

32nd Annual National Conference on Beach Preservation Technology
February 6-8, 2019 ♦ Embassy Suites by Hilton St. Augustine Beach Oceanfront Resort
as of 1-11-19

Wednesday, February 6

10:30 a.m. - 11:30 a.m.

SAND 102: Introduction to Beach Management

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

This is a brief introduction to the fundamental terminology and physical processes of sandy beaches, coastal structures, inlets and beach nourishment. This entertaining 1 hour lecture is intended for conference attendees who are new to beach management or want to expand their understanding of coastal processes.

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OPENING GENERAL SESSION

1:00 p.m. to 5:20 p.m.

1:00 p.m.

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

1:10 p.m.

Performance of Dune Reconstruction After Hurricanes Matthew and Irma, Jacksonville Beaches

Kevin Bodge, Ph.D., P.E., Patrick Cooper, and Steven Howard, P.E., Olsen Associates, Inc., Jacksonville, FL

1:30 p.m.

Brokering a Beach Management Program in St. Johns County, St. Augustine, FL

Damon Douglas and Jay Brawley, P.E., St. Johns County, FL

2:00 p.m.

Borrow Area Investigations for Two New Nourishment Projects in St. Johns County, Florida

Wendy Laurent, Taylor Engineering, Inc., Jacksonville, FL

2:10 p.m.

Coastal Armoring in Florida: South Ponte Vedra Beach – A Case Study of the Past 23 Years of Environmental Permitting of Seawalls in Florida

Tony McNeal, P.E. and Bob Brantly, P.E., Division of Water Resource Management, Florida Department of Environmental Protection, Tallahassee, FL

2:35 p.m.

Articulated Reef Mat Construction at Brevard County

Michael McGarry, Natural Resources Management Department, Brevard County, Viera, FL and Kevin Bodge, Ph.D., P.E., Olsen Associates, Inc., Jacksonville, FL

2:55 p.m.

Replacing NAVD88: Effects of Vertical Datum Modernization on Coastal Engineering

Scott Lokken, National Geodetic Survey, National Oceanic and Atmospheric Administration, Raleigh, NC

3:15 p.m.

Professional Exchange Break (25 Minutes)

3:40 p.m.

Where is the Beach Nourishment that was Placed on the Florida East Coast?

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

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OPENING GENERAL SESSION *continued*

1:00 p.m. to 5:20 p.m.

4:00 p.m.

The Sebastian Inlet District's 100th Anniversary: Celebrating a Century of Coastal Inlet Management

- **The Sebastian Inlet District: Managing the Connection Between the Atlantic Ocean and Indian River Lagoon**
Martin Smithson, Sebastian Inlet District, Indialantic, FL
- **Engineering and Regulatory Aspects of Sebastian Inlet Management**
Michael Jenkins, Ph.D., P.E., Applied Technology and Management, Inc., West Palm Beach, FL
- **The State of the Inlet Annual Report: Assessments of Inlet Morphologic Processes, Shoreline Change, Sediment Budget and Project Performance**
Gary Zarillo, Ph.D., P.G., Department of Ocean Engineering and Sciences, Florida Institute of Technology, Melbourne, FL
- **Environmental Aspects of Sebastian Inlet Management**
Erin Hodel, CSA Ocean Sciences Inc., Stuart, FL

5:20 p.m.

Adjourn

6:00 p.m.

Welcome Reception

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Thursday, February 7, 2019

CONCURRENT SESSIONS

8:00 a.m. to 10:00 a.m.

SESSION A

8:00 a.m.

Low Impact Secant-Pile Seawall for Protecting SR A1A along Flagler Beach

Steven Nolan, P.E. and Stefan Levine, Florida Department of Transportation, Tallahassee and Deland, FL and Lowry Denty, P.E., Mott MacDonald Florida LLC, Pensacola, FL

8:20 a.m.

Use of Erosion Control Structures to Improve Management of Downdrift Impacts of Navigation Inlets

Brett Moore, P.E., Humiston & Moore Engineers, Naples, FL

8:40 a.m.

Additional Stabilization of the Northern Longboat Key Shoreline

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

9:00 a.m.

Towards the Experimentally Based Design of an Effective and Eco-friendly Modular Shoreline Protection System for High Energy Tidal Flow

Landolf Rhode-Barbarigos, Ph.D., Marco Rossini, Antonio Nanni, Ph.D., P.E., and Mohammad Ghiasian, Civil, Architectural and Environmental Engineering, University of Miami, Coral Gables, FL, Brian Haus, Ph.D., Rosenstiel School of Marine and Atmospheric Science, University of Miami, Miami, FL, and Steven Nolan, P.E., Florida Department of Transportation, Tallahassee, FL

9:20 a.m.

