



### About Shoreline

news from the Florida Shore and Beach Preservation Association

## **December 2023**

# Announcing the 2024 National Conference on Beach Preservation Technology Program

Hot off the press! Read all about it! Look no further, the 2024 Tech Conference program is <a href="https://example.com/here">here</a>. The Planning Committee received numerous, high-quality abstracts for consideration in the program and the result of their efforts is another exceptional, educational event for you to attend. Many presentations feature studies, modeling efforts, and performance of beach, dune, and inlet projects. Discussions also focus on post-storm assessments and repair strategies, living shorelines, environmental coastal resources, and advanced monitoring technologies. Please take some time to review the program and make your plans to attend. Deadlines for early registration and hotel reservations are less than four weeks away.

As we turn our focus to 2024, FSBPA Board of Directors and staff would like to sincerely thank each of you for your support this year. It was a memorable one in terms of funding for Florida's beaches (\$50M in recurring funding for local beach and inlet management projects, and over \$200 million for storm damage recovery of beaches and dunes) and the launch of the Florida Resilience Conference with over 120 speakers and 550 attendees! We are fortunate to have so many dedicated, beach enthusiasts in our membership, and we look forward to working alongside you on behalf of Florida's beaches next year.



### **Inside this Edition**



National Conference on Beach Preservation Technology

February 7-9, 2024 St. Augustine Beach, FL

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US Army Corps of Engineers<sub>®</sub>

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How Dedication, Commitment
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Northeast Florida's Coastline
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#### 37th NATIONAL CONFERENCE ON BEACH PRESERVATION TECHNOLOGY

February 7-9, 2024 ◆ Embassy Suites, St. Augustine Beach, Florida

Wednesday, February 7
OPENING GENERAL SESSION
1:00 p.m. to 5:10 p.m.

1:00 p.m.

Welcome from Henry Dean, St. Johns County District 5, St. Augustine, FL

1:10 p.m.

**Current State of the Beaches in St. Johns County** 

Stephen Hammond and Damon Douglas, St. Johns County Public Works Department, St. Augustine, FL

1:30 p.m.

**Building Resilience: Federal Shore Protection Projects in St. Johns County** 

Rosemarie Pinto, P.E., U.S. Army Corps of Engineers, Jacksonville District, FL

1:50 p.m.

Embassy Suites, St. Augustine Beach, Florida Shoreline Protection and Seawall Replacement

Jonathan Brumfield, P.E., Taylor Engineering, Inc., Jacksonville, FL

2:10 p.m.

South Ponte Vedra Beach Dune Restoration Project 2022 Construction Phase

Riggs Brusnighan, Atkins NA, Inc., Jacksonville, FL

2:30 p.m.

Post-Storm North County Dune Restoration - Flagler County, FL

N. Zachary Bedell, P.E., Olsen Associates, Inc., Jacksonville, FL

2:50 p.m.

**Professional Exchange Break (30 Minutes)** 

3:20 p.m.

**Hurricane Idalia and the Florida Big Bend Coast** 

Ralph Clark, P.E. and Sarah Lindeman, Office of Resilience and Coastal Protection, Florida Department of Environmental Protection, Tallahassee. FL

3:40 p.m.

**Lovers Key - Bonita Beach Nourishment Design** 

Michael Poff, P.E., Coastal Engineering Consultants, Inc., Bonita Springs, FL and Mike Campbell, Lee County Natural Resources Division, Fort Myers, FL

4:00 p.m.

**Hurricane Ian Recovery on Lovers Key and Bonita Beach** 

Steve Boutelle, Lee County Natural Resources Division, Fort Myers, FL and Vadim Alymov, Ph.D., Coastal Engineering Consultants, Inc., Bonita Springs, FL

4:20 p.m.

**Post-Storm Assessment Metrics from Anna Maria Island** 

Thomas Pierro, P.E., D.CE, Lindino Benedet, Ph.D., and Morjana Signorin, Coastal Protection Engineering, Boca Raton, FL and Charlie Hunsicker, Natural Resources Department, Manatee County, Bradenton, FL

4:40 p.m.

