



**US Army Corps
of Engineers®**

**9th National Summit on Coastal
and Estuarine Restoration and Management
Short Course: Engineering with Nature® (EWN®)
for Sustainable Estuaries
December 13, 2018
8:30 AM – 4:30 PM
Long Beach Convention Center
Room: 204**

Short Course Objectives:

- ◆ Provide participants with an overview of EWN practices and example projects that promote coastal resilience, flood risk reduction and enhance ecosystem services;
- ◆ Introduce participants to a diverse number of EWN solutions, which include a systems approach that incorporates the use of natural and nature-based features (NNBF);
- ◆ Provide participants a greater understanding of the application and utility of specific NNBF types (e.g., beaches/dunes, wetlands, reefs, islands, etc.) used in creating EWN solutions; and
- ◆ Offer Participants additional insight into current efforts to quantify EWN “triple win” outcomes, which includes the analysis of benefits specific to engineering, environmental, and socio-economic metrics.

Agenda:

Time	Topic/Action	Lead or Speaker
8:00 - 8:30	Onsite Registration for NNBF Short Course	Registration Desk
8:30 – 8:40	Welcome, Introductions, and Review of Agenda	Todd Bridges US Army’s Engineer Research and Development Center (ERDC)

Time	Topic/Action	Lead or Speaker
8:40 – 9:00	Short Course Introduction: EWN - current practices, applications and example projects	Todd Bridges USACE/ERDC
9:00 – 10:20	<p>Coastal Wetlands: EWN Applied Research, Outcomes, and Case Studies</p> <p>1. Wetlands and flood risk: processes, considerations, and examples (20 min)</p> <p>2. Natural marsh processes and their implications in restoration efforts (20 min)</p> <p>3. Coastal Protection Benefits of Vegetation: A Focus on Wave Height Reduction (20 min)</p> <p>Q&A and Panel Discussion (20 min)</p>	<p>Session Chair: Lenore Tedesco The Wetlands Institute</p> <p>1. Candice Piercy USACE/ERDC-Environmental Laboratory</p> <p>2. Brandon Boyd USACE/ERDC-Coastal Hydraulics Laboratory</p> <p>3. Mary Bryant USACE/ERDC – Coastal Hydraulics Laboratory</p>
10:20 – 10:40	Break	
10:40 – 12:00	<p>Beaches and Dune Systems: EWN Applied Research, Outcomes, and Case Studies</p> <p>1. Engineered dunes in hybrid coastal risk-reduction approaches (20 min)</p> <p>2. Measuring the impacts of vegetation on dune erosion (20 min)</p> <p>3. Dune Vegetation and Evolution Modeling for EWN: Linking Remote Sensing to Habitat Change and Ecological Process (20 min)</p> <p>Q&A and Panel Discussion (20 min)</p>	<p>Session Chair: Jeff King USACE/ERDC – Environmental Laboratory</p> <p>1. Jens Figlus Texas A&M University - Galveston</p> <p>2. Duncan Bryant USACE/ERDC – Coastal Hydraulics Laboratory</p> <p>3. Safra Altman USACE/ERDC- Environmental Laboratory</p>

12:00 – 1:15	Onsite Lunch (Provided)	
Time	Topic/Action	Lead or Speaker
1:15 – 2:35	<p>Other Estuarine Features: EWN Applied Research, Outcomes and Case Studies</p> <ol style="list-style-type: none"> 1. Islands (20 min) 2. Mangroves (20 min) 3. Oysters – Employing Nature’s Coastal Engineers for Coastal Ecosystem and Community Resilience (20 min) <p>Q&A and Panel Discussion (20 min)</p>	<p>Session Chair: Paula Whitfield NOAA/NOS –National Centers for Coastal Ocean Science</p> <ol style="list-style-type: none"> 1. Joe Gailani USACE/ERDC – Coastal Hydraulics Laboratory 2. Tori Tomiczek US Naval Academy 3. Stan Rogers NOAA/NMFS-Restoration Center
2:35 – 2:50	Break	
2:50 – 4:15	<p>Organizational Thoughts and Perspectives: Considerations Pursuing EWN Initiatives in Coastal Systems:</p> <ol style="list-style-type: none"> 1. Environmental Defense Fund (15 min) 2. US Army Corps of Engineers (15 min) 3. National Oceanic and Atmospheric Administration (15 min) 4. California State Coastal Conservancy (15 min) <p>Q&A and Panel Discussion (25 min)</p>	<p>Session Chair: Jeff King USACE/ERDC – Environmental Laboratory</p> <ol style="list-style-type: none"> 1. Devyani Kar Environmental Defense Fund 2. Mindy Simmons USACE – HQ Planning/Policy 3. Colette Cairns NOAA/NMFS – Office of Protected Resources 4. Marilyn Latta California State Coastal Conservancy

4:15 – 4:25	Review of Attendee Questions with Interactive Discussion	Kathryn McIntosh ERDC – Coastal Hydraulics Laboratory
4:25 – 4:30	Closing Remarks	Todd Bridges ERDC
4:30	Adjourn	