



2016 Tech Conference
January 12 - - LAST DAY FOR EARLY REGISTRATION AND
GUARANTEED HOTEL RATES

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news from the Florida Shore and Beach Preservation Association

**January 2016** 

## **Greetings from FSBPA's Executive Director**

Happy New Year! I would like to begin my inaugural message as FSBPA's Executive Director by expressing sincere appreciation to the Executive Committee and Board of Directors for supporting my application and entrusting me with the management of the Association. I have admired and respected the Association's advocacy for Florida's beaches since beginning a career in



Jacqueline Larson FSBPA Executive Director

beach management in 1999, and it is an honor to have been selected for this position and to be working closely with the FSBPA team.

Last year, the Board of Directors developed a plan to move the leadership, management, and administrative duties from our President to an Executive Director position, allowing Debbie to focus on beach management policy, funding, and legislation at the Capitol. In my new role, I am responsible for the fiscal management, conferences, outreach and communications, and of course serving the Board of Directors and all members. After my first week on the job, I am well on my way! Debbie, Diana, Lisa and Teri are gearing up for the 2016 Legislative session and our Tech Conference, and they are graciously sharing duties and providing guidance.

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The importance of healthy beaches to coastal communities motivated me to work for 13 years in the state's beach management program supporting local government goals for beach nourishment and inlet maintenance. My time at DEP provided a unique appreciation of the beach management program's history and decisions process. It was rewarding to champion restoration projects alongside local governments, and I felt a tremendous amount of gratification when projects were constructed. I now have the exciting opportunity to work with you to protect your beaches and the values they bring to your community: cultural and natural resources, renowned recreational destinations, storm protection for the uplands, and the economic lift.

By becoming FSBPA's Executive Director, I am even more committed to the Association's mission and welcome the opportunity to work with our members on beach and coastal issues. Please share your ideas with me on how FSBPA can stay on track and meet your needs. Besides working to secure a dedicated beach funding appropriation this session, we are also keenly interested in hearing ideas on enhancing the agendas at our conferences and improving our communication to members. We need the involvement of all members to ensure the Association's continued success now and in the future. With your active involvement and financial support, we will keep Florida's beaches world class.

I look forward to hearing from you at the Tech Conference in February and throughout the coming year.

Sincerely,

Jackie

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## **Introducing FSBPA's Executive Director**

It is our pleasure to introduce FSBPA's new Executive Director, Ms. Jackie Larson. Jackie comes to us with 16 years of work experience at the Florida Department of Environmental Protection, where she gained budgeting, legislative, outreach, and planning experience, all necessary skills of a successful executive director.

Ms. Larson has a strong work ethic and trusted reputation. Most recently, she served the role of Staff Director for the Deputy Secretary of Ecosystem Restoration, assisting in the management of four Divisions and ensuring the day-to-day operations ran efficiently and assignments were prepared accurately and on time. Her primary responsibilities were preparing or overseeing preparation of the Divisions' Legislative Budget Requests (LBR), Legislative concepts, bill analyses, strategic and long-term plans, operational budgets, and personnel actions.

Prior to this position, Jackie worked for Florida's Beach Management Program as a Staff Director and as a Project Manager for beach and inlet management projects. While in these positions, she managed a multitude of contracts and established community partnerships while helping local governments to implement their respective beach management programs. Jackie helped the agency work through several statewide emergencies, including the '04 and '05 hurricane seasons and Deepwater Horizon, was assigned several watches at the State's Emergency Operations Center, and coordinated special projects and legislatively mandated reports, namely the 2007 Beach Management Working Group. As the Beaches Staff Director, she was responsible for the program's budget and strategic planning documents and preparing Legislative reporting assignments and other briefing materials.

Jackie's education, work history outside of DEP, and other interests further expound on why she was selected as FSBPA's Executive Director. She holds a Bachelor of Science in Marine Biology from the College of Charleston and a Master of Science in Environmental Resource Management with an emphasis in coastal systems from Florida Tech. She held other professional positions with an environmental contractor at the Kennedy Space Center, an environmental laboratory in Charleston, and the marine laboratory for the South Carolina Department of Natural Resources. Finally, she is active around the community and holds or has recently held board positions for several civic organizations.

Please welcome Jackie at the Tech Conference on February 3<sup>rd</sup>. She is excited to be in her new role for the Association and is ready to help you.

## **New Member of the Board of Directors**

FSBPA is pleased to welcome back Virginia Barker to the Board of Directors. She was elected to the Board at FSBPA's General Membership Meeting on September 24, 2015. Virginia will serve as a governmental director for the 2016-2018 term.

Let us introduce our distinguished new board member!

Ms. Barker is a Florida native and currently the Director of Brevard County's Natural Resources Management Department. She has 18 years of experience with Brevard County, working her way up from Environmental Specialist, Environmental Scientist, Environmental Management Supervisor, and Watershed Program Manager.

From 1998 to 2004, Virginia coordinated the County's Beach Management program including initial construction of Brevard County's federal North and South Reach shore protection projects in 2000 - 2003. The tremendous teamwork of county staff - Mike McGarry and Paula Berntson, consultant – Kevin Bodge of Olsen Associates, dedicated federal partners



Virginia Barker (left) , Chris Creed (center), and Leanne Welch (right)

at the USACE and state cost-share administered by FDEP, led Brevard County's 9.8-mile North Reach to win an ASBPA Best Restored Beach Award in 2014.

Virginia has served four previous terms on the FSBPA Board of Directors. During a break from service on the Board last year, she was appointed to a formal Transition Committee to ensure great leadership for FSBPA's future including securing a top notch beach steward, Jackie Larson, as Executive Director. Virginia is delighted to be back on the Board collaborating with FSBPA staff and other Board members on the how to meet the current and future needs of Florida's beaches. This is a critical year to resolve issues associated with implementation of Amendment 1 and expand dedicated funding for Florida's Beach Management Program.

## **The 2016 Legislative Session Officially Begins**

(Debbie Flack, President)



After almost nonstop 2015 special sessions and committee meeting weeks, the 2016 Legislative Session officially convenes today, January 12. Given the session's early vs. traditional March start, we must hit the ground running. FSBPA's governmental strategy, largely associated with and supported by our

BeachWatch advocacy program, must be specific and accelerated, and most importantly dependent on the active involvement and reinforcement of each of you as our collective membership.