The Value and Resilience of Beach Tourism During the COVID Pandemic

James Houston, Ph.D., U.S. Army Engineer Research and Development Center, Vicksburg, MS

5:00 p.m.

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# CONCURRENT SESSION A1 8:05 a.m. to 9:45 a.m.

8:05 a.m.

Restoring Littoral Drift along a Jettied Shoreline Jenna Kooker, Edgewater Resources, LLC, Madison, WI

8:25 a.m.

The 2005 Bogue Inlet Relocation Project - A Retrospective Greg "Rudi" Rudolph, Geodynamics, Newport, NC

8:45 a.m.

Beach-Inlet Interaction and Regional Sediment Management at Pristine and Developed Barrier Islands Ping Wang, Ph.D., School of Geoscience, University of South Florida, Tampa, FL

9:05 a.m.

The Inlet Management Study of Passage Key Inlet and Adjacent Beaches

Morjana Signorin, Coastal Protection Engineering, Boca Raton, FL

9:25 a.m.

Estero Barriers Regional Inlet Management Study, Lee County, Florida – 3DCSTM Morphology Modeling Yong Chen, Ph.D., P.E., Moffatt and Nichol, Inc., Norfolk, VA

9:45 a.m.

**Professional Exchange Break (30 Minutes)** 

#### CONCURRENT SESSION B1 8:05 a.m. to 9:45 a.m.

8:05 a.m.

Southeast Florida Sediment Morphodynamics Study – Miami Dade County & Port Everglades Metocean, Sediment Tracer and Resource Atlas Study Jon Marsh, Ph.D., Environmental Tracing LLC, St. Augustine, FL, and Laurel Reichold and Kelly Legault, Ph.D., U.S. Army Corps of Engineers, Jacksonville District, FL

8:25 a.m.

Jupiter Inlet Longshore Transport Modeling Ashley Kauppila, P.E., Taylor Engineering, Inc., Jacksonville, FL

8:45 a.m.

"What If...." A Scenario-Based GIS and Hydrodynamic Modeling Approach to Improve Our Understanding of Sea Level Rise and Incremental Adaptation Brett Vivyan, P.E., GHD, Eureka, CA

9:05 a.m.

Numerical Modeling of Nearshore Hydrodynamics with Erosion Mitigation Structure at the West Galveston Seawall

Jacob Garrett and Himangshu Das, Ph.D., P.E., U.S. Army Corps of Engineers, Galveston District, FL

9:25 a.m.

Are Numerical Models Useful? Lessons Learned from Twenty Years of Modeling Coastal Morphology Change in the State of Florida

Lindino Benedet, Ph.D., Coastal Protection Engineering, Boca Raton, FL

9:45 a.m.

**Professional Exchange Break (30 Minutes)** 



# CONCURRENT SESSION A2 10:15 a.m. to 12:00 p.m.

10:15 a.m.

Leveling the Playing Field: Taking Social Equity into Account Angela Schedel, Ph.D., P.E., HDR Engineering, Jacksonville, FL

10:35 a.m.

Martin County Four Mile Beach Resilience: Optimization of the Beach Template

Nicole McClain, Taylor Engineering, Inc., Jacksonville, FL

10:55 a.m.

Applying "Depth of Closure" to Determine Sand Loss for FEMA Engineered Beach Projects

Robert (Bob) Glassen, FEMA Headquarters, Washington, DC

11:15 a.m.

Evaluating the Equilibrated Toe of Fill at Key Biscayne Beach, Florida

Zach Valerio, Moffatt & Nichol, West Palm Beach, FL

11:35 a.m.

Can the Performance Beach Nourishment be Enhanced Through Shoreface Sand Placement?

