



US Army Corps of Engineers

<http://shoals.sam.usace.army.mil>

Coastal Mapping

The US Army Corps of Engineers has recently modernized its approach to managing and operating federally-authorized navigation projects, which is based on the concept of regional management. Individual projects are combined and managed in the context of regional processes that drive sediment transport, called regional sediment management. Its objective is retaining sand in the littoral system in order to foster more balanced, natural system processes, and reduce project costs. Regional measuring and monitoring is key element of this new approach and management practice. Airborne technologies being operated and developed through the Joint Airborne Lidar Bathymetry Technical Center of Expertise are helping provide the information needed for regional decision support.

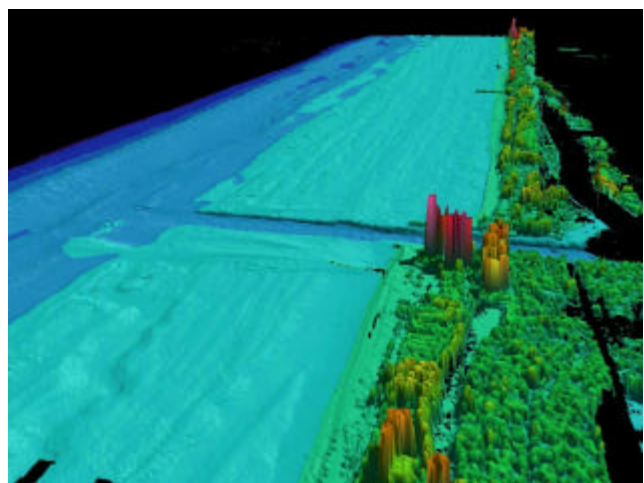
The Joint Center is a partnership between the US Army Corps of Engineers, the Naval Meteorology and Oceanography Command with its Naval Oceanographic Office, and the National Oceanic and Atmospheric Administration's National Ocean Service. The Joint Center's mission is to conduct airborne coastal mapping and charting in support of the partners and perform research and development to evolve our capabilities and supporting technologies.

Through the Joint Center, the Corps of Engineers is pursuing a national coastal mapping program to support regional sediment management. It is based on the technical capabilities and infrastructure developed through the SHOALS program, which was entrepreneurial in its implementation, but showed the benefits of a centralized approach to regional data collection. By doing so, not only is there significant cost savings, but also a national organization responsible to accomplish data and information consistency and to leverage regional data and information from other agencies and programs. Spatial data is being used to characterize physical and environmental conditions of the US coastal zones along the Atlantic, Pacific, Gulf of Mexico, and Great Lakes. Physical conditions, such as elevations, shoreline position, etc., and environmental resources, such as wetlands, sea grasses, hard bottom,

sediments, land use, etc., are collected by implementing an annual program to collect data and by coordinating with other agencies to acquire their regional data. These are being combined to produce information and regional products.

The Joint Center completed the Corps of Engineer's first year of regional coastal mapping in 2004, which covered the sandy portions of Mississippi, Alabama, Florida, Georgia, South Carolina and North Carolina. Participating with the Joint Center was the US Geological Survey's Center for Coastal & Watershed Studies and the National Aeronautical and Space Administration. Products include a seamless digital survey of the coast with bathymetric lidar at a 5 meter horizontal spacing and the topographic lidar at a 1 meter spacing. These surveys covered from the waterline landward 500 meters, and where water clarity permitted, seaward 1,000 meters. In addition, digital imagery was collected coincident with the lidar surveys.

For more information, please contact the Joint Center at 228.252.1101 or visit us on line at <http://shoals.sam.usace.army.mil>.



Joint Center hydro/topo survey, Ft. Lauderdale,