Keep in mind the baseline or starting point for our overriding objective is securing increased statewide beach management funding. The program was formally recognized in last session's structural and funding implementation of Amendment 1. The Ecosystem Management and Restoration Trust Fund that served the program for the past two decades was rescinded, and all Amendment 1 dollars including those for beaches now go through the Land Acquisition Trust Fund (LATF). Much has been said about how the Amendment 1 dollars were spent in this first year, but the bottom line is the beach program got \$25M in non-recurring LATF and was the recipient of an additional \$7.1M in General Revenue which is not nearly as well as it had in the preceding few years. The competition for these dollars will be increasingly difficult going forward with new legislative initiatives earmarking specific uses of substantial amounts of Amendment 1 doc stamp revenue set-aside for the life of the amendment. A few first-year recipients of Amendment 1 dollars, springs for example, have locked in future allocations as recurring in budget recommendations. Recurring allocations are a worthy objective for the statewide beach management program in terms of project timing, leveraging of matching funds, and sustaining the intergovernmental partnership. It will be an important component of FSBPA's funding strategy which is collectively aimed at significantly increasing 2016/17 state cost-sharing dollars.

With regard to our immediate funding goal, we have prepared "talking points" to get the message out to decision-makers for your use and that of other beach-supportive interests. Feel free to share. The message is on-line and immediately follows:

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#### HEALTHY BEACHES DRIVE FLORIDA'S ECONOMY AND BRAND

- We urge your support of a \$50M statewide beach program funding goal for FY 2016/17, including a larger share from the Amendment 1 trust fund, and continuing contributions from non-recurring General Revenue. This amount sustains the integrity of DEP's project ranking and selection process, maximizes federal matching dollars and picks up those projects only partially funded last session. A \$50M funding level addresses half of the need identified in DEP's \$97.7M Local Government Funding Request for FY 2016/17 for 51 beach nourishment and inlet management projects.
- Far too many worthy beach projects go unfunded year after year. Too many miles of beach are being left to erode, and so do their economic contributions to tourism, storm damage reduction, resource protection and Florida's quality of life. Significant opportunities to leverage federal and local match are missed.
- The Office of Economic and Demographic Research (EDR) recently stated in a Senate appropriations committee that, "While many features comprise the state's unique brand, the key component is Florida's beaches." The statewide beach management program generates a positive Return on Investment (ROI) of 5.4. This kind of ROI is unprecedented for a resource management program and is far higher than the vast majority of economic development programs EDR has analyzed. EDR concluded that a state investment of \$44M in the beach program resulted in an average increase in the GDP of \$2.4B per year. This increased the collection of state revenues by \$237.9M.
- Since 1998, the program was the designated recipient of \$30M annually in doc stamp revenues. Since then, the miles of critically-eroded beaches have increased from 317 to 410 miles. In FY 2015/16 the program received just \$25M in Amendment 1 trust fund dollars. This is also the recommended starting point for the upcoming budget process. Florida's beaches cannot afford for it to be the ending point.
- If the program is again funded at the base Amendment 1 allocation of \$25M for FY 2016/17, without supplementing with General Revenue, only 15 beach projects would receive full state cost-sharing, with the top three inlets receiving the statutory minimum of 10%. Two major construction projects which leverage over \$32M in federal dollars would go unfunded, as would a number of projects that received only partial funding in FY 2015/16. It would take an additional \$20.6M to make this subgroup whole.
- Funding for the statewide beach program must be increased substantially to sustain the effectiveness of Florida's unique beach brand. If funding only meets the needs of some of the beaches some of the time, most beaches will suffer much of the time. Healthy beaches grow state revenues by increasing coastal property values, associated doc stamp tax revenues, and tourism-related sales tax revenues.







As the 2016 Session begins our focus goes from policy and goals to the actual beach and inlet project lists in DEP's 2016/17 LGFR (Local Government Funding Requests) transmitted to the Legislature. The immediate objective is simply to get the program's statewide beach and inlet project allocation as high as possible in the separate Senate and House budgets that will go to the Budget Conference.

Our starting point for beaches is discouraging at best, especially given the 1998 doc stamp commitment for beaches of \$30M. For FY 2016/17, the Agency budget request and the Governor's Recommended Budget include just \$25M for statewide beach management in contrast to DEP's corresponding LGFR which totals \$97.7M for 51 beach and inlet projects, plus post-construction monitoring. We are already working with most of our local government members. If you can reinforce project-specific funding needs with locally-elected officials and legislative delegation members now is the time! It is also important we couple these local project funding requests with the strong argument that statewide beach management be a meaningful recipient of a larger share of the overall Amendment 1 doc stamp allocation. We have an effective message—healthy beaches, higher coastal property values and doc stamp revenues will increase the size of the Amendment 1 pie for the benefit of all water and land program interests—but it is not being heard! And despite the Legislature's Office of Economic and Demographic Research recent report that stresses beaches are the key component of Florida's brand and the statewide beach program generates an exceptional Return of Investment of 5.4, that relationship to state sales tax revenues seems to be largely ignored. In turn, far too many miles of beaches are being left to erode year after year.



Of overriding importance and emphasis is our **recurring goal of getting annual beach program funding to the \$50 million level**. In recent years FSBPA has used the simple rate of annual inflation, added miles of restored beach to the program, and growing number of projects and associated backlog. This may continue to get the

program some degree of attention, but identifying how additional funding (above the current year funding of \$32.1M) will be specifically used in FY 2016/17, and the expressed justification, will largely determine our success at session's end.