Mobility of Unexploded Ordnance using Spherical Surrogates on the Beach Face

Benedict Gross and Jack Puleo, Ph.D., Center for Applied Coastal Research, Department of Civil and Environmental Engineering, University of Delaware, Newark, DE

9:40 a.m.

Waterfront Structures in the Face of Coastal Storms

Jordon Cheifet, P.E., APTIM, Boca Raton, FL

10:00 a.m.

Professional Exchange Break (25 Minutes)

SESSION B

8:00 a.m.

Bakers Haulover Inlet Management – Miami-Dade County, FL

Tim Blankenship, P.E., Yong Chen, Ph.D., P.E., Nina Piccoli, Moffatt & Nichol, Miami, FL and Paul Voight, P.G., Department of Regulatory & Economic Resources, Division of Environmental Resources Management, Miami-Dade County, Miami, FL

8:20 a.m.

Management Study at Multiple Natural and Engineered Tidal Inlets, West-Central Florida, USA

Ping Wang, Ph.D., Jun Cheng, Ph.D., Mathieu Vallee and Zachary Westfall, Coastal Research Laboratory, School of Geosciences, University of South Florida, Tampa, FL

8:40 a.m.

25 Years from Recommendation to Construction of the Upham Beach Stabilization Project

Thomas Pierro, P.E. and Michelle Pfeiffer, P.E., APTIM, Boca Raton, FL and John Bishop, Ph.D., Environmental Management Division, Pinellas County, Clearwater, FL

9:00 a.m.

City of Delray Beach Intracoastal Waterway Water Level & Infrastructure Vulnerability Study

Jeff Needle, P.E., Public Works Department, City of Delray Beach, FL, and Tara Brenner, P.G., P.E. and Douglas Mann, P.E., APTIM, Boca Raton, FL

9:20 a.m.

Gulf Intracoastal Waterway Dredge Readiness and Operations Plan (GIWW DROP)

Laurel Reichold, U.S. Army Corps of Engineers, Jacksonville District, FL

9:40 a.m.

Sediment Management and Navigation Optimization at Collier Creek, Florida

João Dobrochinski, Stephen Keehn, P.E., and Tara Brenner, P.G., P.E., APTIM, Boca Raton, FL and Gary McAlpin, P.E., Coastal Zone Management, Collier County, Naples, FL

10:00 a.m.

Professional Exchange Break (25 Minutes)

Thursday, February 7, 2019

CONCURRENT SESSIONS

10:25 a.m. to 12:05 p.m.

SESSION C

10:25 a.m.

Jekyll Island Shoreline Restoration Program
Timothy Mason, P.E., Applied Technology and Management, Inc., St. Augustine, FL and Ben Carswell, Jekyll Island Authority, Jekyll Island, GA

10:45 a.m.

USACE ODESS – A New Tool in the Toolbox for Assessing Potential Impacts of Shore Protection Sand Mining Projects on in Water Sea Turtles
Terri Jordan-Sellers., Michael Sessions, and Dylan Davis, U.S. Army Corps of Engineers, Jacksonville District, FL, Mobile District, AL, and South Atlantic Division, Atlanta, GA

11:05 a.m.

An Analysis of Sea Turtle Nesting Before and After a Sand Placement Project in Broward County, FL
Stephanie Kedzuf and Greg Ward, Environmental Planning and Community Resilience Division, Broward County, Fort Lauderdale, FL

11:25 a.m.

Dredging Buffers Along the Gulfstream Pipeline, Petit Bois Pass, Alabama
Sean Kelley, P.E. and John Ramsey, P.E., Applied Coastal Research and Engineering, Inc., Mashpee, MA

11:45 a.m.

Using the Integrated SAND-CASM Model in Support of Sediment Management Planning and Resilient Coastal Ecosystem Restoration
Steve Bartell, Ph.D., Cardno, Inc., Greenback, TN

12:05 p.m.

Luncheon (1 Hour 15 Minutes)

SESSION D

10:25 a.m.

Nearly Forty Years of Excellence at the Center for Applied Coastal Research
Jack Puleo, Ph.D., Center for Applied Coastal Research, Department of Civil and Environmental Engineering, University of Delaware, Newark, DE

10:45 a.m.

In Situ Hydrodynamic and Morphodynamic Measurements During Extreme Storm Events
Stanford Borrell and Jack Puleo, Ph.D., Center for Applied Coastal Research, Department of Civil and Environmental Engineering, University of Delaware, Newark, DE

11:05 a.m.

Sensitivity of Occurrence Frequency of Storm Tides to Random Tide Phases
Siyu (Aaron) Chen and Jeff Tabar, P.E., and Mike Anderson, Stantec, Laurel, MD and Nashville, TN

11:25 a.m.

Modification of Long Term Wave Statistics Based on the 2017-2018 Storm Season & Impacts on Coastal Protection Design
Jacqueline Branyon, Ph.D., P.E. and Robert Sloop, P.E., Moffatt & Nichol Engineers, Miami, FL and Long Beach, CA

11:45 a.m.

