

New technology helps address old coastal erosion problems

Natrx and Native Shorelines recently partnered to solve a coastal erosion and permitting challenge along 700 linear feet of erosional homeowner properties on Clubfoot Creek, near Havelock, NC and the Pamlico Sound.

Native Shorelines, a division of Restoration Systems, offers its QuickReef™ living shoreline system comprised of a proprietary mixture of natural calcium carbonate materials, cemented together and arranged in the shallow waters of the intertidal zone.

Natrx's patented Dry Forming™ process is a breakthrough approach to providing sustainable, coastal infrastructure resilience tailored to individual site requirements through advanced manufacturing techniques.

Serious erosion from flood conditions in the Neuse River Basin was causing significant land loss for two property owners along Clubfoot Creek. Native Shorelines evaluated the site



conditions and worked with Natrx on a digital design for custom ExoForm structures compatible with the permit requirements and that interlock with QuickReef™ units. Natrx helped ad-

vance the project from digital design, to physical production proof, to permit application and approval in less than one week. Natrx then produced 233 of the custom, naturalistic ExoForm structures to interlock with the QuickReef product, which Native Shorelines installed quickly and efficiently.

Clubfoot Creek is a great example of using new technology to address coastal problems. Natrx is proud of the collaborative nature of this project, whereby its patented Dry Forming technology helped overcome permitting hurdles and cost-effectively solve coastal erosion issues. Natrx anticipates future collaborations with Native Shorelines, and is excited to work with other practitioners and innovators in the coastal resilience space.



Thanks to our Spring Conference sponsors



COASTAL SCIENCE & ENGINEERING



moffatt & nichol



From the chairman...

As chairman of the North Carolina Beach, Inlet and Waterway Association (NCBIWA), I'd like to welcome you to the Spring 2023 edition of our organization's quarterly newsletter and extend my sincere thanks to everyone who attended our spring local governments meeting that took place in Emerald Isle in May.

The event was very well attended by our members and featured an assortment of updates from some key players, including the U.S. Army Corps of Engineers, the U.S. Coast Guard, the North Carolina Division of Coastal Management and the North Carolina Division of Coastal Management, as well as many others.

The many important topics that were discussed throughout the two-day event included state and federal legislative and policy updates, tourism, funding opportunities, flood and coastal resiliency efforts, and environmental planning and design. Thank you to everyone who attended—and to all those whose presentations at the meeting support the NCBIWA's ongoing efforts to protect, restore and maintain North Carolina's coastline and coastal communities.

I'd also like to remind everyone to save the date for our fall conference, which is scheduled to be held Thursday, Nov. 16, through Friday, Nov. 17, at The Aloft in downtown Wilmington, North Carolina. Last year's fall conference was an incredible success, and I hope to see some new and familiar faces at the event in 2023. — **Bobby Outten, Chairman, North Carolina Beach, Inlet and Waterway Association**



BOARD OF DIRECTORS

- Chairman:** Bobby Outten
County Manager and Attorney, Dare County
- Vice-Chairman:** Jim Normile
Commissioner, Emerald Isle
- Treasurer:** Ken Willson
Coastal Protection Engineering, Wilmington
- Secretary:** Tammy Proctor
Tourism Director, Pender County
- Directors:**
- Merrie Jo Alcoke, Attorney, New Bern
 - Col. Steven A. Baker, Former Commander (Ret.), Wilmington District, USACE
 - Dennis Barbour, Charter Boat Captain & Former Mayor, Carolina Beach
 - Ned Barclay, Wilmington
 - Melvin Cooper, Commissioner, Town of Beaufort
 - Dan Dawson, P.E., Engineer, Wilmington
 - Carin Faulkner, Village of Bald Head Island
 - Bill Keller, Col. USMC (Ret.)/Onslow County
 - Tom Leonard, North Topsail Beach
 - James R. Leutze, Ph.D., Chairman Emeritus Chancellor Emeritus, UNC-Wilmington
 - Ike McRee, Currituck County
 - Cliff Ogburn, Southern Shores
 - Bill Rich, Hyde County
 - Todd S. Roessler, Attorney, Kilpatrick Townsend & Stockton LLP, Raleigh
 - Steven G. Smith, Mayor, Topsail Beach
 - Justin Whiteside, Assistant Town Administrator, Ocean Isle Beach
 - Dawn York, Moffatt & Nichol, Wilmington