Our **starting point is a non-recurring base of \$25M in trust funds** (LATF). Keeping in mind the LGFR priority lists include 51 projects (36 Beach, 15 Inlet) with a total state share of \$97.7M, this base will fund just 15 beach projects and a small part of the 16<sup>th</sup>, funding for post-construction monitoring, and the statutory minimum of 10% for the top three inlet management projects. The math tells you how many projects are once again left behind including two major federally-authorized projects and two studies unfunded which leverage \$32.7M in federal dollars and a number of projects that received only partial funding in FY 15/16 would be left out of the mix. Once



the inlet 10% minimum is adjusted to include these two targeted additional needs, we would have reasoned justification for a **\$53M statewide beach management program for next fiscal year.** 

The next Shoreline will provide a summary of substantive beach-related legislation FSBPA is tracking/monitoring, including HB 877, an act relating to beach management and erosion control. It amends a single subsection (14) of Section 161.101, Florida Statutes.

**FSBPA**, as a statewide beach preservation association, whose membership participated in last year's OPPAGA study and has been, at times, critical of certain measures used by DEP in the annual project ranking exercise, **is supporting HB 877**. It is sponsored by Representative Ben Albritton, Chair, House Agriculture and Natural Resources Appropriations Subcommittee, who has been committed over the past few years to ensuring annual beach project ranking and selection as part of the State's statutory beach program focuses on the most important and relevant considerations.

Representative Albritton, like many of our coastal government members and other beach and tourism-related interests, recognizes the growing need to have the confidence of decision-makers and the public that the beach projects receiving annual state appropriations represent the best investment of limited state dollars. With local government annual funding requests routinely including more than 50 projects and a total cost in the \$100M range, we have the responsibility to ensure the best projects in terms of limited state's expenditures rise to the top of the annual list of funded projects. The bill sponsor has sought guidance and recommendations from House formally-requested EDR and OPPAGA studies, the Department of Environmental Protection, and FSBPA as well as considerable and appreciated member input.

HB 877 simply takes existing statutory ranking criteria and provides for the first time some legislative priority and policy emphasis regarding what is really important from the State's perspective and in light of today's needs. There is an added emphasis on economic benefits. Primary criteria capture the economic benefits of tourism, recreation, storm damage reduction as well as the availability and federal cost-share percentage, previous state financial commitment, and the project's cost-effectiveness.

In addition to these benefits measures, HB 877 also addresses the issues of fairness, equity, resource protection, and timeliness, with criteria that address project mobility in the annual ranking exercise, readiness-to-proceed, significance in addressing Florida's erosion problems, inlet mitigation, and habitat enhancement. Ultimately, perception and credibility may be as important in ensuring program sustainability as is the bill's proposed ranking criteria and the policy guidance it provides. It goes hand-in-hand with our primary goal of increased program funding!



#### Last Day for early registration and guaranteed hotel rates—January 12, 2016

## 2016 Tech Conference • February 3-5 • Omni Jacksonville

Please join us for the 2016 National Conference on Beach Preservation Technology in Jacksonville! The 2016 Planning Committee evaluated numerous abstract submittals and produced an outstanding final program. The program is full of a wide range of topics, including beach nourishment and inlet management projects, project lessons learned, coastal structures, sea level rise and resiliency, turbidity and mixing zones, regional sediment management, and nearshore hardbottom and mitigation. Some of the highly anticipated presentations include:

- · Risk-informed decision making for sea level rise adaptation
- Predicting loss of fine sediment from borrow to beach
- Development of an appropriate mixing zone using turbidity and sedimentation predictions
- Erosion impacts of modified inlets on the east coast of Florida
- Mechanisms for hurricane sedimentation of hardbottom resources
- Permitting updates and efficiencies from the Florida DEP

You will find the most up-to-date full conference program online at <a href="www.fsbpa.com/tech-conference.html">www.fsbpa.com/tech-conference.html</a>. The program, as well as a list of the conference sponsors and exhibitors are available on the following pages.

Please be sure to take a look at the program so that you can be thinking about which sessions you would like to attend on Thursday, with concurrent sessions running all day. There will also be a chance for audience participation with two of the presentations sessions – the first on Wednesday following presentations on sedimentation and mixing zones/turbidity, and the second on Friday following presentations on biological monitoring and a permitting update from FDEP.

#### **January 12—Last Day for Early Registration and Guaranteed Hotel Rates**



To register for the conference, visit the conference website and sign-up online.

Hotel reservations should be made directly with the conference hotel, the Omni Jacksonville. Click here to make your reservation online or call (800) 843-6664. The group rate is \$150 for a single or double room, plus tax. There is a discounted overnight valet parking fee of \$10 per vehicle, per night and complimentary wireless internet access in guest rooms with enrollment in the Omni Select Guest Program. To ensure room availability, make your reservation early! The hotel will honor the group rate as long as rooms remain in FSBPA's block or by January 12, 2016, whichever occurs first.



## 29<sup>th</sup> Annual National Conference on Beach Preservation Technology Conference Program February 3-5, 2016 ◆ Omni Jacksonville

Wednesday, February 3, 2016
OPENING SESSION
1:00 p.m. to 7:00 p.m.

1:00 p.m. Welcome

1:10 p.m.

The Value of Navigation Dredged Material to Ecosystem Restoration and Coastal Resiliency

Eric Summa and Terri Jordan-Sellers., U.S. Army Corps of Engineers, Jacksonville District, FL and Anne McCarthy and Mark Fonseca, Ph.D., CSA Ocean Sciences Inc., Stuart, FL

1:35 p.m.

**Risk-Informed Decision Making for Sea Level Rise Adaptation** 

Angela Schedel, Ph.D., P.E., Commander U.S. Navy, Ocean Engineering Department, U.S. Naval Academy, Annapolis, MD

2:00 p.m.

In Search of Resiliency - Martin County's Journey toward Increased Berm Elevation

Kenneth Craig, P.E. and Michael Trudnak, P.E., Taylor Engineering, Inc., Jacksonville, FL and Kathy Fitzpatrick, P.E., Martin County, FL

2:25 p.m. Professional Exchange Break

2:55 p.m.

**Mechanisms for Hurricane Sedimentation of Hardbottom Resources** 

Michael Jenkins, Ph.D., P.E., Applied Technology and Management, Inc., West Palm Beach, FL

3:20 p.m.

Development of an Appropriate Mixing Zone Using Turbidity and Sedimentation Predictions for the Port Everglades Sand Trap Christopher Creed, P.E. and Steven Howard, P.E., Olsen Associates, Inc., Jacksonville, FL, Julio Zyserman, Ph.D., DHI Water & Environment, Inc., Solana Beach, CA, and Cheryl Miller, Coastal Eco-Group, Deerfield Beach, FL

3:55 p.m.

