

FLORIDA SHORE & BEACH PRESERVATION ASSOCIATION

A League of Cities and Counties on Beach and Coastal Issues

About Shoreline



news from the Florida Shore and Beach Preservation Association

October 2019

2019 Annual Conference: It is a Wrap!

FSBPA is grateful for all who attended our 2019 Annual Conference at the Hutchinson Island Resort. The speakers were informative, the venue was lovely, and the attendee turnout was exceptional - all the necessary ingredients for an outstanding event. A special note of gratitude goes out to our sponsors and vendors. We simply could not organize these memorable events without your support and generous contributions. Bravo to our volunteers as well, especially to Jessica Garland and Paula Berntson.

Next Page

2020 National Conference on Beach Preservation Technology February 5 - 7 | Hyatt Regency Sarasota

2020 Tech Conference

Abstract Deadline ◆ October 11, 2019

Don't delay, submit today! www.fsbpa.com/tech-conference.html

Inside this Edition

2019 Annual Conference

- Award Winners
- Thank you Exhibitors & Sponsors!

In the news - When beaches are trashed, who pays the price?

NOAA

... page 9

SR-A1A Flagler Beach Innovative Bulkhead/ Seawall almost tested during Hurricane Dorian

Christian Steputat, University of Miami and Steve Nolan, FDOT

... page 10



US Army Corps of Engineers_®

Jacksonville District FEDERAL PROJECT STATUS UPDATES -October 2019

... page 13

This year's program included several first-time presenters and covered interesting sessions on Hurricane Michael, harmful algal blooms, coastal resiliency, regional projects, and crisis communication. It also highlighted distinguished speakers and guests who provided the timely funding and policy discussions that our September conferences are known to feature. On Wednesday, Martin County Commissioner Doug Smith opened the 62nd Annual meeting and gave attendees a charming hometown perspective on the county's beaches and a recount of the history of the Hutchinson Shores Resort. Commissioner Smith was followed by a partnership-themed presentation on the county's projects given by Don Donaldson, Kevin Bodge, Pat Noonan, and Ken Craig. Pat treated us with some original artwork by Dr. Bodge. Nicely done! Next,



Commissioner Doug Smith welcomes the 2019 Conference Attendees

we heard from Nerissa Okiye, the county's Tourism and Marketing Manager. She discussed why tourists come to Florida (beaches topped the list!) and the demographic of our visitors. She also shared insights on how managers can look for opportunities to collaborate with stakeholders on projects and special events.





Alex Reed, Mike Dombrowski, and Tara Brenner (seated) discuss Hurricane Michael impacts and recovery efforts in Florida's Panhandle during the Wednesday session

Thursday morning began with the annual Jacksonville District Commander's Update, a highlight of our program every year. Colonel Kelly focused on resiliency and how the Corps is working to ensure resilience is "mainstreamed" throughout their business practices. The much-anticipated update also included discussion on the 2018-2019 unprecedented coastal program in terms of funding, collaboration, and advancements in regional and systems approaches (e.g., RSM and SACS). Jackie Keiser, Supplemental Program Manager, followed Colonel Kelly, providing a comprehensive overview of the Supplemental Program and the status of project funding. Their presentations will be available on our website soon.



Don Donaldson and Colonel Kelly



Senator Debbie Mayfield and Debbie Flack

On Friday we presented FSBPA's highest policy award, Statesman of the Year, to Senator Debbie Mayfield, (District 17). Senator Mayfield, Chair of the Appropriations Subcommittee on Agriculture, Environment, and General Government was a champion for beach funding and the Coastal Management Bill last Session and a most-deserving recipient of this award. FSBPA was honored to have Representative LaMarca also join us to speak about the purpose of the Florida Coastal Caucus established this year. We were delighted to have fellow caucus members, Senator Harrell and Representative Overdorf, in attendance showing their support. We are grateful for these dedicated state leaders who will lead the charge for beaches this year. The future of Florida's beaches is in great hands.

Several of the presenters gave permission to post their presentations on our website, and we will have those available for you later this month.

In case you missed it, a green sea turtle nest in front of Hutchinson Shores Resort hatched the day before the conference began, and EAI hosted a public excavation on Friday at 6:45 a.m. to determine if there could still be any hatchlings in the nest. We are happy to report that all made it out of the nest.

It was a nice turn out for a 6:45 a.m. event...in the rain. Congratulations, EAI, for celebrating your 25th anniversary last month!