EX-OFFICIO BOARD MEMBERS

- Christine Brayman
USACE, Wilmington District
 - Braxton Davis
Director, N.C. Division of Coastal Management
 - Kevin Hart
N.C. Division of Water Resources
 - Pat McElraft
Former State Rep., 13th District
 - Mike McIntyre
Former U.S. Rep. N.C. 7th Congressional District, Dir. Govt. Relations, Ward and Smith, P.A.
 - Spencer Rogers
Honorary Member, North Carolina Sea Grant (R)
Kathleen Riely — Executive Director
P.O. Box 440, Wrightsville Beach, NC 28480

NCBIWA's purpose is to:

- Educate elected officials and the public on the importance of beach nourishment and coastal preservation, sustainability and resiliency through the information presented at our annual meetings and conferences and;
- Advocate on behalf of our members on the Local, State and Federal levels to promote funding for coastal infrastructure including beach nourishment, storm damage mitigation and;
- Encourage the use of science and technology to advance coastal research by governmental and non-governmental organizations and;
- Promote the routine maintenance of federal navigation channels, including the Atlantic Intra-coastal Waterway, and the proper best use of coastal sediment: better known as Beneficial Use of Dredged Material (BUDM).

NC DEQ seeks input on resiliency for blueprint

The North Carolina Department of Environmental Quality (DEQ) will hold three public engagement sessions in June to receive input on how flooding, flood mitigation, and resiliency impact North Carolina communities. Public input will assist DEQ in developing the North Carolina Flood Resiliency Blueprint alongside over 100 technical advisors representing Federal, State, County, Municipal, and Tribal governments, non-governmental organizations and universities.

All three sessions will take place in the first week of June. Meeting dates and locations are as follows:

- **Public Input Session: New Bern**
— Thursday, June 1, 4-7 p.m., 203 S.

Front St., New Bern, NC 28560

- **Public Input Session: Lumberton**
— Thursday, June 8, 4-7 p.m., 1702 West 5th Street, Lumberton, NC 28358
- **Public Input Session: Wilmington**
— Friday, June 9, 4-7 p.m., 230 Government Center Drive, Wilmington, NC 28403

Spanish interpretation services will be available at all meetings.



The Flood Resiliency Blueprint is a statewide initiative to develop an online-decision support tool and associated planning to address flooding for communities in North Carolina's river basins. The Blueprint will accomplish several key goals, including:

- Develop community and basin-specific risk management processes to identify and address flooding for NC communities;
- Develop an online decision

❖ Continued on page 6

2023 NCBIWA Spring Conference wrap-up

The Spring Conference in beautiful Emerald Isle delivered two days of information ranging from leading the charge on legislation such as the RISEE Act, technological advances, and protecting the coast. We heard from our elected officials on both the state and federal levels.

Our keynote speakers were Congressman David Rouzer and Congressman Dr. Greg Murphy, who shared Beltway insights and his efforts on behalf of our coastline.

Topics covered included an update from the U.S. Army Corps of Engineers, the U.S. Coast Guard, and we learned from Col. Steven Baker that he gets inspected on his boat quite frequently, but the Guard is always polite, he said.

Our sessions covered topics that included state and federal legislative and policy updates, federal funding opportunities, coastal resiliency, new technologies, impacts from flooding, tides, and tourists, and leveraging funding.

“We couldn’t host a quality conference without our sponsors,” said Kathleen Riely, NCBIWA executive director. “We are thankful for our corporate, county, and municipal sponsors.”

Again, we provided PDH educational credits for professionals at the spring conference.

The conference was made available via Zoom and in person, with a total attendance of more than 120. But, if you missed the conference, as a member, you could view the presentations on our website, www.ncbiwa.org.

Watch the website for upcoming information about the Fall Conference.

Top: Reide Corbett, Executive Director of the Coastal Studies Institute and Dean of the Integrated Coastal Programs at East Carolina University. Middle left: Lt. Mike Thompson, U.S. Coast Guard. Middle right: Christy Ferguson, Assistant Town Manager, Holden Beach. Left: Jason Holland (left), Mayor, Emerald Isle and Bobby Outten, NCBIWA Chairman.





Above: Teresa Batts, Mayor, Town of Surf City and Brent Laurenz, Executive Director, Friends of the Mountains-to-Sea Trail. Top right: Braxton Davis, Director, N.C. Division of Coastal Management. Right: Brad Pickel (right), AIWA Executive Director, and Spencer Rogers, North Carolina Sea Grant (retired). Below, left to right: North Carolina Representatives Frank Iler, Celeste C. Cairns and Carson Smith. Below right: Justin LeBlanc, LeBlanc Government Relations



New dredge a 'game changer'

Dare County, NC, and EJE Dredging Service took delivery of the Miss Katie, a shallow-draft 156'3"×35 x10'9" hopper dredge built at Conrad Shipyard, Morgan City, LA, in August 2022. The homeport for the vessel is Wanchese, NC. The vessel was specifically developed and designed to ensure she can safely navigate the channels and inlets of North Carolina. The split-hull configuration allows for spoil discharge in shallow waters, preventing it from grounding on its own hopper load.