**Predicting Loss of Fine Sediment from Borrow to Beach** 

Krista Henrie, Kevin Bodge, Ph.D., P.E., and Steve Howard, P.E., Olsen Associates, Inc., Jacksonville, FL

4:20 p.m.

**Application of Nearshore Placement Tools at Vilano Beach, Florida** 

Katherine Brutsché, Ph.D., Brian McFall, Ph.D., P.E., Jase Ousley, P.G., and Coraggio Maglio, P.E., Coastal Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS and Jason Engle, P.E., U.S. Army Corps of Engineers, Jacksonville District, FL

4:45 p.m. Panel and Audience Discussion

5:00 p.m. Adjourn

6:00 p.m. – 7:00 p.m. Welcome Reception, Location: Exhibit Hall



## CONCURRENT SESSIONS 8:05 a.m. to 9:45 a.m.

#### **SESSION A**

#### 8:05 a.m.

Python Programming as a Coastal Management Tool John Bishop, Ph.D. and Andrew Squires, Pinellas County Natural Resources, Clearwater, FL and Ping Wang, Ph.D., Coastal Research Laboratory, Department of Geology, University of South Florida, Tampa, FL

#### 8:30 a.m.

The Role of Wind in Longshore Transport

Carolina Burnette and William Dally, Ph.D., P.E., University of North Florida, Jacksonville, FL

#### 8:55 a.m.

Design Approach – Coupling Delft3D, SBEACH, and XBEACH, Gulf State Park, Alabama

David Swigler, P.E., Gordon Thomson, P.E., and Morjana Signorin, CB&I Coastal Planning & Engineering, Inc., Boca Raton, FL and Jay Morgan, Thompson Engineering, Inc., Mobile. AL

#### 9:20 a.m.

FILSIM Model for Probabilistic Performance of Beach Nourishment Projects

David Kriebel, Ph.D., P.E., Coastal Analytics LLC, Millersville, MD

#### 9:45 a.m.

**Professional Exchange Break** 

#### **SESSION B**

#### 8:05 a.m.

Implementation of Charlotte County's Long-Term Beach and Inlet Management Plan

Vadim Alymov, Ph.D. and Michael Poff, P.E., Coastal Engineering Consultants, Inc., Naples, FL and Chuck Mopps, Charlotte County Community Development, Punta Gorda, FL

#### 8:30 a.m

Evolution of Barrier Island Sand Spits and effects on Beach Management Practices in Southwest and Central Florida, USA

Mohamed Dabees, Ph.D., P.E. and Brett Moore, P.E., Humiston & Moore Engineers, Naples, FL

#### 8:55 a.m.

Evolution of the Pensacola Beach, FL, Beach Restoration Project after Ivan and Katrina

Albert Browder, Ph.D., P.E. and Krista Henrie, Olsen Associates, Inc., Jacksonville, FL

#### 9:20 a.m.

Jupiter Carlin Nourishment – A Case of Adaptive Management, Cooperation, and Innovative Applications Michael Stahl and Kelly Martin, Palm Beach County Department of Environmental Resources Management, West Palm Beach, FL

#### 9:45 a.m.

**Professional Exchange Break** 



#### CONCURRENT SESSIONS 10:15 a.m. to 12 noon

#### **SESSION C**

#### 10:15 a.m.

An Update on the Bureau of Ocean Energy Management, Marine Minerals Program Studies

Douglas Piatkowski and Jennifer Culbertson, Ph.D., Bureau of Ocean Energy Management Headquarters, Department of the Interior, Sterling, VA

#### 10:40 a.m.

#### **Evaluation of Canaveral Shoals Borrow Area Rugosity**

Paul Knorr, Ph.D., Bureau of Ocean Energy Management Headquarters, Department of the Interior, Sterling, VA

#### 11:05 a.m.

#### **Federal Sand Resources**

Jeff Reidenauer, Ph.D. and Lora Turner, Bureau of Ocean Energy Management Headquarters, Department of the Interior, Sterling, VA

#### 11:30 a.m.

#### Florida Upland Sand Resources for Beach Renourishments

Tara Brenner, P.G., CB&I Coastal Planning & Engineering, Inc., Boca Raton, FL

12:00 p.m. Luncheon

#### **SESSION D**

#### 10:15 a.m.

Engineered Shoreline Protection – Case Study from the Jersey Shore Material Selection Process, Sustainability, and Impacts from Sandy

Arthur Chew, P.E., Arthur Chew Consulting, Linwood, NJ and Cris Timpson, TenCate Geosynthetics, Commerce, GA

#### 10:40 a.m.

Dredging, Communities, Compliance and Transparency: Lessons Learned and New Approaches

Brett Kettle, Ph.D., Queensland, Australia

#### 11:05 a.m.

Four Structurally Stabilized Resort & Public Beaches in the Caribbean

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

#### 11:30 a.m.

Breakwater Modification and Beach Nourishment at Jaboatão Dos Guararapes, PE, Brazil

Lindino Benedet, CB&I Coastal Planning & Engineering, Inc., Boca Raton, FL and Rodrigo Barletta, CB&I Coastal Planning & Engineering, Inc., Brasil

12:00 p.m. Luncheon





## CONCURRENT SESSIONS 1:30 p.m. to 3:10 p.m.

#### **SESSION E**

#### 1:30 p.m.

The Economic Impact of the Beaches of Palm Beach County, Florida

William Stronge, Ph.D., Economics Department, Nova Southeastern University, Boca Raton, FL

#### 1:55 p.m.

Adapting to Sea Level Rise to the Year 2100 and Beyond in the State of Florida, USA

Randall Parkinson, Ph.D, P.G., Division of Coastal Zone and Watershed Management, Environmental Remediation & Recovery, Melbourne, FL, and Peter Harlem and John Meeder, Florida International University, Miami, FL

#### 2:20 p.m.

Development of a Hydrodynamics-Based Index for Coastal Storm Severity

Gabriel Todaro and William Dally, Ph.D., P.E., University of North Florida, Jacksonville, FL

