



Coastal Sediments 03 Conference

Short Course, May 18, 2003

Sheraton Sand Key Resort • Clearwater Beach, Florida



U.S. Army Corps of Engineers, Coastal Inlets Research Program

WELCOME!

This Short Course was organized by staff of the Coastal Inlets Research Program, a research and development program of the U.S. Army Corps of Engineers. The CIRP is funded by Corps Headquarters in recognition of the need to better understand and quantify the complex physical processes at coastal inlets. The objective is to advance knowledge and develop predictive technology to design, operate, and maintain federal navigation channels as rationally and cost-effectively as possible, while accounting for the presence of the neighboring beaches in a sand-sharing system. The resultant physical processes information and predictive technology are part of an overall environmental approach to environmentally sound management of the nation's coast.

The Corps of Engineers has a long and distinguished record in studies of coastal inlets, and examples will be given here. The Corps published design documents on jetty construction and experiences as far back as the late 1800s. Colonel E. I. Brown of the Corps wrote groundbreaking papers on inlet hydrodynamics and coastal sediment processes in 1928 and 1930. Much of the inlet stability work of O'Brien (1931, 1967) was supported by the Beach Erosion Board of the Corps. Keulegan's celebrated report in 1967 and related work of his in that era was conducted for the Corps' Committee on Tidal Hydraulics, a permanent committee formed in 1948 that has met more than 100 times to review issues and problems related to tidal inlets and processes. Escoffier, a hydraulic engineer at the Corps of Engineers' Mobile, Alabama, District office published his famous stability analysis paper in 1940 among several other important works on tidal inlets. Jarrett, a career-Corps engineer, continued past work in publishing his much-referenced 1976 report on inlet channel stability.

In the 1970s, the Corps established the research program "General Investigation of Tidal Inlets" that sponsored numerous theoretical studies, case studies, field data collection, and development and refinement of numerical and physical models of tidal inlets and inlet processes. The GITI program supported faculty and graduate students at numerous universities around the United States that, in effect, led to a wave of improved knowledge and generation of academicians with expertise in the area of coastal inlets. The GITI report series, written by Corps engineers and scientists, university staff, and experts in private industry became a standard for comprehending and quantifying coastal inlet processes.

The CIRP, established in 1993, continues the work of the GITI program. Among many activities, the CIRP is moving forward with development of both decision-support numerical models and computation-intensive numerical models, as well as improved physical model technology, for simulating waves, currents, sediment transport, and morphology change at coastal inlets. This short course will present selected products of the CIRP that we hope will be useful to you in your studies and projects. Welcome, and please consult the CIRP web site <http://cirp.wes.army.mil/cirp/cirp.html> for more information and updates on CIRP progress and available technology.

Sincerely,

Nick Kraus, CIRP Program Manager, for all the CIRP staff