David Kriebel, Ph.D., P.E., Coastal Analytics, LLC, Indialantic, FL

12:00 p.m. Lunch (1 Hour)

#### CONCURRENT SESSION B2 10:15 a.m. to 12:00 p.m.

10:15 a.m.

Reef Relocation Technologies for Impact Mitigation Michael Jenkins, Ph.D., P.E., ATM a Geosyntec Company and Charles Calloway, P.E., Calloway Marine Technologies, Inc., West Palm, FL

10:35 a.m.

A Multi-Benefit, Landscape Scale Restoration in the Eel River Estuary Humboldt County, CA

Pete Duin, Department of Environmental Resources Engineering, Cal Poly Humboldt, Arcata, CA

10:55 a.m.

Curry Hammock State Park Tidal Restoration Project Nicholas Bragaia, P.E., GHD, Wellington, FL

11:15 a.m.

Application of an Advanced Sand Search Tool (ASST): A Case Study from Northern Onslow Bay, North Carolina Kurt Baker, Geodynamics, Newport, NC

11:35 a.m.

Geotechnical Properties and Processes of Sandy Beaches and Their Impact on Beach Erosion Nina Stark, Ph.D., Engineering School of Sustainable Infrastructure and Environment, University of Florida,

12:00 p.m. Lunch (1 Hour)

Gainesville, FL



#### CONCURRENT SESSION A3 1:00 p.m. to 3:00 p.m.

#### 1:00 p.m.

Strategic Planting and Nutrient Amendments to Accelerate the Revegetation of Rapidly Retreating Coastal Dunes Joseph Morton, Ph.D., Department of Environmental Engineering Sciences, Center for Coastal Solutions, University of Florida, Gainesville, FL

#### 1:20 p.m.

Perico Preserve Restoration – Farmland Conversion for Seagrass Habitat Creation

Lauren Floyd, Coastal Protection Engineering, Boca Raton, FL

#### 1:40 p.m.

Marsh Terracing: One of the Multiple Lines of Defense to Benefit the Barataria Land Bridge – Jefferson Parish, Louisiana

Matt Salmon, P.E. and Nina Reins, P.E., Freese and Nichols, New Orleans, LA

#### 2:00 p.m.

Using a Towed ROV System to Map Submerged Aquatic Vegetation in the Sunken Island Beneficial Placement Area, Hillsborough Bay, Tampa Harbor

Anne Shoffner, Cummins Cederberg, Inc., Jupiter, FL

#### 2:20 p.m.

Relative Seagrass Burial Tolerance of Shoal Grass (*Halodue sp.*) in Aragonite Silts during Hurricane Irma (2017) Turks & Caicos Islands, BWI

Leaf Erickson, Ph.D., Erickson Consulting Engineers a Graef Company, Sarasota, FL and William Precht, Ph.D., Dial Cordy Associates, Miami, FL

#### 2:40 p.m.

Wave-Driven Oyster Mortality: Assessing the Impact of Boat Wakes and Wind Waves on GTM Estuary Oyster Reefs Daniele Pinton, Ph.D., Department of Civil and Coastal Engineering, University of Florida, Gainesville, FL

#### 3:00 p.m.

**Professional Exchange Break (30 Minutes)** 

#### CONCURRENT SESSION B3 1:00 p.m. to 3:00 p.m.

#### 1:00 p.m.

Rock Groin Performance – Longboat Key, FL Krista Egan, P.E., Olsen Associates, Inc., Jacksonville, FL

#### 1:20 p.m.

Post-Storm Emergency Coastal Armoring Case Study in Volusia County

Katie Britt Williams, CFM, WEDG and Geoff Parker, P.E., Cummins Cederberg, Inc., Tallahassee and St. Petersburg, FI

#### 1:40 p.m.

Low Impact Secant-Pile Seawall for Protecting SR-A1A along Lower Flagler & Upper Volusia Counties Steven Nolan, P.E., State Structures Design Office, Florida

