Fleckenstein.

This work not only supports oyster populations and improves water quality, but the employment opportunities generated by this form of reef construction are also well documented. The economic benefits were originally evaluated after completing a large-scale reef-building project funded in 2009 and were updated in 2024. As part of the update, RTI International documented an impressive return on investment that oyster sanctuary creation can deliver, showing that every $1 spent generates $1.71 in benefits. Between 2013 and 2023, $20 million in public and private funding supported the creation of 159 acres of sanctuary habitat, created 143 additional jobs, and added $34 million to the coastal economy.

You can read the full economic report on our website.

This work is supported by grant funds from the National Oceanic and Atmospheric Administration’s Restoration Center and appropriations from the State of North Carolina.

MARINE DEBRIS

Building Better Docks to Withstand Storms and Safeguard the Coast

The 2025 Atlantic Hurricane season is upon us, and experts emphasize the importance of preparing your home and property well before a storm threatens our coast. One crucial step for coastal property owners is ensuring that their dock or pier is resilient enough to withstand strong winds and waves.

More than 85% of marine debris is caused by damaged or lost docks, piers, boathouses, and similar structures. Unfortunately, many of these structural failures are a result of substandard marine construction techniques-- including a lack of expertise, inferior materials, and shortcuts taken during the building process. Poor dock construction can lead to damage from storms and resulting debris that threatens the health and beauty of our fragile coastal habitats.

To prevent these impacts, it is essential to incorporate stronger resilient building practices in marine construction.

In 2023, thanks to the Federation's advocacy efforts, state legislators passed two significant measures aimed at reducing marine debris. First, the General Assembly enacted a groundbreaking ban on unencapsulated polystyrene, commonly used in floating dock construction. This new law requires polyesterene to be fully encapsulated in coastal counties, protecting ecosystems from the tiny foam beads that are often released when the fragile material breaks apart.

Second, the General Assembly included residential docks under the state's building code, ensuring they are constructed to withstand damage from extreme storms. The code sets clear standards for safe, resilient dock construction – from pilings to materials to environmental considerations – to better protect property owners and our coastal environment.

When combined, these initiatives significantly enhance a structure's resilience to storms and reduce marine debris.

Key elements of the code include:

- Structural Integrity: Ensuring the dock can withstand load and environmental stress, including uplift from floods.
- Material Standards: Using approved, weather-resistant materials.
- Construction Practices: Following best practices for installation.
- Environmental Impact: Minimizing ecological disruption during construction.

To help ensure your dock is code compliant and resilient:

1. Hire an Engineer to Work with your Marine Contractor
    a. Ensure the engineer is up-to-date with the North Carolina building code requirements since new provisions were adopted for residential docks and piers in 2022.
    b. Make sure the engineer has a close working relationship with the marine contractor building the dock.
    c. Always check credentials and references before hiring.
2. Design Approval
    a. Have the engineer ensure the dock design is reviewed and approved by local building code inspectors.
    b. Ensure the design complies with severe weather resistance design standards for coastal areas.
3. Material Selection
    a. Use materials that meet or exceed code requirements for durability and weather resistance.
    b. Confirm materials are suitable for marine environments.
4. Construction Monitoring
    a. Make sure your engineer regularly inspects construction to ensure compliance with approved designs.
    b. Ask for records to document these inspections, and verify that any deviations from design requirements were addressed promptly.

New!
Celebrate a birthday or other special event with our new build-your-own birthday fundraiser.
Celebrate your way while supporting the coast!

EDUCATION

Restoring the Coast One Lesson at a Time

Educating the next generation of coastal stewards and informing our communities about the challenges facing our coast, as well as how we can all contribute to ensuring the North Carolina coast thrives, is a core part of the Coastal Federation's mission. Our team of educators has been actively engaged across the coast over the past few months.

In our central region, Coastal Education Coordinator Rachel Bisesi worked with nearly 200 second grade students at White Oak Elementary School, teaching them how rain gardens function and encouraging them to roll up their sleeves and actively participate in maintaining these valuable stormwater features.

In the northeast region, Coastal Education Coordinator Sara Hallas-Heilmright collaborated with the town of Manteo to clear roadsides of trash and debris before it could be flushed into local waterways. With the help of dedicated volunteers, they removed hundreds of pounds of harmful litter.

Further down the coast in the southeast region, Coastal Education Coordinator Bonnie Mitchell led nearly 70 volunteers in a daylong effort to plant more than 5,000 plugs of wetland grasses as part of a restoration project at Carolina Beach State Park.

"Involving volunteers in wetland restoration not only strengthens our impact on the ground, but also builds a deeper connection between people and the natural spaces we're working to protect," explained Mitchell. "When volunteers get their hands dirty planting native species and restoring habitat, they learn firsthand the importance of this work and become powerful advocates for coastal conservation in their communities."

Our dedicated team of educators plays a vital role in every area of the Federation's work, and their strong ties to coastal communities and schools help demonstrate how it takes a collective effort to support a healthy coast.

Protect NC's Coast from Offshore Oil & Gas

North Carolina's 300-mile coastline powers a $6.8 billion tourism economy and supports thriving fisheries and rich marine life. But all of this is threatened by proposed federal plans to expand offshore oil and gas drilling. The Bureau of Ocean Energy Management (BOEM) is developing a new five-year leasing program and has not ruled out North Carolina and surrounding states along the East Coast. Drilling could bring devastating oil spills, harmful seismic blasting, and long-term damage to endangered species and coastal communities — all for negligible energy gain. North Carolina's coast is irreplaceable, and North Carolinians have repeatedly voiced overwhelmingly opposition to drilling. Now is the time to act. Stay informed by subscribing to the Coastal Federation so you can help demand: No offshore drilling. No seismic blasting. Not here. Not now. Not ever.

Donate Your Vehicle to Support the Coast!

The Federation is in need of a commuter vehicle - or another safe, functional vehicle that could be traded in. If you have a car or truck that you might be interested in donating, we'd love to hear from you.

North Carolina
Coastal Federation
Working Together for a Healthy Coast
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Celebrate the Coast this Fall!

Make plans to celebrate our beautiful and healthy coast with us this fall at three special events!

The Pelican Awards

September 20th
Morehead City

Join us in honoring this year's coastal champions in our annual awards ceremony

nccoast.org/awards

Taste of the Coast

September 20th
Morehead City

A festive waterfront celebration with wine and food pairings, fresh oysters, live music and a silent auction.

nccoast.org/celebrate

Roast for the Coast

October 24th
Wilmington

Enjoy fresh oysters and other seafood in a beautiful garden setting.

nccoast.org/roast