#### 2:45 p.m.

South Florida Storm Surge Modeling Project: Model
Development and Capturing of Coastal Features
Christopher Bender, Ph.D., P.E. and William Miller, Ph.D.,
P.E., Taylor Engineering, Inc., Jacksonville, FL and Ashley
Kauppila, P.E., Taylor Engineering, Inc., West Palm Beach, FL

#### 3:10 p.m.

**Professional Exchange Break** 

#### **SESSION F**

#### 1:30 p.m.

The Florida Beaches Habitat Conservation Plan, The Planning Process: Where we are and Where we are Heading Jennifer McGee, Ph.D. and Thomas Ostertag, Florida Fish and Wildlife Conservation Commission, Tallahassee, FL

#### 1:55 p.m.

Egmont Key, FL and Galveston, TX Entrance Channel Beneficial Use of High Silt Content Maintenance Dredging Material

Coraggio Maglio, P.E., Jase Ousley, P.G., Katherine Brutsché, Ph.D., Coastal Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS, Brandon Smolinsky, U.S. Army Corps of Engineers, Galveston District, TX, and Aubree Hershorin, Ph.D. and Millan Mora, P.E., U.S. Army Corps of Engineers, Jacksonville District, FL

#### 2:20 p.m.

Applying Coastal Engineering Tools to Habitat Restoration Projects in Manatee County

Charlie Hunsicker, Manatee County, FL, and Thomas Pierro, P.E. and Michelle Pfeiffer, P.E., CB&I Coastal Planning & Engineering, Inc., Boca Raton, FL

#### 2:45 p.m.

Mississippi River Long Distance Sediment Pipeline (BA-43 EB) and Bayou Dupont Marsh and Ridge Creation (BA-48) Projects Kodi Guillory, P.E., Coastal Protection and Restoration Authority of Louisiana, Baton Rouge, LA and Nick Cox, Moffatt & Nichol, Baton Rouge, LA

#### 3:10 p.m.

**Professional Exchange Break** 



## CONCURRENT SESSIONS 3:40 p.m. to 5:00 p.m.

#### **SESSION G**

#### 3:40 p.m.

Translocation of Staghorn Coral (*Acropora Cervicornis*) Across Regions of the Florida Reef Tract: Investigating Species Recovery and Restoration

Cody Bliss and Stacy Buck, CB&I Coastal Planning & Engineering, Inc., Boca Raton, FL

#### 4:05 p.m.

#### St. Lucie County Mitigation Reef - Lessons Learned

Andrew Condon, Ph.D. and Michael Walther, P.E., Coastal Tech-G.E.C., Inc., Vero Beach, FL and Richard Bouchard, P.E., St. Lucie County Erosion District, Ft. Pierce, FL

#### 4:30 p.m.

Anna Maria Island Mitigative Artificial Reefs – An Evaluation of Reef Material and Age

Lauren Floyd and Katy Brown, CB&I Coastal Planning & Engineering, Inc., Boca Raton, FL

5:00 p.m. Adjourn

#### **SESSION H**

#### 3:40 p.m.

Regional Sediment Management Center of Expertise: Making RSM Standard Operating Procedure throughout the USACE

Jason Engle, P.E., U.S. Army Corps of Engineers, Jacksonville District, FL

#### 4:05 p.m.

**Probabilistic Alternatives Analysis of Regional Sediment Management Practices** 

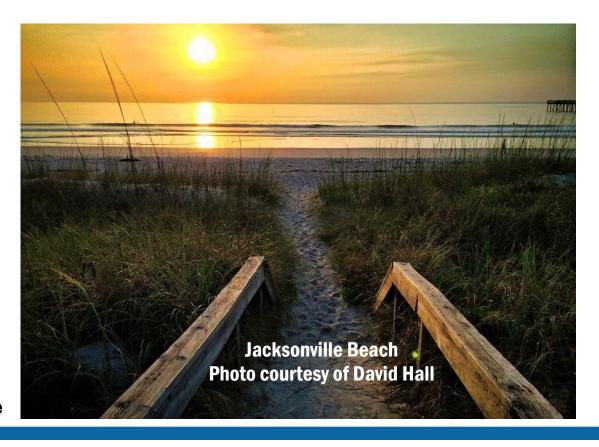
Michael Krecic, P.E., INTERA Incorporated, Gainesville, FL

#### 4:30 p.m.

St. Lucie Nearshore Sand Shoal Complex: Regional Sediment Resource or Submerged Storm Breakwater

Leaf Erickson and Gary Zarillo, Ph.D., P.G., Department of Marine and Environmental Systems, Florida Institute of Technology, Melbourne, FL

5:00 p.m. Adjourn





#### Friday, February 5, 2016

## CLOSING GENERAL SESSION 8:00 a.m. to 12:20 p.m.

8:00 a.m.

Addressing Turbidity Compliance Issues Associated with Coastal Navigation Projects with Beach and Nearshore Placement Sirisha Rayaprolu, U.S. Army Corps of Engineers, Jacksonville District, FL, and Larry Parson and Elizabeth Godsey, U.S. Army Corps of Engineers, Mobile District, AL

8:25 a.m.

**Biological Monitoring - The Permittee's Perspective** 

Nicole Sharp, P.E. and Kenneth Banks, Ph.D., P.E., Broward County, FL

8:50 a.m.

**Hardbottom Monitoring: Offering Solutions to Existing-Expensive Protocols** 

Eric Summa and Clay McCoy, Ph.D., U.S. Army Corps of Engineers, Jacksonville District, FL

9:15 a.m.

**Joint Coastal Permitting Updates and Efficiencies** 

Lainie Edwards, Ph.D., Division of Water Resource Management, Florida Department of Environmental Protection, Tallahassee, FL

9:40 a.m.

**Panel and Audience Discussion** 

10:00 a.m.

**Professional Exchange Break** 

10:30 a.m.

**Erosional Impacts of Modified Inlets on the East Coast of Florida** 

James Houston, Ph.D., U.S. Army Engineer Research and Development Center, Vicksburg, MS and Robert Dean, Ph.D., P.E., Department of Civil and Coastal Engineering, University of Florida, Gainesville, FL (deceased)

10:55 a.m.