Niki Desjardin and Jimmy Sellers announce EAI's 25th Anniversary





EAI nest excavation



2019 ANNUAL CONFERENCE AWARD WINNERS

Presented during the Awards Banquet, Thursday, September 19

The 2019 Awards Banquet afforded FSBPA Board of Directors, staff, and banquet attendees an opportunity to recognize extraordinary individuals for their achievements and admirable careers in preserving and protecting Florida's beaches. We began the ceremony by presenting Ms. Alex DavisShaw with the time-honored Local Government Award for her involvement in the preservation of the City of Sarasota's beaches. Next, Mr. Tony McNeal, FDEP, was awarded the Jim Purpura / T.Y. Chiu Engineering Award for his excellent coastal engineering career and three decades of contributions to the preservation of Florida's beaches. Richard Bouchard received the Lifetime Achievement Award for his important role in establishing a successful beach preservation program in St. Lucie County. Lastly, before the evening ended, our MC and FSBPA Board Chairman, Gary McAlpin, made a special announcement in honor of Ms. Jackie Keiser.

Jackie Keiser, our inspiration at the U.S. Army Corps of Engineers Jacksonville District, accepted a promotion to the Chief of the Hurricane Emergency Response Division for the South Atlantic Division, where she will be overseeing the Supplemental Program for the region. Although, Florida's beaches will no longer be her sole focus, Florida's shorelines will still be a major part of her hurricane emergency responsibilities. It has been clear year after year that Jackie is an exceptional multi-tasker and has set the standard of excellence and commitment to public service. In recognition of her achievements, the Board voted to change the name of the Richard Bonner Award to the Richard E. Bonner - Jacqueline J. Keiser Award to memorialize her commitment and service to Florida's beaches.

Thank you Jackie, and the team you so admirably represent.



Colonel Kelly, Jackie Keiser, and Gary McAlpin



LOCAL GOVERNMENT AWARD

Alex DavisShaw nominated by nominated by Tom Pierro and Michelle Pfeiffer

In recognition of your leadership and sincere dedication to the City of Sarasota's beaches by consistently balancing coastal protection with an unwavering commitment to environmental stewardship and public safety



A Note from Alex DavisShaw

I wanted to express my thanks to Michelle Pfeiffer and Tom Pierro for nominating me for this award and to the FSBPA board for selecting me for this honor. It is incredibly special to be given this recognition by one's peers. I came to manage the City of Sarasota beach projects rather unexpectedly. Some of you long timers may remember Dennis Daughters, my former boss and City Engineer. He worked on the City's beach projects and initiated the work on the City's long-range beach project with the US Army Corps of Engineers. In 2004, when he decided to retire, he planned to work part-time for the City and continue managing our beach projects. While I had been working on the other projects our department was responsible for, transportation projects mainly, I had worked in a limited capacity on the beach projects. After retirement and before starting back up part time, Dennis went to visit Costa Rica. He really enjoyed his visit, so much so, he decided to move there. I must add that we had two folks from our department visit Costa Rica that year, and both decided not to return to Sarasota and moved to Costa Rica. So, after implementing a moratorium on trips to Costa Rica, (just kidding) I had to get caught up on our Beach projects. Dennis had been working with a great team of folks from APTIM, the US Army Corps of Engineers and of course Debbie Flack and the others at FSBPA. They were all very knowledgeable, generous with their time and helped me learn the ropes and get up to speed on our projects. So now to be receiving an award for that work is an incredible honor and one I truly have to thank APTIM, the Corps and FSBPA for. PS – Dennis still keep tabs on the project and is happy in Costa Rica.





JIM PURPURA/T.Y. CHIU ENGINEERING AWARD

Tony McNeal nominated by Michael Barnett, Michael Dombrowski, Lois Edwards, Doug Mann, Brett Moore and Darwin Stubbs

In appreciation of over 30 years of excellence in coastal engineering and beach and dune preservation through your unyielding commitment to the Florida Coastal Construction Control Line Program and dedicated service to the people of this State

It was an amazing experience to take part in the presentation of the Jim Purpura / T.Y. Chiu Engineering Award to Mr. Tony McNeal. Tony was accompanied to the banquet not only by his team of nominators, but also by his closest family and friends, a clear sign of what this recognition meant to him. Mike Barnett brought tears to the eyes of many who know Tony as he spoke on behalf of the nominating team, recounting many of their experiences together. The banquet room erupted in applause several times in full appreciation of his extraordinary career as the Administrator of the Coastal Construction Control Line Program at FDEP. After two standing ovations, there wasn't much left to be said about the true appreciation FSBPA and its members have for Tony. Tony, when you retire next year, you will certainly leave an admirable legacy for the next administrator who will know undeniably that the guy before him did a great job.