Upon the arrival of the Miss Katie, Dare County Board of Commissioners Chairman Bob Woodward stated: "The Miss Katie will be a game changer for the watermen in Dare County. It's absolutely critical that we have the resources in place to properly dredge our channels and inlets that these watermen depend on as their highway to work every day, and thanks to the county's partnership with EJE Dredging and the arrival of Miss Katie, we'll be much better equipped to do just that."

Since August, the Miss Katie has been strategically dredging the channels and inlets of Oregon, Hatteras, and Lockwood Folly. Combined, the vessel has removed over 450,000 cubic yards of material from those waterways, albeit mostly from Oregon Inlet, improving navigability for commercial and recreational vessels.

"The waterways of North Carolina are vital commercial and recreational resources for North Carolina and the United States," said EJE President/CEO Jordan Hennessy. "The Miss Katie is the newest state-of-the-art shallow-draft split-hull hopper dredge in the U.S. The vessel is a testament to the Cajun toughness of Conrad Shipyard, and as she has operated and dredged the waterways of the State, she is now North Carolina strong."



NC DEQ creates online planning manual for coastal local governments

The "Comprehensive Land Use Planning in Coastal North Carolina — GUIDANCE FOR LOCAL GOVERNMENTS" manual is organized to provide guidance on developing a land use plan that meets the requirements of the Coastal Resources Commission as well as guidance on developing a comprehensive plan that addresses a broader range of local planning issues. The availability of the guide in an online format continues DCM's modernization of their processes and materials in order to better serve our local governments and the community. For more information about the Guide, go to: <https://www.deq.nc.gov/about/divisions/coastal-management/coastal-management-land-use-planning/land-use-planning-guide>.



Blueprint

❖ Continued from page 3

support tool which seamlessly guides state, county, municipal, and other jurisdictions to identify and select flood mitigation strategies responsibly, systematically, equitably, and transparently; and

Establish a repeatable, statewide methodology for prioritizing, and

selecting flood mitigation strategies for future implementation.

More information about the Blueprint is available online at <https://www.deq.nc.gov/about/divisions/mitigation-services/flood-resiliency-blueprint>. You can also contact Elizabeth Christenson at elizabeth.christenson@ncdenr.gov or (919) 707-8753 for more information.



Holden Beach project wins 2023 Best Restored Beach award

The American Shore and Beach Preservation Association (ASBPA) is proud to release our much-anticipated annual list of the nation's best restored beaches. The award winning projects this year are Central Reach Reimbursement Project in Holden Beach, North Carolina; City of Boca Raton, City of Deerfield Beach and Town of Hillsboro Beach, Florida Joint Nourishment Project; and Foss Park District, North Chicago, Illinois.

The goal of ASBPA's annual Best Restored Beach award is to acknowledge community beach restoration projects which increase a shoreline's resiliency, the beach's ability to mitigate storm damage and flooding from severe storms, and naturally allow the beach to adjust to short-term sea level rise while remaining an important part of the nearshore ecosystem.

Projects are judged on three criteria: the economic and ecological benefits the beach brings to its community; short and long term success of the restoration project; and the challenges each community overcame during the course of the project.

"We appreciate each year all those

who nominate their worthy projects for consideration. This year's restored beach award recipients represent a variety of beach types, and I congratulate them for the hard work and beautiful beaches they have protected and enhanced," said ASBPA President Gary Jones.

The Central Reach Reimbursement Project (CRR) in Holden Beach, North Carolina was selected as a Best Restored Beach as this project demonstrated a long-term commitment by the community to nourish and renourish their beach after a series of severe storms devastated the beach from 2017 to 2022. The project was designed as a repair project from storm damage but was the first of its kind to combine multiple FEMA storm repair projects into one large initiative. The primary goals for beach nourishment were to protect infrastructure, property, and habitat while secondary goals were to fuel the tourist economy by providing more beach for visitors and to mitigate any impacts of future storms to the island. The project overcame difficulties in finding adequate sand resources which included encountering unanticipated pockets of rock which required sand borrow site adjustments. The project was successful even though construction ceased early due to regulatory issues.



Congress begins WRDA, appropriations hearings

During the first week of May, the Senate Environment & Public Works (EPW) Committee held a hearing to review the U.S. Army Corps of Engineers' proposed budget for fiscal year 2024 and implementation of the Water Resources Development Act (WRDA) of 2022. EPW is the authorization arm of the federal civil works program and next week's hearing will also help to set the stage for the WRDA 2024 bill. EPW intends to send letters in July to each senator outlining their WRDA 2024 process. Formal submissions from Senate offices to EPW are expected to be due in October.