**Terminal Groin Justification and Construction** 

Erik Olsen, P.E., Olsen Associates, Inc., Jacksonville, FL

11:20 a.m.

**Engineering Advancement of Turtle Exclusion Device** 

John Henriksen, Ph.D., P.E. and Ryan Munger, Manson Construction Company, Jacksonville, FL

11:55 a.m.

Sand Budget Dynamics, Sebastian Inlet, Florida

Gary Zarillo, Ph.D., P.G., Department of Marine & Environmental Systems, Florida Institute of Technology, Melbourne, FL

12:20 p.m.

**Conference Adjourns** 

Subject to change, any updates as necessary will be made online and presenters notified



## **Thank you to our Conference Sponsors**

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#### **Hot/Cold Tumblers**



#### **Welcome Reception**



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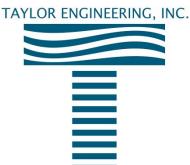
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## Honeymoon Island Beach Restoration Project – Phase II Project Construction 2014-2015

Brett D. Moore, P.E., President Humiston & Moore Engineers January 8, 2016

#### **Background**

Honeymoon Island State Park is located in Dunedin, in Pinellas County Florida. Honeymoon Island is approximately 4 miles long with a land area of 2800 acres. The island is currently owned and managed by the State of Florida Park Service. The Park Service has maintained much of the island in its natural state, and the island has been one of the most highly visited beach state parks in Florida with over a million visitors annually.

Since the opening of the park in 1982, the gulf shoreline has been experiencing chronic erosion which has threatened park infrastructure including parking lots and bathhouses. The main reason for the erosion is the beach and the island itself was artificially advanced seaward through mining of offshore material and filling the Island shoreline in the 1960's, as part of a prospective development project at that time. The development plans established a wider beach with an unnatural shoreline orientation, and deeper than equilibrium offshore profile slope. This resulted in the beach area becoming situated as an artificial headland. As a result there has been a chronic erosion problem on this artificial headland despite it's popularity as a beach destination.

In 1989 the State of Florida placed approximately 230,000 cubic yards of sand on the beach from an upland source. The material was readily available through a local public project, and the sand was relatively inexpensive. This sand was placed along the gulf shoreline of Honeymoon Island, along the two northern parking lots, and walkways were constructed to access the beach.



The artificial headland with an unnatural shoreline orientation has always been inconsistent with prevailing wave climate, which combined with the steep offshore bathymetry subjected the fill to high erosion stress. The sand placed along this area was quickly eroded, much of it moved offshore and to the south. In less than



2 years most of the dry sand beach had been lost threatening the park's popular beach area and its infrastructure.

Chronic erosion along the park shoreline led to the design and implementation of the recent Honeymoon Island Beach Restoration project. This project has been designed and constructed in two Phases.





#### Phase I of the Honeymoon Island Beach Restoration Project

The first phase of the Honeymoon Island Beach Restoration Project was permitted in 2006 and constructed in 2007. The project consisted of dredging 140,000 cubic yards of sand from Hurricane Pass and the construction of a low profile T-groin to replace an existing concrete bag groin to provide additional protection and stability to the beach. While there was a need for additional erosion control structures at the time, it was decided to limit the construction to one T-groin and monitor its performance.

The borrow area was designed to realign the inlet channel to improve inlet hydraulic efficiency. It involved the selective dredging of approximately 140,000 cubic yards of sand for beach fill, and the dredging directed the inlet channel away from the active recreational beach. Out of

consideration for the historic high rate of sand loss and high erosion stress, the regulatory agencies authorized the introduction of an erosion control structure to reduce the rate of sand loss. The structure was designed to stabilize the beach while allowing sand bypassing to the shoreline downdrift of the structure.

H&M was the engineer of record; Coastal Marine Construction was the prime marine contractor, and Florida Dredge and Dock, LLC was the subcontractor responsible for dredging and beach fill placement. The project began in September 2007 and was completed in January 2008. The total construction cost was \$1,926,718.

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#### Phase II of the Honeymoon Island Beach Restoration Project

In comparison to the 1989 beach nourishment project, the erosion control structure completed for Phase I

substantially improved stability of the recreational beach south of the north parking lot within the influence of the T-groin. The dune plantings seaward of the south parking lot and located north and upland of the T-groin were performing well and collecting windblown sand. However, the continued erosion further north and west of the north parking lot, and continued storm damage to the north parking lot demonstrated the need for additional erosion control structures as part of the design for the next Phase.



As the shoreline eroded, the material that was left behind was mostly rock debris from the combined sand and rock fragments that had been mined from offshore, resulting in a rubble shoreline up to the undermined parking lots. The existing beach conditions were further compromised by the impact of Tropical Storm Debby in June 2012 resulting in further damage to the north parking lot and loss of uplands.

The Park Service supported a second Erosion Control and Nourishment Phase consisting of the construction of additional T-groins of a design similar to Phase I, partial retreat of the damaged north parking lot which allowed minor shoreline reorientation, and additional selective dredging of the inlet borrow area, which had recovered substantially from the initial dredging.

Phase II consisted of the construction of three T-groins, and the selective dredging and fill placement of approximately 160,000 cubic yards from the borrow area used for the Phase I project, which was expanded to the south. The Phase II Project was bid in April 2014, and Florida Dredge and Dock, LLC was awarded the contract.

#### Construction

Due to the high wave energy erosion stress along the project area, the Project Order of Work consisted of installation of the 3 T-groins followed by the placement of the beach fill. In this manner, the area of fill placement would be sheltered prior to fill placement, and dry beach losses from natural profile adjustment would be minimized.

Project construction commenced in August 2014 through mobilization of equipment and delivery of materials for installation of the three T-groins. The groin T-heads were designed with a sheetpile core, and with a dense armor stone apron along the seaward side for wave energy dissipation and scour protection. The shore perpendicular groin segments were constructed of the same armor stone, although scaled down





in size due to the protection from wave energy afforded by the T-heads. Material quantities included a total of 450 linear feet of 20-foot long steel sheetpile and a total of approximately 10,800 tons of armor stone. The source of the armor stone was the Martin Marietta Mine in Georgia, which provided the desired high density rock.

