

## Regional Coastal Mapping Eddie Culpepper and Eddie Wiggins

The US Army Corps of Engineers (USACE) initiated its National Coastal Mapping Program (NCMP) this year in the USACE South Atlantic Division. The Joint Airborne Lidar Bathymetry Technical Center of Expertise (JALBTCX) located at Stennis Airport in Kiln, MS, administers the mapping program. The Compact Hydrographic Airborne Rapid Total Survey (CHARTS) system was used to accomplish the surveys this fiscal year. CHARTS is an in-house survey capability that collects topographic lidar data, bathymetric lidar data, and digital imagery.

The survey specification for the NCMP requires all three of these data types.

Bathymetric data are collected from the shoreline to 1 km offshore at 5 m spacing. Topographic data are collected from the shoreline to 0.5 km onshore at 2 m spacing. The topographic data are collected in opposing flight directions, resulting in 200% coverage of the land portion of the survey. The digital imagery have a ground resolution of 20 cm per pixel and are georeferenced using CHARTS positioning and attitude sensor data. The data are positioned using post-processed kinematic GPS and National Geodetic Survey monumentation. The processed topographic lidar, hydrographic lidar, and imagery data will be delivered to the NCMP Project Delivery Team Member in each USACE district office, who will bear the responsibility of disseminating the data within their district and to the public. GIS products created from the data, like grids, tins, and contours, will also be delivered to the districts.

The NCMP will continue in fiscal year 2005 with a survey of the US Atlantic coast from Virginia to Maine. Survey work in fiscal years beyond 2005 will include the Great Lakes and US West Coast. The cycle begun this year on the Gulf of Mexico is expected to repeat every five to seven years at the current rate of funding and survey system availability.