Subtidal Water Level and Current Variability in a Deltaic Mississippi River Estuary during Cold Front Season
Ali Reza Payandeh, Dubravko Justic, Ph.D., Giulio Mariotti, Ph.D., Haosheng Huang, Ph.D, and Soroush Sorourian, Department of Oceanography and Coastal Sciences, College of the Coast and Environment, Louisiana State University, Baton Rouge, LA

12:05 p.m.

Luncheon (1 Hour 15 Minutes)

Thursday, February 7, 2019

CONCURRENT SESSIONS

1:20 p.m. to 3:20 p.m.

SESSION E

1:20 p.m.

Sea Level Rise Resiliency & Living Shorelines
Angela Schedel, Ph.D., P.E., Taylor Engineering,
Jacksonville, FL

1:40 p.m.

**Lessons Learned on Living Shoreline Creation with
Artificial Oyster Reefs**
Casey Connor, P.E.; Josh Carter, P.E., Arpit Agarwal, and
Craig Harter; and Katlin Walling, Mott MacDonald,
Jacksonville, FL, Austin, TX, and Freehold, NJ

2:00 p.m.

**Shoreline Resiliency and Habitat Enhancement through
Oyster Reef Restoration in Naples Bay, Florida**
Stephanie Molloy, Ph.D., Natural Resources Division,
City of Naples, FL

2:20 p.m.

**Marine Corps Air Station Cherry Point Living Shoreline
Project**
Steven Davie, P.E., Michael Barnett, P.E., and Jesse
Davis, P.E., GHD, Inc., Atlanta, GA, Mobile AL, and
Wellington, FL and Lee Gerald and Robert Warren, LG2
Environmental Solutions, Inc., Jacksonville, FL

2:40 p.m.

**City of Encinitas, CA Cardiff Beach Living Shoreline
Project**
Pete Milligan, P.E., Engineering Division, Development
Services Department, City of Encinitas, CA, Victor
Tirado, P.E., Brian Leslie, and Mitch Duran, P.E., GHD,
Inc., San Diego, CA

3:00 p.m.

**Urban Community Adaptation to Changing
Environmental Hazard: Resilience Planning and
Outreach in Broward County**
Greg Ward, Nicole Sharp, P.E., Samantha Danchuk,
Ph.D., P.E., and Jennifer Jurado, Ph.D., Environmental
Planning and Community Resilience Division, Broward
County, Fort Lauderdale, FL

3:20 p.m.

Professional Exchange Break (25 Minutes)

SESSION F

1:20 p.m.

**Evaluation of Offshore Sediments in Palm Beach County,
Florida for a Regional Sediment Management Strategy
for Coastal Restoration Projects**
Palaparathi Jyothirmayi and Tiffany Roberts Briggs, Ph.D.,
Florida Atlantic University, Boca Raton, FL

1:40 p.m.

Southwest Florida Borrow Area Analysis
Beth Forrest, Ph.D., P.G. and Quin Robertson, Ph.D.,
APTIM, Boca Raton, FL and Jennifer Steele, Ph.D.,
Division of Water Resource Management, Florida
Department of Environmental Protection, Tallahassee,
FL

2:00 p.m.

**Beneficial Use of Dredge Material – Balancing
Regulatory, Private, and Public Interests in Coos Bay**
Gillian Miller and Brian Leslie, GHD, Inc., Irvine, CA, and
Mara Krinke and Casey Story, David Evans and
Associates, Inc., Portland, Oregon

2:20 p.m.

**The Canaveral Shoals Blues: How Beach Nourishment
Using the Canaveral Shoals Borrow Site Has Impacted
the Surf Breaks of Cape Canaveral and Cocoa Beach,
Florida**
John Hearin, Ph.D., P.E., Jacobs Engineering Group,
Cocoa Beach, FL

2:40 p.m.

**The South Amelia Island Shore Stabilization Project:
Project Maintenance and Borrow Area Development at
Nassau Sound**
Albert Browder, Ph.D., P.E., Steven Howard, P.E., and
Patrick Cooper, Olsen Associates, Inc., Jacksonville, FL

3:00 p.m.

Rollover Pass Closure Project, Galveston County, Texas
Michael Trudnak, P.E., Taylor Engineering, Inc.,
Jacksonville, FL

3:20 p.m.

Professional Exchange Break (25 Minutes)

Thursday, February 7, 2019

CONCURRENT SESSIONS

3:45 p.m. to 5:25 p.m.