Department of Transportation, Tallahassee, FL and Mohammadamin Mirdarsoltany, Ph.D. Candidate, Department of Civil & Architectural Engineering, University of Miami, Coral Gables, FL

#### 2:00 p.m.

Volusia County Rapid Hurricane Response and the Successful Use of Trap Bags

Wendy Laurent, P.E., Taylor Engineering, Inc., Philadelphia, PA and Jessican Fentress, P.E., Volusia County, FL

#### 2:20 p.m.

Vulnerability Assessments and Infrastructure Resilience – Case Study Daytona Beach

Kiara Horton and Craig Wells, Freese and Nichols, Inc., New Orleans, LA and Tampa,  ${\sf FL}$ 

#### 2:40 p.m.

Stirred, Not Shaken! Beach Renourishment Vibration Control and Documentation in Staging Areas Eric Rehwoldt, P.E., P.G., Seismic Surveys, LLC

#### 3:00 p.m.

**Professional Exchange Break (30 Minutes)** 



# CONCURRENT SESSION A4 3:30 p.m. to 5:10 p.m.

3:30 p.m.

Collier County Emergency Berm Project: 2023 Project and Post-Ian Update

Nicole Sharp, P.E., APTIM, Boca Raton, FL

3:50 p.m.

Emergency Beach Response to Hurricane Ian at Big Hickory Island, Florida

Douglas Mann, P.E., D.CE, APTIM, Boca Raton, FL and Jamie Boesé, Pelican Landing Community Association, Bonita Springs, FL

4:10 p.m.

South Siesta Key Beach Repair – The Strength of Effective Communication

Robert Neal, P.E., ATM a Geosyntec Company, Wilmington, NC

4:30 p.m.

Do you Believe in Miracles, Part Deux?

Chadd Chustz, Town of Ft. Myers Beach, FL and Michael Poff, P.E., Coastal Engineering Consultants, Inc., Bonita Springs, FL

4:50 p.m.

Delray Beach Coastal Impacts from Hurricane Nicole Doris Otero, Ph.D., CFM, APTIM, Boca Raton, FL

5:10 p.m. Adjourn

# CONCURRENT SESSION B4 3:30 p.m. to 5:10 p.m.

3:30 p.m.

Are DMMA's Really the End for Dredged Material? Examples of Beneficial Use at the Jacksonville District Jennifer Coor, Ph.D., P.G. and Barbara Nist, P.G., U.S. Army Corps of Engineers, Jacksonville District, FL

3:50 p.m.

Building Coastal Resilience Through Dredge Management Quin Robertson, Ph.D., P.G., Woolpert, Beavercreek, OH

4:10 p.m.

Engineering Distinctions between Living Shorelines & Shoreline Stabilization for Backbay Areas Jenna Phillips, Cummins Cederberg, Inc., Sarasota, FL

4:30 p.m.

Citywide Living Shoreline Viability Assessment & Grant Funding Opportunities, Challenges, and Lessons Learned Leonard Barrera Allen, P.E., CFM, WEDG, Cummins Cederberg, Inc., Coral Gables, FL and Teresa Kaimrajh, P.E., City of Miami Beach, FL

4:50 p.m.

Management of Natural and Nature Based Features, Case Studies in Southwest Florida Post Hurricanes Ian and Idalia Mohamed Dabees, Ph.D., P.E., BC. CE, Humiston & Moore Engineers, Naples, FL

5:10 p.m. Adjourn



#### Friday, February 9

# CLOSING GENERAL SESSION 8:05 a.m. to 12:00 p.m.

8:05 a.m.

National Investment in Coastal Research and Beach Nourishment in Florida

Nicole Elko, Ph.D., American Shore and Beach Preservation Association, Folly Beach, SC

8:25 a.m.

Ft. Pierce Inlet Sediment Trap Using New- and Low-Tech Tools to Inform Coastal Processes

Joshua Revord, P.E., St. Lucie County, FL and Kevin Bodge, Ph.D., P.E., Olsen Associates, Inc., Jacksonville, FL

8:45 a.m.