Construction of the T-groins during the winter season was a challenging task. The Contractor constructed the project using both land-based and offshore operations. This allowed for some of the materials to be delivered directly to site while other materials were brought in by barge. To facilitate this dual construction process, the contractor built custom designed equipment for this project. The "spider" was designed to bring and place rock from the land-based operation, and to assist with material installation from the barge mounted equipment working from offshore. Construction of the T-groins was nearly complete by the end of June 2015.





The dredge used by Florida Dredge & Dock, LLC was the *Bayonet Point*, a 14-inch cutterhead dredge with a booster. Dredging and beach fill commenced on July 7, 2015, and the beach fill was deemed substantially complete on September 25, 2015. Final project cleanup and demobilization was completed by November 13, 2015. The total beach fill pay quantity was 162,890 cy.





The comparative photos above show the conditions prior to and following construction. As evident by the width of the north parking lot, the DEP Parks Service realigned the parking to allow for a 70 foot retreat and conversion of part of the parking lot to beach and dune.

The total construction project cost was \$4,318,664. Funding for the project was approved by the Florida Legislature for FY12/13 and Pinellas County provided additional local funding and administrative support during permitting and construction. The project also received post Tropical Storm Debby FEMA funding for a portion of the work.

The project overcame a series of obstacles including weather, park functions for holidays and special events, through weekly on-site meetings and constant coordination between the Parks Service staff, Florida Dredge & Dock, LLC, Pinellas County staff and Humiston & Moore Engineers.

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Since completion of the project, the number of visitors at the park has rebounded significantly. Below is a comparison of attendance at the park for November and December from 2014 to 2015

Honeymoon Island State Park Attendance			
	2014	2015	Increase
Nov	48,205	75,874	57%
Dec	54,943	91,127	66%



In the past, the construction of a beach along this section of the shoreline was not sustainable by itself. In this case, the strategic use of erosion control structures allowed for a sustainable beach fill project to support the Park's infrastructure and natural beach habitat.



## Federal Project Status Updates — January 2016



#### **FEASIBILITY STUDIES:**

- St. Johns County St. Johns County feasibility study includes shoreline areas in South Ponte Vedra Beach, Vilano Beach, and Summerhaven. The District is on schedule and continues to actively move forward with the feasibility study. The project team has recently finished the draft feasibility report in preparation for the Tentatively Selected Plan (TSP) milestone which is scheduled with the vertical team for 4 February 2016. The TSP will provide hurricane storm damage reduction in highly erosive areas along the shoreline. The Agency Decision milestone is scheduled for 26 May 2016 and The Civil Works Review Board is scheduled for 31 January 2017.
- Flagler County The Chief of Engineer's Report was signed by Lieutenant General Thomas Bostick on December 23, 2014. With this signing, the Corps is certifying that the beach and dune project is environmentally sound and economically beneficial to the nation. The Chief's Report is currently under review by the Office of Management and Budget. After this review, the report goes to Congress for future authorization and appropriations. The local sponsor is currently discussing the possibility of moving forward with the pre-construction, engineering and design phase (PED) even though no federal funds have been provided. The Corps and County are awaiting any nominal amount of budget towards PED to determine whether accelerated funds can be utilized vice contributed funds. The kickoff for PED is currently on hold till funding path is determined.
- St. Lucie County Re-scoping efforts were completed in FY2014 to modify the scope of the study to current Corps feasibility study 3x3x3 standards. The final array of alternatives for modeling was identified in November 2015 and a Tentatively Selected Plan will be identified in April 2016. Alternatives identified will provide hurricane storm damage reduction in highly erosive areas along the shoreline in St. Lucie County. The Chief of Engineers Report is currently scheduled for July 2017.

#### OTHER MAJOR PLANNING REPORTS:

- The **Draft Ft. Pierce Shore Protection Project GRR** is anticipated to seek an additional 50 years of Federal participation for the project. Alternatives analysis is ongoing by the sponsor and consultants. Once complete, findings will be incorporated into a draft GRR, which will be directly submitted to the ASA by the County, per WRRDA Section 1014.
- Jupiter/Carlin Shore Protection Project Palm Beach County has submitted a draft Section 934 report and NEPA document for the Jupiter/Carlin Segment to extend Federal participation for the next renourishment and out to 50 years of Federal participation. Following review of the data and report, revisions were recommended to the Beach-fx model. Having received Federal funds for Palm Beach County projects, the model revisions and completion of the 934 report are being conducted at the Jacksonville District.

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- Broward County Shore Protection Project Segment II 2<sup>nd</sup> Renourishment Limited Reevaluation Report (LRR) and Environmental Assessment (EA) was approved in October 2016 along with the signing of the "Finding No Significant Impact" by the Jacksonville District Commander. Construction began on January 4, 2016 and the contract is administered by Broward County. Broward County will begin a new LRR/EA for Segment III in the coming year.
- The **Dade County Limited Reevaluation Report (LRR)** and Environmental Assessment (EA) will evaluate the use of a new sand source for the Dade County Beach Erosion Control and Hurricane Protection Project. The final report will be sent to the South Atlantic Division by January 15<sup>th</sup>, 2016. Final approval of the report is scheduled for late February 2016.
- Lee County, Gasparilla A Section 934 report has been initiated to determine the Federal interest in extension of Federal participation in cost-sharing from the current 10 years to a 50-year period of Federal participation, or an additional 40 years. On-going efforts focus on the Beach-fx model setup.