LIFETIME ACHIEVEMENT AWARD

Richard Bouchard nominated by Ken Craig and Josh Revord

In recognition of more than two decades of significant contributions and tireless service to the preservation of St. Lucie County's beaches and the support of this Association



On rare occasions, the Lifetime Achievement Award is presented to an individual who has undertaken a long-term commitment to the preservation of Florida's beaches. Richard Bouchard, one of only a handful of fellow-recipients, was honored with the Lifetime Achievement Award before colleagues, friends and family. Richard has been actively involved with FSBPA for 15 years and a champion for the St. Lucie County beach and inlet management program for more than 20 years. His dedicated service to establish a reliable program will be remembered long after his impending retirement next March. Richard, thank you for sharing your incredible history with us. We will miss your persistent charge on behalf of beaches, but trust that we will see you at a conference again in the near future! Please accept our heartfelt congratulations for your amazing career.

Thank you to our Sponsors & Exhibitors

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In the news - When beaches are trashed, who pays the price?



NOAA recently updated its story map to include its research efforts on estimating the effects of marine debris on coastal economies. In the United States, the tourism and recreation sectors contribute \$124 billion to our gross domestic product (NOAA OCM, 2019). These sectors rely heavily on healthy ocean and coastal resources, which can be adversely impacted by marine debris. In order to better understand the relationship between the coastal tourism economy and

marine debris, the NOAA Marine Debris Program supported a study to investigate how the presence of marine debris can impact the recreational use of beaches and influence the economy in four selected coastal areas. For more information, be sure to visit NOAA's website at https://www.noaa.gov/multimedia/infographic/when-beaches-are-trashed-who-pays-price.



Debris in Magee Marsh, Ohio (Photo: NOAA).



SR-A1A Flagler Beach Innovative Bulkhead/Seawall almost tested during Hurricane Dorian

Christian C. Steputat, PE¹, Steven Nolan, PE², Stefan Levine, El², Lowry J. Denty, PE³, and Antonio Nanni, PhD, PE¹ (¹: University of Miami - Civil, Architectural & Environmental Engineering, ²: Florida DOT, ³: Mott McDonald Florida, LLC)

The story continues...

Following up on the presentation at the 2019 National Conference on Beach Preservation Technology and subsequent *Shoreline* article in the May/June edition, the 5,000-ft. length of Low-Impact Buried Secant-Pile Bulkhead/Seawall was completed in July after less than 5 months of active construction along the shoulder of State Highway A1A north of Flagler Beach. Sand dune restoration, landscaping, roadway drainage and paving will continue thru the fall and was recently tested when Hurricane Dorian skirted the east coast of Florida in early September.

Recalling that the purpose of the project was to provide storm related protection and fortification for the roadway itself from possible future storm related wave action and erosion activity, including localized and globalized storm scour conditions. The protection of the highway is especially important, since Flagler Beach is designated as an Evacuation ZONE "A" and SR-A1A integrity is critical for rapid response and recovery efforts. Significant sand dune erosion was observed after Hurricane Dorian, with almost 13 feet erosion height documented at some locations (see *Figure 1*). Thankfully the secant-pile wall face was never exposed due to the early re-establishment of a protective dune system. However, the completed structure may have ensured that no lateral movement and settlement of the highway shoulder occurred at the most severe erosion locations, and provided additional assurance of continued mobility and safety for post-storm recovery efforts.



Figure 1 – Flagler Beach sand dune erosion post-Dorian (September 2019)



Figure 2 – Flagler Beach dune erosion and highway damage post-Matthew (October 2016)



Given the eastward shift of Dorian's track (more than 100 miles offshore) compared to Matthew (see *Figures* 3 and 4), and the reduction in intensity from a Category 5 to Category 2 after crossing over the Bahamas, this was a narrow escape for the Florida east coast, and a welcomed reprieve after the losses from Hurricane Matthew in 2016.



Figure 3 - Hurricane Dorian's east coast track (August/September 2019)



Figure 4 - Hurricane Matthew's east coast track (October 2016)

The timing of this event, shortly after completion of the highway protection system (*Figure 5* and *6*), highlights the potential risk for much of our coastal infrastructure to the increasingly frequent extreme-weather events, and the importance of adaption planning in an era of accelerating coastal change.