Truck Hauling Millions of Cubic Yards of Sand to Southeast Florida Beaches

Will Reilly, P.E., U.S. Army Corps of Engineers, Jacksonville District, FL

9:05 a.m.

Volatile Times: The Effects of Munitions and Explosives of Concern on Florida Dredging Projects

Patrick Snyder, P.E., U.S. Army Corps of Engineers, Jacksonville District, FL

9:25 a.m.

**Low-Profile Short Groins along a Mostly Low-Energy Coastline** 

Kevin Bodge, Ph.D., P.E., Olsen Associates, Inc., Jacksonville, FL

9:45 a.m.

**Professional Exchange Break (30 Minutes)** 

10:15 a.m.

Year 1 Overview of the St. Augustine, Florida Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study

Martin Durkin, U.S. Army Corps of Engineers, Jacksonville District, FL

10:35 a.m.

Response of Engineered Berms and Natural Shell Hash Fronting-Features to Hurricane Nicole, St. Johns County, Florida

Zachary Scott, University of North Florida, Jacksonville, FL

10:55 a.m.

Decadal Variability of Beach-Dune Geomorphic Resilience and Cross-Shore Aeolian Fetch in NE Florida – Applications of the USACE Coastal Engineering Resiliency Toolbox

Copeland Cromwell, Department of Geological Sciences, University of Florida, Gainesville, FL

11:15 a.m.

Geological and Geotechnical Characteristics of Restored and Natural Dunes in Northeast Florida

Justin Shawler, Ph.D., U.S. Army Engineer Research and Development Center, Vicksburg, MS

11:35 a.m.

St. Johns County/GTM Beachfront Data Collection Facility Goes Online

William Dally, Ph.D., P.E., Surfbreak Engineering Sciences, Ponte Vedra Beach, FL and University of North Florida, Jacksonville, FL

12:00 p.m.

Adjourn

# **CONFERENCE & HOTEL RESERVATIONS**



National Conference on Beach Preservation Technology

Register Now!

**Hotel Reservations** 

Early Registration and Hotel Reservation deadline is January 8, 2024

# **Thank You Sponsors!**

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If you are interested in a sponsorship or exhibit, there is still time to reserve! For information, <u>click here</u>.



# A Sanderella Story: How Dedication, Commitment and Teamwork Protects Northeast Florida's Coastline

US Army Corps of Engineers<sub>®</sub>

By Jason Harrah, Project Manager



St. Johns County, Vilano Segment

What do 20-miles of coastline, 7 million cubic yards of sand, and \$140 million have in common? They collectively encompass the 2023-2024 federal beach renourishment schedule for northeast Florida, which truly exemplifies the gold standard of teamwork and dedication to restore a coastline ravaged by countless named storms, nor'easters and climate change.

Before I discuss these projects in detail, it's important to share a moment of gratitude and appreciation for the monumental efforts of the Project Delivery Team (PDT). According to the Corps of Engineers Project Delivery Business Process (PDBP), the PDT is responsible and accountable for delivering a quality project, and actively resolving problems and issues as they carry out effective, coordinated actions to deliver the completed project. The definition I prefer is: **One Project, One Team!** 



I view the Northeast Florida "Team" as quite simply the best....In my opinion, they are akin to good recipe of great sports teams. One that includes 1/3 cup 1996' Chicago Bulls, 2/3 cup 2016'Golden State Warriors, 2 teaspoons of the 1980 USA Hockey Team and a dash of the 1985 Chicago Bears. A highly trained and battle tested team with key players from Congress, USACE, US Navy, USFWS, BOEM, NMFS, NOAA, EPA, FDEP, FWC, FDOT, SHPO, City of Jacksonville (and beach communities), St. Johns County (and City of St. Augustine Beach), Flagler County (and City of Flagler Beach), Olsen & Associates, Dredging Industry (countless laborers, equipment operators, surveyors, environmental monitoring firms, etc.), NGOs and the public.

