Headquarters
US Army Corps of Engineers
SUMMARY

COMMANDING GENERAL'S
EXECUTIVE

MAJ Steven L. Kreh / CECW-ZA
18 SEP 2015

MEMORANDUM FOR CG
MEMORANDUM THROUGH XO to the CG

SUBJECT: Coastal Engineering Research Board (CERB) 2015

DATE / LOCATION: 01-03 SEP 15 / Galveston, TX

PARTICIPANTS:
MG Ed Jackson, CERB President, Deputy Commanding General, Civil & Emergency Operations (DCG-CEO)
BG Turner, CERB Member, Commander, SAD
BG Toy, CERB Member, Commander, SPD
BG William Graham, CERB Member, Commander, NAD
Dr. David Kriebel, CERB Member, U.S. Naval Academy
Mr. William H. Hanson, CERB Member, Great Lakes Dredge & Dock Company
BG David Hill, Commander, SWD
COL Richard Pannell, Commander, SWG
Mr. José E. Sánchez, CEERD-HZ
Mr. Edward E. Belk, Jr., CECW-CO
Mr. Theodore A. Brown, CECW-P
Mr. Jeffrey A. McKee, CECW-CO-D
Ms. Tanya M. Beck, CEERD-HNC
Mr. Mark B. Gravens, CEERD-HFC
Ms. Sharon L. Hanks, CEERD-HY
Ms. Linda S. Lillycrop, CEERD-HNC
Mr. W. Jeff Lillycrop, CEERD-HT

BLUF:
- The Board on Coastal Engineering Research (CERB) held its annual meeting on 1-3 September 2015 in Galveston, TX.
- Theme was *Coastal Navigation – Driving the U.S. Economy by Integrating Marine Transportation Infrastructure with Natural Coastal Systems*
- The goal was to 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.
- Key discussion take-aways were identified in Executive Session that will be further developed and finalized with specific recommendations

SYNOPSIS: We heard from Federal, State, Private, and non-governmental representatives about how critical the Texas ports and waterways are to our national economy. They are key contributors to the energy sector. It was indicated that the region

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would invest $100B over the next 10 years to continue growth of the petrochemical industry, furthering its value and national significance. Presentations included plans for growth, but also the need for sustainable, resilient solutions blending our coastal authorities in flood risk management, ecosystem restoration, and navigation. Many of the presentations and discussions emphasized systems approaches to expanding facilities and services, regional sediment management, incorporating natural and nature-based features into infrastructure, and using natural processes to enhance performance by engineering with nature. We also heard much about the challenges of monitoring coastal processes on a regional scale and managing and sharing data produced by the entire coastal engineering community.

Our meeting included three technical sessions and a field trip to emphasize that although the Houston/Galveston region is comprised of numerous individually authorized navigation, flood risk management, and ecosystem restoration projects, they must be operated and managed as an integrated system to successfully provide the sustainable, resilient services the region requires. The three technical panels were: Integrated coastal and navigation systems of the Texas coast; Coastal engineering with nature and regional sediment management; and Integrated coastal and navigation systems. On our field trip we visited the Port of Texas City, a beach placement site along the Galveston seawall of maintenance dredging from the navigation channel, and the Port of Galveston. Presenters were all very knowledgeable and passionate about their topics and identified coastal research needs that could address the challenges that lay ahead.

KEY DISCUSSION TAKE-AWAYS:

a. Continue investment in "systems" research and development of tools that help design and operate water resources projects in a regional context. We have made much advancement in Regional Sediment Management and should continue to advance it with our emerging Engineering with Nature and Marine Transportation System performance and optimization capabilities. It is clear from our meeting that to create resilient solutions a systems approach must be taken. Addressing them as individual projects will not produce long-term sustainable solutions.
b. Ensure our projects are founded on solid science and engineering. Link our most challenging studies and projects with the latest research and technology to address uncertainties early and produce defensible, innovative solutions. Create opportunities to expedite technology transfer and use of the latest ERDC tools with on-going studies in Districts. BG Graham offered to facilitate such a connection in NAD and Dr. Russo offered to facilitate this in SWG. We especially want to make sure contemporary issues including climate variability, sea level rise, and their potential impacts to our water resources infrastructure are properly addressed.
c. Share data and tools with stakeholders to build relationships and transparency. Expand our data integration framework to make more regional and enterprise data available to community applications and uses. Link our tools with the data so they may be shared and modified to reduce duplicative development and

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leverage other agency investments. Increase outreach to other agencies and stakeholders to let them know of these emerging capabilities to enhance collaboration.

d. Enhance collaboration across the coastal research community. Work with the American Shore and Beach Preservation Association (ASBPA) who recently completed *The Future of Nearshore Processes Research.* They have requested the Corps consider taking a leadership role in helping organize the Federal agencies in an integrated nearshore research plan.

These directly support our USACE Campaign Plan goals to Transform Civil Works, helping us deliver quality solutions by improving our knowledge and tools that perform systems analysis and systems optimization. Successful implementation will Reduce Disaster Risks by producing new design guidance to increase coastal resiliency by advancing the principles and guidance of Engineering with Nature and Regional Sediment Management. Finally, they will help us Prepare for Tomorrow through stakeholder collaborations to advance our enabling coastal science and technology.

DUE OUTS / TASKERS:

ACTION	RESPONSIBLE PARTY
Complete CERB report to detail all action items and taskers	Mr. José E. Sánchez, CEERD-HZ
CERB 2016 Executive Meeting program and framework development; MAR 16; Location: TBD	Mr. José E. Sánchez, CEERD-HZ
CERB 2016 Annual Meeting program and framework development; SEP 16, Location: San Juan, Puerto Rico	Mr. José E. Sánchez, CEERD-HZ

FUTURE ENGAGEMENTS / RECOMMENDATIONS:

- Finalize specific recommendations by fully defining the requirements, determining necessary resources, addressing risk, and formulating a request.
- Formulate an engagement plan to support the American Shore and Beach Preservation Association's request to help develop a national integrated coastal engineering R&D implementation plan.

KEY PROCESS LESSONS LEARNED:

Discussion focused on providing specific research recommendations to the Civil Works research and development steering committee, specifically defining the research requirements to solve identified problems, recommended resources needed to meet the requirement, definition of the risks associated with not funding or completing the project, and developing specific requests targeted at the proper decision authority.

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