DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET NW
WASHINGTON, D.C. 20314-1000

Mike, Appreciate Summary & Recommendations Concur w/Comments LPB 26 NOV 2012

CEERD-HV-Y

MEMORANDUM FOR Chief of Engineers

SUBJECT: Recommendations for Research and Development Needs from the Board on Coastal Engineering Research

1. The Board on Coastal Engineering Research held its annual meeting on 18-20 September 2012 in Jacksonville, FL, with a theme of *Regional Sediment Management: Uniting Navigation, Beaches, and the Ecosystem.* The goal was to review the coastal engineering challenges within the southeast coastal system, focusing on how Regional Sediment Management can help to bridge multi-purpose and multi-agency missions and to identify the research and technology that is needed to help Districts and the Nation meet those challenges. The meeting focused on three main business areas of the Corps (Navigation, Coastal Storm Risk Management, and Environmental Restoration) that are of interest to the Board and the linkages between these missions. The meeting was attended by the full Board membership consisting of three Division Commanders, three civilians, and myself. The Board recently underwent a significant change in membership with 5 new members. At the meeting, the Board reviewed and endorsed recommendations of the previous Board from their Memorandum dated 11 May 2012.

2. In addition, the Board clearly heard and discussed new coastal engineering challenges, particularly those associated with the Corps' planning modernization. Thus, the Board additionally recommends Research and Development (R&D) address the following:

a. The need for coastal engineering tools, techniques and guidance that balance analysis, modeling, and data collection at the appropriate level of detail for planning investigations and recommendations for authorization. The Corps requires engineeringly sound results based on our best knowledge yet delivered through tools and methods, such as reduced order modeling and model-based engineering that support the needs of the new planning modernization guidance. These products should consider and balance the tradeoffs between reducing risk and managing uncertainty.

b. The need to improve our understanding, quantification, and integration of the interdependencies across our different business lines from a science and engineering case to adequately predict performance so that we may consider then how to calculate and combine benefits resulting from the interdependencies.

3. The Board recommends that the USACE R&D Community work with the Chief of Planning and Chief of Engineering and Construction to define the tools and techniques at an appropriate level of detail and sophistication for the analysis in planning studies, in design, and for operations. It is also recommended that the relevant Planning Centers of Expertise (Hurricane and Storm Damage Reduction, Deep Draft Navigation, and Ecosystem Restoration) and the Risk Management Center be included in the effort. An approach might be to assess a few recent coastal planning studies and projects to reverse engineer to quantify performance of new methods and guidance.

MICHAEL J. WALSH
Major General, US Army
President, Board on Coastal Engineering Research