Figure 5 - "Cast-In-Place" Pile-Cap Formwork (June 2019)



Figure 6 - Re-established Dune over Wall (August 2019)

Next Page

Page I2

October 2019



Construction monitoring on this project, estimated secant-pile GFRP-rebar cage assembly time savings of 32% to 52%, compared to a similar steel-rebar cage assembly. These time savings can mostly be attributed to the light-weight and flexibility of the GFRP rebars. Pile and pile cap installations were also closely monitored, timed, evaluated and analyzed. It has been determined that the use of GFRP rebars can have a significant positive impact on constructability due to the lighter weight and ease of cutting. In addition to the short-term production and long-term economic benefits, it can be observed from Figure 6, that this "grey" protection solution has beneficial environmental and societal elements. The protection system is totally invisible to critters, bystanders and beach-goers in total respect of the original configuration of the beach profile, while still guaranteeing safety to users of the highway and the local public.

Future work based on studies from this project, includes Life Cycle Cost (LCC) and Life Cycle Analysis (LCA) comparisons against traditional constructions to show the economic and environmental advantages of the GFRP-RC alternative. Continued development of an engineered revetment system that could be coupled with this or other "grey" shoreline protection systems is ongoing at the University of Miami. This SEAHIVE system combines wave attenuation and ecological habitat characteristics, using sustainable and resilient structural materials. The project is funded under the National Highway Cooperative Research Program's IDEA Project #213, and was also presented at the 2019 NCBPA in St Augustine last February.

Back to Main Page



U.S. Army Corps of Engineers Jacksonville District FEDERAL PROJECT STATUS UPDATES - October 2019



PLANNING STUDIES:

Dade County Feasibility Study

The purpose of this study is to address protection of critical infrastructure, reduction of structure damages, and evacuation route protection in response to the risks and effects of coastal storms and associated impacts such as sea level rise, storm surge, and extreme wind and tidal effects. Team is working toward a tentatively selected plan for April 2020.

South Atlantic Coastal Study

The South Atlantic Coastal Study (SACS) is a study authorized by the Water Resources Development Act (WRDA) 2016. This study will identify coastal risk and vulnerabilities due to hurricane and storm damage as a result of sea level rise in regions from North Carolina to Mississippi. This study is expected to take 4 years to complete and is expected to identify the reconnaissance-level analysis of coastal risk and vulnerability as well as potential solutions to be studied in greater detail in the future. The Tier 1 analysis for SACS, which includes a geoportal that shows risk for the coastal areas in the South Atlantic Division, has been completed. Work on the Tier 2 analysis, which focuses on more detailed analyses is being conducted.

Broward County Shore Protection Project - Segment III

Broward County submitted a letter of interest in March 2016 to request extension of the Federal project an additional 15 years. Broward County is under procurement to obtain a contractor to initiate the LRR for Segment III. Funding for this project has not been yet been obtained.

Ft. Pierce Shore Protection Project

The last renourishment was completed in June 2018. Work for the next and final renourishment needed prior to the expiration of federal participation in November 2020 will commence in 2019. This is dependent on obtaining funds in the Fiscal Year 2020 workplan. A General Re-evaluation Report (GRR) was completed by St. Lucie County and sent to congress. Approval of this GRR would extend federal participation for another 50 years.

Lee County Shore Protection Project – Gasparilla Island

The Lee County Shore Protection, Gasparilla Island Segment, has been approved by ASA(CW).



ENGINEERING AND DESIGN:

Broward County Shore Protection Project - Segment II

The PIR for Hurricane Irma for Broward County Segment II has been approved for renourishment of the beach. The project is expected to renourish about 388,000 cubic yards of sand. The contract for the project was expected to be awarded in late 2019 but recent surveys have shown heavy erosion in unpermitted areas. In order to include these areas, a new permit modification will be needed. This is expected to add a year to the schedule.

Dade County Renourishment

There are 4 separate contracts being prepared over the next 3 years. Contract A will cover a truck haul project to Surfside Beach. This contract is expected to be awarded in May 2019. Contract B is a truck haul to Miami Beach Hot Spots with an award date in June 2019. Contract C is the renourishment of Bal Harbour. This project is expected to be awarded in March 2020. Contract D will cover Sunny Isles and the remaining portion of Miami Beach. This contract is expected to be awarded in summer 2020.