No good team discussion is complete without statistics, so here are our "stats" ...

Following Hurricanes Ian and Nicole the St. Johns Coastal Storm Risk Management (CSRM) Project in South Ponte Vedra Beach and Vilano Beach was first to be awarded in June 2023 to Weeks Marine, Inc. with 1.3 million cubic yards of berm and dune construction along 3-miles of coastline. This project is on target to complete ahead of schedule in January 2024. Next up, the St. Johns County Shore Protection Project (SPP) in St. Augustine Beach was awarded in September 2023 to Great Lakes Dredge & Dock Company. This 3-mile project includes 2.5 million cubic yards of berm construction including Anastasia State Park as the northern limit. Work is scheduled to start in February 2024 (near the FSPBA Tech Conference timeline) with completion in October 2024. The Duval County Shore Protection Project (SPP) includes 10-miles of berm and dune construction in Hanna Park, Atlantic Beach, Neptune Beach, and Jacksonville Beach. Bid Opening was completed November 16, 2023, with Great Lakes Dredge & Dock Company as the apparent low. The bid evaluation process is currently underway with award scheduled mid-December 2023. Work is anticipated February 2024 through October 2024. The Jacksonville Harbor Operations & Maintenance (O&M) FY24 Contract received proposals November 17, 2023, with award scheduled in late December 2023. This contract will place approximately 500,000 cubic yards of beach quality sand from the federal navigation channel along 1-mile of critically eroded shoreline at Naval Station Mayport as part of the USACE regional sediment management strategy. Work is anticipated February 2024 April 2024. And last but certainly not least, the Flagler County Coastal Storm Risk Management (CSRM) Project in Flagler Beach is currently scheduled to advertise for initial construction in February 2024 with award in May 2024. This 3-mile project includes 1.3 million cubic yards of berm and dune construction in the City of Flagler Beach. Work is anticipated July 2024 – March 2025.

Regarding future projects, the *Ponte Vedra Coastal Storm Risk Management Study* is currently scheduled to complete in April 2024 with signing of the Chief of Engineers Report. The recommended plan includes approximately 5 miles of berm and dune construction in South Ponte Vedra Beach with an estimated 50-year cost of \$134 million and \$3.9 million in total benefits. Initial construction of this project is subject to authorization in a future Water Resources Development Act (WRDA). The *City of St. Augustine Back Bay Feasibility Study* is also full steam ahead to evaluate alternatives that addresses compound flooding in the Nation's Oldest City including 17 distinct neighborhoods, 2 environmental justice communities, 3 separate land masses, and multiple bodies of water. Development of the Initial Array of Alternatives is scheduled for completion August 2024.

In summary, I would like to thank each of the USACE team members for their unwavering dedication, tenacity, and commitment to protecting Florida's coastline. Let's just say if championship rings were given each fiscal year our fingers would be filled with shiny rings. In addition, none of these projects would happen without the tireless efforts from our external team members and local sponsors. I truly appreciate you all and the work you do.

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#### Shoreline

A monthly electronic publication of the Florida Shore & Beach Preservation Association.

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Florida Shore & Beach Preservation Association

PO Box 13146. Tallahassee FL 32317

**Phone:** (850) 906-9227

www.fsbpa.com • mail@fsbpa.com

# **CALENDAR OF EVENTS**

## **FSBPA Events**



February 7-9, 2024

**37th Annual National Conference on Beach Preservation Technology** 

**Embassy Suites, St. Augustine, FL** 

September 11-13, 2024

3rd Annual Florida Resilience Conference featuring the 67th FSBPA Annual Meeting Hyatt Regency Coconut Point, Bonita Springs, FL

# **Other Events**

2024 Legislative Session

January 9 - March 8

March 26-28, 2024

**2024 ASBPA Coastal Summit** 

National Association of Counties Building Washington, D.C



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