

# Engineering With Nature: Designing Navigation Infrastructure for Greater Environmental Sustainability

September 7-8, 2011

Doubletree Guest Suites Historic Charleston - Stono Ballroom  
Charleston, SC

---

## Agenda

### Tuesday, September 6

6:30 – 8:00 **Informal Meet & Greet Social:** Meet in Doubletree Guest Suites Historic Charleston Lobby at 6:15 pm

### Wednesday, September 7

8:00 – 8:30 **Coffee and Registration**

8:30 – 9:00 **Welcome and Introductions:** Drs. Todd Bridges and Thomas Fredette, ERDC

9:00 – 9:25 **Engineering With Nature:** Dr. Todd Bridges, ERDC

9:25 – 9:50 **Environmental Enhancements and Navigation Infrastructure within the U.S. Army Corps of Engineers:** Dr. Thomas Fredette, ERDC

9:50 – 10:15 **Building with Nature: Challenges for sustainable development of surface water infrastructure:** Stefan Aarninkhof\*, Anneke Hibma, Mindert de Vries, Martin Baptist, Gerard van Raalte and Mark van Koningsveld, Royal Boskalis Westminster nv, Papendrecht (The Netherlands) and EcoShape

10:15 – 10:30



10:30 – 10:55

**Ecologically-informed engineering reduces loss of intertidal biodiversity on artificial shorelines:** Mark Anthony Browne, University College Dublin

10:55 – 11:25

**Breakwaters for the creation of Submerged Aquatic Vegetation habitat:** Evamaria W. Koch\*, Nicole Barth, Dale M. Booth, Cindy Palinkas and Deborah Shafer, Horn Point Laboratory, University of Maryland, Center for Environmental Science

11:25 – 11:30

**Announcements**

**11:30 – 1:00**

**Lunch**



1:00 – 1:25

**Fish Passage Operations at Jim Woodruff Lock and Dam:** Brian Zettle, USACE

1:25 – 1:50

**The Manatee Pocket Dredging Project: Environmentally Beneficial, Sustainable, and Cost-Effective:** Michael P. Whelan\*, David L. Stites, Kathy Fitzpatrick, and Larry T. Dale, Taylor Engineering, Inc.

1:50 – 2:15

**Building an Improved Weir Decanting System: Economical, Safer, Longer Life-Cycle and with Environmental Provisions:** Coraggio Maglio\*, Justin Grover, and Fred McAuley, USACE

2:15 – 2:30



2:30 – 2:55

**A New Look at Great Lakes Breakwaters. Can they be Greener?:** Dr. Burton Suedel, ERDC

2:55 – 3:20

**Closure of Rollover Pass, Bolivar Peninsula, Texas: Restoring Natural Conditions in a Major Texas Estuary:** David L. Stites\*, Michael P. Whelan, Michael Trudnak, and E. Ray Newby, Taylor Engineering, Inc.

3:20 – 3:45

**Reservoir management to minimize mercury in fish: lessons from a hydropower storage basin:** J.A. Kubitz, Cardno ENTRIX

3:45 – 4:10

**Review of Savannah River Dissolved Oxygen Conditions and Comparison to Biota Survivability Studies:** Russell Short, Geosyntec

- 4:10 – 4:35 **Environmental Sediment Management Structures on the Mississippi River:** Robert Davinroy\*, Michael Rodgers, and Dave Gordon, USACE
- 4:35 – 5:00 **Leveraging Water-Based Infrastructure to Maximize the Restoration of Coastal Ecosystems:** Mark O’Leary, JJR, Ltd.
- 5:00 – 5:25 **The Role of Multi-Criteria Decision Analysis (MCDA) in Project Development:** Dr. Burton Suedel, ERDC
- 5:25 – 5:30 **Wrap Up**
- Recap Day 1 findings
  - Review agenda for Day 2

## **Thursday, September 8**

- 8:00 – 8:15 **Coffee**
- 8:15 – 8:30 **Overview of the Day**
- 8:30 – 10:00 **Breakout Session**
- 10:00 – 10:15 
- 10:15 – 11:45 **Report out from Breakout Sessions**
- 11:45 – noon **Closing Remarks and Adjournment**