USDOT notice of funding for the PROTECT grant program

DOT has issued the long-awaited notice of funding opportunity for the new PROTECT competitive grant program! This is one of 40+ new programs at DOT created by the Bipartisan Infrastructure Law and one that ASBPA has been tracking closely as it aims to make surface transportation assets more resilience to "climate change driven impacts include severe storms, flooding, drought, levee and dam failures, wildfires, rockslides, mud slides, sea level rise, and more." Click [here](#) for the full announcement. Three main highlights include:

This grant provides for two-years of funding (FY22 and FY23). Applications for 1) resilience improvements 2)

❖ Continued on next page

Government

❖ Continued from page 7

community resilience and evacuation routes, and 3) at-risk coastal infrastructure are due August 18.

Highway (title 23), transit (chapter 53 of title 49), intercity passenger rail facilities or services and port facilities are all eligible.

NOAA funding announced

Vice President Kamala Harris recently announced the Department of Commerce has recommended \$562 million in funding — including investments in nearly 150 projects across 30 coastal and Great Lakes states and territories — to make communities and the economy more resilient to climate change, as part of the Investing in America agenda. The grant awards are made under NOAA's Climate-Ready Coasts Initiative and are funded by the Bipartisan Infrastructure Law (BIL) and bolstered by the Inflation Reduction Act (IRA). Learn more by reading the announcement on NOAA's website.

Summer Series hosted by Blue Flag USA and Swim Drink Fish!

Last year Blue Flag USA launched a popular summer series on beach management topics in support of candidates and ASBPA's mission to advocate for healthy, sustainable, and resilient coastal systems. We are joined this year by the national operator for Blue Flag in Canada, Swim Drink Fish.

The three-month series will cover Accessibility, Water Quality, and Safety in an effort to bring together candidate sites, awarded sites, industry, managers, stakeholders, and more to share experiences. Participation is not limited to members of either organization.

After registering for the webinar, you will receive a confirmation email with sign-in details. Each month will have a separate registration link, be on the lookout for more information at blueflag.us.



First Blue Flag Beach sites awarded

Blue Flag USA is proud to announce the first Blue Flags have been awarded in California and Florida at Westward Beach in Malibu between the Zuma Lagoon and Birdview Avenue for the May 25-September 30, 2023, season, and at Delray Beach Municipal Beach between Casuarina Road and Laing Street for the May 19, 2023, to April 30, 2024, season.

"Our sites have worked hard for several months to implement and maintain over 30 diverse criteria to achieve award status. Their staff and communities can raise their flags with pride for going above and beyond US standards to receive international recognition for sustainable management practices," stated Annie Mercer, ASBPA program coordinator.

Call for Nominations: 2023 Best Restored Shores Award

ASBPA announces a call for nominations for the 2023 Best Restored Shores Award to recognize projects which enhance the environment, particularly on low-energy and moderate-energy shorelines.

Celebrating its fifth year, this award showcases well-designed and implemented projects, focused on restoring natural resources to enhance shoreline resilience by addressing environmental degradation, storm impacts, climate change, and sea level rise.

Nominations are open May 1 to August 1. Information is online at <https://asbpa.org/about-us/awards-program/>.

2023 National Beach Nourishment Database update under way

The 2023 National Beach Nourishment Database update is under way! The ASBPA National Beach Nourishment Database is an online geodatabase that provides national-scale statistics on U.S. communities beach nourishment efforts over the last century. The database has been compiled over the last two decades and is updated annually by ASBPA membership.

During the recent 2022 project season, the database recorded 51 projects, placing over 20 million cubic yards of sand, and spanning over 70 miles. We could not have obtained this valuable information without your help!

We hope you will submit any project data you have access to that would expand the scope and accuracy of the database. There will be those in your region that may not see this, so please forward this to relevant project managers so we can make sure and get all projects into our database.

We certainly want updates and information on new projects, but we also need help with historic projects, fact checking, length and cost figures for past projects. So even though you may not have anything to add, if no nourishment projects have occurred in your region since last year, please log in and take a look at nearby projects. In addition, we always welcome any quality checking help you can offer with the older records.

The update period closes on June 30, 2023. Make sure your project isn't missed! If you'd like to submit a project for this year's update, please email Nicole Elko. Include the project year, name, volume (cubic yards), length (feet), and cost if possible.

The database is online at: <https://asbpa.org/national-beach-nourishment-database/>.