SESSION G

3:45 p.m.
Benthic Habitat Mapping Methods: *In Situ* Diver-Based vs. UAV-Based and Suitability of Each
Erin Hodel and Chip Baumberger, CSA Ocean Sciences Inc., Stuart, FL and Jordan Kowenski and David Graves, SurvTech Solutions, Inc., Tampa, FL

4:05 p.m.
Strategic Intervention for a Reef in Grief
Kerry Neil, Ph.D., GHD, Inc., Brisbane, Australia

4:25 p.m.
Assessment of Beach Nourishment Hardbottom Impacts
Tem Fontaine, P.E., Coastal Tech-G.E.C., Inc., Vero Beach, FL

4:45 p.m.
Three Sisters Springs Shoreline Stabilization and Bank Restoration
Matt Starr, P.G. and Michael Burton, Stantec, Tampa, FL and Sky Notestein, Southwest Florida Water Management District, Brooksville, FL

5:05 p.m.
Dredging, Storms, and Seagrass
William Precht, Dial Cordy and Associates, Inc., Miami, FL and Leaf Erickson, Coastal Design and Engineering, Ltd., Providenciales, Turks and Caicos Islands

5:25 p.m.
Adjourn

SESSION H

3:45 p.m.
Geomorphologic Change in Southeast Florida Following Multiple Tropical Weather Systems from 2016-2018
Julie Cisneros and Tiffany Roberts Briggs, Ph.D., Florida Atlantic University, Boca Raton, FL

4:05 p.m.
Hutchinson Island Shore Protection Project Planning and Data Analysis Tools
Alexandra Carvalho, Ph.D., CMar Consulting, LLC, Jacksonville, FL and Jessica Garland and Kathy Fitzpatrick, P.E., Martin County, FL

4:25 p.m.
Hutchinson Island Shore Protection Project Physical and Biological Monitoring Integrated Time Series Data Analysis
Alexandra Carvalho, Ph.D., CMar Consulting, LLC, Jacksonville, FL, Michael Trudnak, P.E., Taylor Engineering, Jacksonville, FL, and Kathy Fitzpatrick, P.E., Martin County, FL

4:45 p.m.
Acquisition of Storm Damage Reduction Easements
John Bishop, Ph.D. and Andrew Squires, Environmental Management Division, Pinellas County, Clearwater, FL

5:05 p.m.
Improving Beach Nourishment Effectiveness While Reducing Costs Through Regional Collaboration
Howard Marlowe and Dan Ginolfi, Warwick Group Consultants, LLC, Washington, D.C.

5:25 p.m.
Adjourn

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Friday, February 8

CLOSING GENERAL SESSION

8:00 a.m. to 12:00 p.m.

8:00 a.m.

Florida Red Tide: Protecting Public Health through Innovation and Citizen Science

Tracy Fanara, Ph.D., Environmental Health Program, Mote Marine Laboratory, Sarasota, FL

8:25 a.m.

An Overview of the 2017-18 Red Tide Event and New Approaches for Observing and Predicting Harmful Algal Blooms in the Gulf of Mexico

Matt Garrett, Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission, St. Petersburg, FL

8:50 a.m.

Broward County Segment II Beach: Response to Hurricane Irma and Winter Storm Riley

Christopher Creed, P.E. and N. Zachary Bedell, Olsen Associates, Inc., Jacksonville, FL and Nicole Sharp, P.E., Environmental Planning and Community Resilience Division, Broward County, Fort Lauderdale, FL

9:10 a.m.

Coastal Management at Stumphole – “Everything, and Then Some”

Michael Dombrowski, P.E., MRD Associates, Inc., Destin, FL

9:30 a.m.

The Impact of Hurricane Michael on the Coast of Northwest Florida

Ralph Clark, P.E., Division of Water Resource Management, Florida Department of Environmental Protection, Tallahassee, FL

9:50 a.m.

Post-Disaster Response and Recovery – Weathering the Financial Storm of Hurricanes Joaquin, Matthew and Irma, Hilton Head, SC

Scott Liggett, P.E. and Jennifer Ray, Town of Hilton Head Island, S.C.

10:10 a.m. Professional Exchange Break (30 Minutes)

10:40 a.m.

Modeling Potential Circulation Improvements in Old Tampa Bay, Tampa, FL

Todd DeMunda, P.E. and Shayne Paynter, Ph.D., P.E., Atkins, Melbourne, FL and Tampa, FL and Bryan Flynn, P.E. and Dave Tomasko, Ph.D., ESA Associates, Tampa, FL

11:00 a.m.

Mapping with UAV’s (unmanned aerial vehicles) and USV’s (unmanned surface vehicles)

David O’Brien, Jr., SurvTech Solutions, Inc., Tampa, FL

11:20 a.m.

When Dunes Misbehave – Examples of Natural and Engineered Coast Dunes Which Have Performed with Unanticipated Results. What to do About it.

Robert Barron, Coastal Management and Consulting, Coastal Growers, Inc., Boynton Beach, FL

11:40 a.m.

Adjourn