#### **ENGINEERING AND DESIGN:**

- Nassau County The final FDEP permit was issued in May 2015. The upcoming Kings Bay Navy maintenance dredging beach quality material will be beneficially placed in much needed area of the Nassau County Shore Protection Project template.
- **Duval County** The project is on track to award the next renourishment contract in June 2016. Currently the district and local sponsor are working on the draft tri-party agreement as well as draft plans/specifications.
- St. Johns County, St. Augustine Beach The project delivery team is currently preparing a Limited Reevaluation Report (LRR) to include an offshore borrow area as a potential borrow area at the request of the local sponsor. The LRR draft report will be submitted to South Atlantic Division (SAD) on 5 July 2016 and the Final Report will be submitted on 3 January 2017. The project team continues evaluating monitoring data to revise the erosion rates and quantities. The next renourishment is scheduled for 2017 dependent on funding.
- Sarasota County, Lido Key The Jacksonville District submitted a JCP application to FDEP on 11 March 2015. The Draft EA and FONSI were released for public comment on 30 March 2015. A NEPA public meeting was held on 15 April 2015 at City Hall City of Sarasota. The public comment period for NEPA closed on 15 May 2015 and the Jacksonville District is currently addressing more than 300 public comments. The District submitted responses to FDEP's RAI and FDEP has requested an extension of 30 days for review of the responses.
- Brevard County Mid-Reach With approval of the General Reevaluation Report in September 2014 by the Assistant Secretary of the Army for Civil Works, a Design Agreement was executed in October 2014 and Pre-Engineering and Design (PED) kickoff meeting was held in December 2014 for development of the mitigation feature. The team is postured to move forward with Construction of the feature in the event that FY 2016 workplan funding becomes available.



# FDEP Division of Water Resource Management Agency Updates



#### Construction Activities on Florida's Beaches

A number of beach restoration, nourishment and erosion control projects<sup>1</sup> are underway this winter now that turtle nesting season has ended. The weather has not been particularly conducive to offshore dredging, but progress is being made!

Phase II of beach restoration at **Honeymoon Island State Park** in Pinellas County was completed in December 2015. The project included the placement of 162,890 cubic yards of sand from the Hurricane Pass ebb shoal. The project also included the construction of three low profile T-head groins which will stabilize the beach and significantly decrease erosion. The project was constructed below the anticipated budget for a total (state) cost of \$4,613,479. Pinellas County administered the contract and provided construction oversight.

Honeymoon Island consistently ranks number one in the Florida State Park system for contributing to the local economy. In Fiscal Year 2013-2014 the direct economic impact of the park was \$85,919,234. In December 2015, visitation to Honeymoon Island totaled 94,464 people, an increase of over 30,000 visitors compared to December 2014. A similar increase in visitation was documented after Phase I of the restoration in 2007, illustrating the economic and recreational benefit of beach nourishment.



Honeymoon Island State Park on December 27, 2015. *Photo courtesy of Assistant Park Manager Michael Lang.* 

The **Cortez Groins Replacement** project began in March, 2015 and is scheduled to be completed in March 2016. Three derelict structures are being removed and replaced with permeable adjustable groins (PAGs) as part of the larger critically eroded Anna Maria Island Beach Nourishment Project. The PAGs allow changes to the flow of sediment as needed north and south of the structures. The \$5 million project is funded by Manatee County and DEP.



A truck haul nourishment is underway at **Broward County Segment II**. The project consists of 750,000 cubic yards of sand being placed along 4.9 miles of shoreline between Hillsboro Inlet and Port Everglades. Most of this segment was nourished in 1983, but a portion in Ft. Lauderdale has not yet been restored. The Army Corps of Engineers will reimburse Broward County an estimated \$30 million of the projected \$44 million project cost.

The Palm Beach Island Beach Management Agreement Phipps Ocean Park (Reach 7) Nourishment is underway after a weather delay. The project consists of 1.01 million cubic yards of sand from an offshore source for placement on the Phipps Ocean Park, Reach Seven and Reach Eight. Sand may also be stockpiled for a dune feature at R-116 to R-121, and future placement on Reach 8. The \$16.9 million project is funded by the Town of Palm Beach. State funding for the project is being requested in Fiscal Year 2016-17.

The **Singer Island Dune** construction started in December 2015. The project consists of placement of 12,000 cubic yards of sand from an upland sand source. The \$375,000 project is funded by Palm Beach County and DEP.

The nourishment at **Pensacola Beach** started in November, but has been delayed by weather. Hopefully, by mid-January, 1.75 million cubic yards of sand will be arriving along 8.1 miles of beach. This project was last nourished in 2006. The \$16.9 million project is funded by the Santa Rosa Island Authority and DEP.

The **St. Andrews State Park Gator Lake Groin and Breakwaters** project is almost complete. More sand will be available for bypassing to Bay County beaches in the future as a result of this project.

The **Jupiter Island Beach Nourishment** is scheduled to begin pumping on January 9 and place 1.65 million cubic yards of sand along 6.1 miles of beach. The \$17.8 million project is funded by the Town of Jupiter Island, DEP and FEMA.

The **Kings Bay** maintenance dredging will place sand on the north end of Amelia Island starting in mid-February.

The **Navarre Beach Nourishment** is planned for spring of 2016. Restored in 2006, the project is 4.1 miles long. The nonfederal **Central Boca Raton Nourishment** (now permitted in conjunction with the federal North Boca Segment of the Palm Beach County Shore Protection Project) is also planned for this winter. **Longboat Key** received the federal permit to bypass from New Pass, and hope to begin construction this winter on the south end of the island.

There are other projects nearing completion of their pre-construction phases. You can review the status of construction projects permitted by the Beaches, Inlets and Ports Program at <a href="http://www.dep.state.fl.us/beaches/permitting/icp-uc.htm">http://www.dep.state.fl.us/beaches/permitting/icp-uc.htm</a>.

- (3) "Beach nourishment" means the maintenance of a restored beach by the replacement of sand.
- (4) "Beach restoration" means the placement of sand on an eroded beach for the purposes of restoring it as a recreational beach and providing storm protection for upland properties.

<sup>&</sup>lt;sup>1.</sup> Chapter 161.021, Florida Statutes definitions:



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

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### **CALENDAR OF EVENTS**

## **FSBPA Conferences**

February 3-5, 2016 2016 Tech Conference Omni Jacksonville, Florida

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## **OTHER DATES OF INTEREST**

**January 12-March 11, 2016** 

**2016 Legislative Session** 

**January 29-31, 2016** 

19th Annual Florida Marine Turtle Permit Holder Meeting Hyatt Regency Jacksonville Riverfront Jacksonville, Florida

February 23-25, 2016 ASBPA Coastal Summit Washington, DC