Flagler County Shore Protection Project

The design of the plans and specifications for the Flagler County Shore Protection Project are being development. The contract is expected to be advertised in February 2020.

Manatee County Shore Protection Project

The Project Delivery Team (PDT) is working on the plans and specifications. Award of the contract is anticipated to occur in early 2020. The construction event requires approximately 800,000 cy of material to be placed along Anna Maria Island. Sand will also be placed on Coquina Beach as part of a non-federal addition to the project. The anticipated award date for the contract is in February 2020.

Palm Beach County Shore Protection Project

<u>Jupiter Carlin</u>: Plans and specifications have been completed. Original schedule had anticipated award date of September 2019 but delays have caused the award date to slip into FY2020.

<u>Ocean Ridge</u>: Plans and specifications have been completed. Original schedule had anticipated award date of September 2019 but delays have caused the award date to slip into FY2020.

<u>Delray Beach</u>: Plans and specifications have been completed. Original schedule had anticipated award date of September 2019 but delays have caused the award date to slip into FY2020.

<u>North Boca Raton</u>: Plans and specifications have been completed. Original schedule had anticipated award date of September 2019 but delays have caused the anticipated award date to slip into December 2019.

<u>Mid-town</u>: Plans and specifications have been modified to include less volume placement due to the borrow area volume available. Current estimated placement volume is 400,000 cy but other borrow areas are being considered to supplement the volume.

Next Page

October 2019



Sarasota County - Lido Key

Bids received in July 2019 were higher than the awardable range. PDT is analyzing options to continue pursuit of an award.

St. Johns County Coastal Storm Risk Management Project – Vilano and South Ponte Vedra

The design of the plans and specifications for the project are being developed. Award of the construction contract is expected to occur in February 2020.

St. Lucie Coastal Storm Risk Management - South Segment

This is a new project that will be funded with funds from the supplemental bill. Plans and specifications were started in September 2018, however, St. Lucie County has requested the project to be pushed back by 2 years due to concerns with real estate and the need to obtain the required non-federal funding. Advertisement for this contract is expected to occur in late 2021 with construction occurring in 2022.

CONSTRUCTION:

Brevard County South Reach

Brevard County South Reach has been approved for \$9,000,000 in supplemental funding for additional quantities to the design template. The award is scheduled for the 4th quarter of fiscal year 2019, and it will be included as part of the Mid Reach Initial fill contract.

Brevard County Mid Reach

Construction of the mitigation feature (reef mats) is complete and post-deployment surveys are underway. The initial fill for the project will be combined with the South Reach construction. Construction award will occur in the 4th quarter of fiscal year 2019.

Pinellas County

Sand Key: Construction by Norfolk Dredging Company was completed in October 2018.

<u>Long Key:</u> Contract Option D was completed on 7 June 2019. Material for Upham beach came from Blind Pass (approximately 150,000 cubic yards). Post-construction surveys are being acquired.

Back to Main Page



Call for Abstracts - Deadline is October 11, 2019

We welcome abstracts on the topics listed below:

- Shore Protection Projects and Coastal Management
- Coastal Research and Environmental Science
- Additional Topics
 - Beach and nearshore hydrographic surveying technology
 - Beach operations and maintenance
 - Coastal management policy decisions and lessons learned
 - Coastal Pier Construction Projects
 - Coastal Resiliency Initiatives
 - Dredging technology
 - Living shorelines, seagrass and habitat creation
 - Red tide and other Harmful Algal Blooms
 - Sea level rise
 - Storm surge modeling

Who Should Submit?

- Public and private sector engineers
- Environmental scientists
- Coastal geologists
- Marine scientists and biologists
- Academic researchers
- Coastal surveyors
- Coastal managers and local government representatives

For complete information on the abstract topics

and the submittal process, visit <u>www.fsbpa.com/tech-conference/presentations.html</u>

Back to Main Page



Shoreline

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CALENDAR OF EVENTS

FSBPA Conferences

February 5-7, 2020

National Conference on Beach Preservation Technology Hyatt Regency Sarasota, FL

September 16-18, 2020

FSBPA Annual Conference

Hyatt Regency Coconut Point, Bonita Springs, FL

Other Dates of Interest

October 22-25, 2019
ASBPA National Coastal Conference
Myrtle Beach, SC

November 21-22, 2019
Atlantic Intracoastal Waterway Association Annual Conference
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