

Coastal Engineering Research Board Tasks and R&D Update

ERDC
Engineer Research and
Development Center

Linda Lillycrop

Program Manager,
Regional Sediment Management
Engineer Research and Development Center

*Advancing Science and Technology
in Support of Sustainable Solutions to
America's Water Resources Needs*



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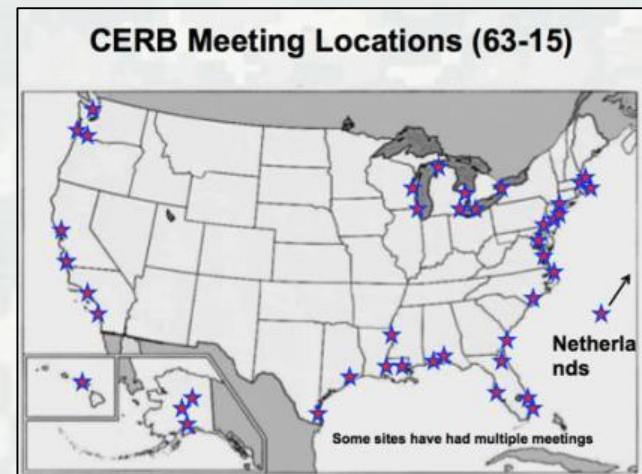
History of CERB

Beach Erosion Board (1929 – 1963): *“investigate and report on the subjects of sand movement and beach erosion at such localities as may be designated by the Chief of Engineers.”*



Coastal Engineering Research Board (1963 – Today)

Mission: Recommends to the Commander, USACE, overall priorities of broad research areas in consonance with the needs of the coastal engineering field and the objectives of the Commander.



92nd CERB Meeting

Galveston, TX

THEME: Coastal Navigation – Driving the U.S. Economy by Integrating Marine Transportation Infrastructure with Natural Coastal Systems

Meeting Concept: Identify the U.S. Gulf region's engineering challenges to enhance the resilience of coastal systems while sustaining critical marine transportation and the research and development needs to deliver innovative solutions to meet these challenges and opportunities.



92nd CERB Agenda

Technical Sessions

- **Integrated Coastal and Navigation Systems of the Texas Coast**
- **Coastal Engineering with Nature and Regional Sediment Management**
- **Integrated Coastal and Navigation Systems**

Field Trip

Stop #1 Integrated Petrochemical Facility, Navigation, and Structural Flood Risk Management Infrastructure, Port of Texas City

Stop #2 Beach Nourishment Project, Galveston Island

Stop #3 Port of Galveston Facilities and Cruise Terminal



Regional Sediment Management & Engineering With Nature

Use of USACE Enterprise Tools for Lifecycle Systems Management of Dredged Material: Houston Ship Channel & Gulf Intracoastal Waterway Pilot Project

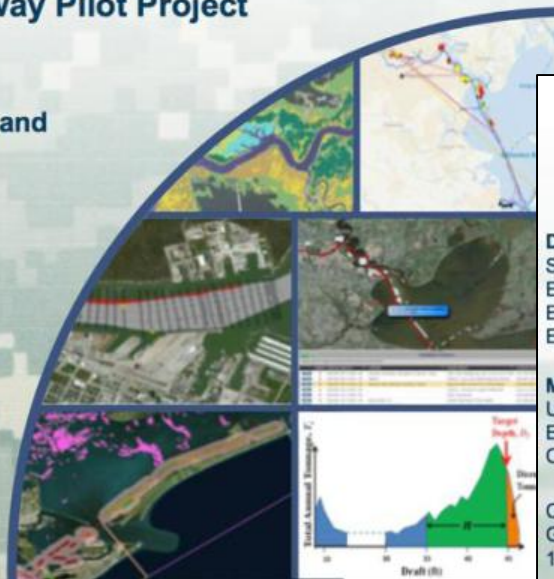


Linda Lillycrop
USACE Engineer Research and Development Center

92nd Coastal Engineering Research Board Meeting
Galveston Island, TX
1-3 September 2015



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USACE *Engineering With Nature* (EWN) and *Regional Sediment Management* (RSM) "Proving Grounds"

Dr. Todd Bridges
Senior Research Scientist
EWN Program Manager
Engineer Research and Development Center
Environmental Laboratory

Ms. Linda Lillycrop
USACE RSM Program Manager
Engineer Research and Development Center
Coastal and Hydraulics Laboratory

Coastal Engineering Research Board Meeting
Galveston, TX
1-3 September 2015



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Systems Optimization

Dredging Equipment / Environmental Windows Optimization of Navigation Systems in the Gulf of Mexico

Heather Nachtmann, Ph.D.
Kenneth N. Mitchell, Ph.D.
Chase E. Rainwater, Ph.D.
Corey Winton, Ph.D.
Fereydoun Adbesh, M.S.

92nd Coastal Engineering Research Board Meeting
September 2, 2015



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MarTREC
Maritime Transportation Research & Education Center

Coastal and Navigation Asset Management: System Optimization Based on Cargo Flows for the Houston-Galveston Navigation Channel

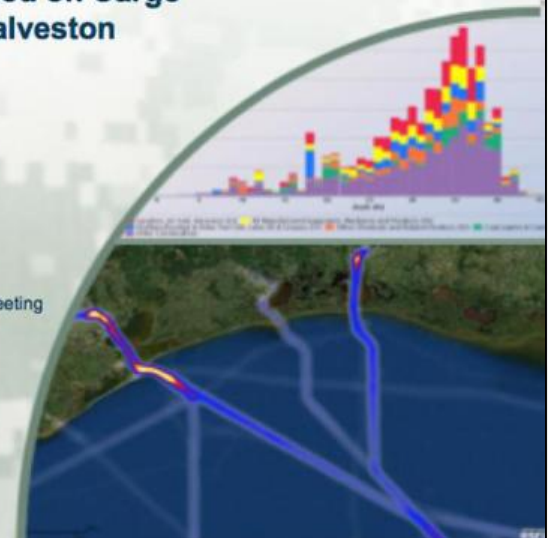
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Kenneth Ned Mitchell, PhD
Research Civil Engineer
ERDC Coastal and Hydraulics Lab
Vicksburg, Miss.

92nd Coastal Engineering Research Board Meeting
Galveston, Texas
2 Sept. 2015



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Priority Coastal Research Needs



The Future of Nearshore Processes Research:
Implementing a Research Plan
by the Nearshore Community

[http://scripps.ucsd.edu/centers/nearshorefuture/Shore & Beach Coastal Forum](http://scripps.ucsd.edu/centers/nearshorefuture/Shore%20&%20Beach%20Coastal%20Forum)

asbpa
American Shore & Beach Preservation Association
Advocating for healthy coastlines

Editors: Nicole Elko, Falk Feddersen, Diane Foster, Cheryl Hapke, Jesse McNinch, Ryan Mulligan, H. Tuba Ozkan-Haller, Nathaniel Plant, & Britt Raubenheimer



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Navigation and Coastal Tools for the
U.S. Gulf Coast: Capabilities and
Research Needs

Chris Massey, PhD
Research Mathematician
Coastal and Hydraulics Laboratory


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92nd CERB Take-Aways

- 1. Continue investment in “Systems” research and development of tools that help design and operate projects and regions**
- 2. Consider a Corps role in creating a National coastal R&D plan**
- 3. Link R&D with on-going District projects to focus research products and drive requirements with high priority needs**
- 3. Measuring, monitoring and data**



Questions ???



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